CLIMATE CHANGE DISPUTE RESOLUTION

BY

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Abstract

Climate change is the biggest threat humankind has been called to face. It threatens the very survival of our species and planet. This thesis considers the climate crisis from a dispute resolution (DR) perspective. More specifically, the disputes arising as a consequence of climate change and the way in which they are, and should be, addressed. These disputes are unique and require specific consideration given they concern an imminent threat to human survival, involve highly vulnerable parties and fundamental power imbalances, and are burgeoning in complexity and volume.

A cursory consideration suggests that the current approach to these climate change disputes is not effective, as climate change worsens and related disputes increase. This assumption, however, has not yet been demonstrated by evidence-based examination. Although there is research considering particular types of climate change disputes (such as, those based on human rights), specific DR processes (such as, negotiation or adjudication) and aspects of effectiveness (such as, the impact of adjudication on mitigation) there is no work that examines and assesses the full scope of climate change disputes and DR processes. As a result, there is no substantiated basis on which climate change disputes can be most effectively identified, understood, resolved or prevented.

In order to address these problems, this thesis provides a comprehensive map of climate change disputes and the current DR system for addressing them. It also formulates and applies a mechanism for assessing the effectiveness of that system, one that includes and prioritises addressing climate change itself. On the basis of the resulting assessment, which demonstrates deficiencies in the current climate change DR system, this thesis proceeds to recommend specific improvements to enhance that system's efficacy. It concludes that the most effective way to address climate change disputes is through a system that supports the climate response, is comprehensive, cohesive, deliberate, adaptable, preventative, and, in large part, relies on more and better use of innovative alternative DR processes. Although this recommended approach requires changes in the way DR is conceived and delivered, it is vital this occur given that climate change disputes are escalating, and will continue to do so, as more individuals, communities, states, and ecosystems are impacted, and the urgency with which we must face the climate crisis grows. Climate change requires bold action on every front, including through our DR system.

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Table of Abbreviations and Acronyms

Bali Action Plan	United Nations Framework Convention on Climate Change *Report of the Conference of the Parties* FCCC/CP/2007/6/Add.1 (14 March 2008), Decision 1/CP.13
Cancun Agreement	United Nations Framework Convention on Climate Change *Report of the Conference of the Parties* FCCC/CP/2010/7/Add.1 (15 March 2011), Decision 1/CP.16
COP	Conference of the Parties
DR	Dispute resolution
GCDR	Government Centre for Dispute Resolution
GHG	Greenhouse gas/es
Glasgow Climate Pact	UNFCCC *Report of the Conference of the Parties* XXVI (2021), Addendum 1, Decision 1/CP 26
Grantham Database	Grantham Research Institute on Climate Change and the Environment "Climate Change Laws of the World" <www.climate-laws.org>
IPCC	Intergovernmental Panel on Climate Change
Kyoto Protocol	Kyoto Protocol to the United Nations Framework Convention on Climate Change 2303 UNTS 162 (opened for signature 16 March 1998, entered into force 16 February 2005)
NGO	Non-governmental organisation
Paris Agreement	Paris Agreement to the United Nations Framework Convention on Climate Change (opened for signature 22 April 2016, entered into force 4 November 2016)
Sabin Database	Sabin Centre for Climate Change Law "Climate Change Litigation Database" <www.climatecasechart.com>
UN	United Nations
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change 1771 UNTS 107 (opened for signature 4 June 1992, entered into force 21 March 1994)
UNHRC	United Nations Human Rights Committee
WMO	World Meteorological Organisation

Part A: Background and Definitions

Chapter 1: Introduction

I Chapter Introduction

This chapter provides the introductory material to my thesis. More specifically, it contains an overview of my research topic and the relevant literature; a description of this research, including the problem, question, and my thesis; as well as an overview of the structure of this work.

II Topic Overview

A Climate Change

In 1988, the General Assembly declared climate change a common concern of humankind, "since climate is an essential condition, which sustains life on earth."[1] Climate change research has developed rapidly over the subsequent decades. My research proceeds on the basis of the following scientific facts. Climate warming is currently occurring due to anthropogenic GHG emissions, and this is already affecting weather and climate extremes in every region across the globe.[2] Further, this warming will continue to increase unless significant reductions in GHG emissions are made in the coming decades.[3] There is also an increasing understanding of the impacts of this warming, which, along with higher temperatures and changes in rainfall patterns, include slow-onset processes (such as sea level rise, ocean acidification and desertification) and more frequent and severe, extreme sudden-onset events or natural disasters (such as droughts, floods, fires, heatwaves and storms).[4]

There is also unequivocal evidence that these impacts are having adverse effects on human and natural systems. In recent years, there has been an increasing understanding of what these consequential harms are likely to be, and how destructive. Namely, that they will be extensive

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1 *Protection of Global Climate for Present and Future Generations of Mankind* GA Res 43/53 (1988), art 1.

2 IPCC "Summary for Policymakers" in *Climate Change 2021: The Physical Science Basis* (August 2021) at A.1 and A.3 (this research is based on the work of 234 scientists from 66 countries); WMO *United in Science 2021* (September 2021) (this report is compiled by WMO, bringing together the latest climate science from a group of global organisations, including IPCC, Global Carbon Project, UNEP, World Health Organization, International Science Council and World Climate Research Programme); WMO *Statement on the State of the Global Climate in 2021* (2022); and in New Zealand, Ministry for the Environment "Science of Climate Change" (30 September 2021) <www.mfe.govt.nz>.

3 IPCC, above n 2, at B.1.

4 Above n 2.

and severe. More specifically, the impacts of climate change include adverse outcomes for: human health, well-being and security; food security; water supply; livelihoods; services; infrastructure; economies; social and cultural assets and heritage; ecosystems; natural environments; and species.[5] Climate impacts will also lead to loss of territory and climate displacement, possibly to the extent that some populations will be left stateless.[6] As the New Zealand government stated in 2020, climate change threatens "our environment, our way of life, and the ways we make a living."[7] For the purposes of this research, I refer to the adverse effects caused by the impacts of climate warming as harms.[8]

Additionally, there is a growing recognition that some populations are at disproportionately higher risk of climate change harms.[9] Maxine Burkett refers to these groups as "climate-vulnerable" (a term I have adopted in this thesis), and defines them as: "those individuals, communities, or nation-states that have a particularly acute exposure to present and forecasted climatic changes and are generally the least responsible for the anthropogenic GHG emissions."[10] These groups include: communities dependent on agricultural or coastal livelihoods; poor and disadvantaged peoples; many indigenous and first nations peoples;[11] women; and young people.[12]

Indigenous and first nations peoples are particularly vulnerable to climate harms. This is due to a number of factors. Many indigenous cultures have a special relationship with the land and

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5 IPCC "Summary for Policymakers" in *Climate Change 2022: Impacts, Adaptation and Vulnerability* (February 2022); WMO, *United in Science*, above n 2; WMO, *State of the Global Climate*, above n 2; World Economic Forum *The Global Risks Report 2020 15th Edition* (January 2020); and Elena Sesana and others "Climate Change Impacts on Cultural Heritage: A Literature Review" (2021) 12(4) WIREs Climate Change e710.

6 Ruohong Cai and others "Climate Variability and International Migration" (2016) 79 JEEM 135 at 146; Institute for Economics and Peace *Ecological Threat Report 2021: Understanding Ecological Threats, Resilience and Peace* (Sydney, October 2021) at 76; Internal Displacement Monitoring Centre *Disaster Displacement: A Global Review 2008-2018* (May 2019); and Nathan Ross "Low-Lying States, Climate Change-Induced Relocation, and the Collective Right to Self-Determination" (Doctor of Philosophy Thesis, Victoria University of Wellington, 2019) at 1-2.

7 Ministry for the Environment and Stats NZ *New Zealand's Environmental Reporting Series: Our Atmosphere and Climate 2020* (October 2020) at 2.

8 The impacts and harms are examined further in the definition of Loss and Damage Disputes in Chapter 3.II.F, and more generally in Chapter Six.

9 IPCC, above n 5, at 7-8.

10 Maxine Burkett "Litigating Climate Change Adaptation: Theory, Practice, and Corrective (Climate) Justice" (2012) 42 Env't LRep 11144 at 11145.

11 IPCC, above n 5, at 11-12.

12 Winkelmann, CJ, Glazebrook J and Ellen France J "Climate Change and the Law" (speech to the Asia Pacific Judicial Colloquium, Singapore, 28 May 2019) at Appendix 2.

exercise stewardship of the environment for future generations.[13] They are also more likely to be dependent on the environment and its resources, and are often in lower socio-economic groups, meaning that they are less likely to have the resources to adapt to climate change. Further, climate change exacerbates difficulties that are already facing indigenous peoples, including "political and economic marginalisation, loss of land and resources, human rights violations, discrimination, and unemployment."[14]

New Zealand Māori are among this climate-vulnerable group.[15] They are facing a range of specific harms, "from the loss of physical structures and resources, to impacts on the spiritual, physical, intellectual, and social values that are integral to the health and wellbeing of Māori identity."[16] A 2021 report summarising the research on climate change impacts on Māori found that there will be negative consequences across their environment, enterprise, health, and culture.[17] By way of specific example, Māori coastal sites of cultural significance including marae (meeting places) and urupā (burial grounds) are at risk of sea level rise and associated impacts.[18]

B Climate Change Disputes

There is growing evidence that climate impacts and harms will result in an increase in disputes, particularly violence or armed conflict.[19] A 2021 meta-analysis of climate-conflict research found "plausible indirect causal pathways between climatic conditions and a wide set of

[13] As recognised in the *Declaration on the Rights of Indigenous Peoples* GA Res 61/295 (2007), art 25.
[14] Inter-Agency Support Group on Indigenous Peoples' Issues *Collated Paper on Indigenous Peoples and Climate Change* UN Doc E/C.19/2008/CRP.2 (7 February 2008), art 5.
[15] Climate Change Adaptation Technical Working Group *Adapting to Climate Change: Stocktake Report* (December 2017); and Ministry for the Environment *National Climate Change Risk Assessment for New Zealand* (August 2020) at 34.
[16] Ministry for the Environment and Stats NZ, above n 7, at 53.
[17] Ngā Pae o te Māramatanga and Manaaki Whenua – Landcare Research *He huringa āhuarangi, he huringa ao: a changing climate, a changing world* (October 2021).
[18] National Institute of Water and Atmospheric Research Ltd *Tangoio Climate Change Adaptation Decision Model* (July 2018); and Simon Bickler, Rod Clough and Sarah Macready *The Impact of Climate Change on the Archaeology of New Zealand's Coastline* (Department of Conservation, July 2013) at 1.
[19] For example, see Richard Pierce "Legal Disputes Related to Climate Change Will Continue for a Century" (2012) 42 Env Law 1257 at 1273; Katharine Mach and others "Climate as a Risk Factor for Armed Conflict" (2019) 571 Nature 193; Kilian Heilmann and Matthew Kahn *The Urban Crime and Heat Gradient in High and Low Poverty Areas* (National Bureau of Economic Research, Working Paper, June 2019); Curtis Craig, Randy Overbeek and Elizabeth Niedbala "A Global Analysis of Temperature, Terrorist Attacks, and Fatalities" (2019) Studies in Conflict and Terrorism 1; and International Committee of the Red Cross *When Rain Turns to Dust* (7 July 2020).

conflict related outcomes."[20] Such studies, however, cannot be extrapolated to support a claim that climate change is the *sole* cause of war, migration, unrest and conflict. Rather, climate change can be referred to as a trigger,[21] threat accelerant,[22] contributing factor, or risk multiplier.[23] As noted by the UN, "[t]he effects of climate change heighten competition for resources such as land, food, and water, fueling socioeconomic tensions and, increasingly often, leading to mass displacement."[24] The connection between climate change and conflict has been formally recognised by the Security Council in its proclamation that climate change is a "threat multiplier" in relation to international peace and security.[25]

Due to the difficulty in drawing causal pathways between climate change and armed conflict, and to manage scope, I do not consider climate change-related armed conflicts in specific detail. I note them here, however, as they highlight the need to treat climate change disputes (CCDs) as a unique and specific category of disputes. More specifically, and as evidenced throughout this thesis, CCDs concern an imminent threat to human survival, involve highly vulnerable parties and fundamental power imbalances, and are burgeoning in complexity and volume. As such, they require dedicated consideration and treatment. Although I do not focus on armed conflict, it comes within the broad definition of CCDs as used in this thesis. Notably, one that is not limited to legal or international law disputes.[26]

C Relevant Literature

Alongside the literature showing a connection between climate change and predicted disputes, there is evidence that CCDs are currently arising, as demonstrated by the growing body of literature considering their resolution. Given "there is no single institution that has the legal jurisdiction and authority aligned with the global scope of the problem", there are a number of different DR avenues currently being used and researched in relation to CCDs.[27] It should be

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20 Nina von Uexkull and Halvard Buhaug "Security Implications of Climate Change: A Decade of Scientific Progress" (2021) 58 JPR 3 at 3.

21 Mariagrazia D'Angeli, Giovanni Marin and Elena Paglialunga "Climate Change, Armed Conflicts and Resilience" (Fondazione Eni Enrico Mattei, Working Paper, February 2022) at 2.

22 Mark Tufts "The Climate-Security Century" (2021) 8 Tufts Fletcher Security Review 80 at 81.

23 As noted, for example, by various academics in Colin Butler and Ben Kefford "Climate and Conflict: Risk Multipliers" (2018) 555 Nature 587; and Peter Gleick, Stephen Lewandowsky and Colin Kelley "Climate and Conflict: Don't Oversimplify" (2018) 555 Nature 587.

24 UN "The Climate Crisis" <www.un.org>.

25 UN Security Council *8451st Meeting* S/PV.8451 (25 January 2019).

26 See Chapter 3.II.C for the full definition of disputes.

27 Winkelmann, Glazebrook and France, above n 12, at [6] referencing Richard Lazarus "Super Wicked Problems and Climate Change: Restraining the Present to Liberate the Future" (2009) 94 Cornell L Rev

noted that my thesis is about climate change DR (CCDR), not climate change law. Therefore, I do not analyse the substance of cases or causes of action from a legal perspective. Rather, I am examining the nature of the disputes and the ways in which they are resolved.

1 Adjudication

One of the more common avenues for addressing CCDs is through the courts. It has been claimed that the first climate change case was heard in Australia in 1994.[28] Over 20 years later, in 2015, scholars considered that there was an "explosion" in the volume of climate change adjudication, and this is now regarded as a burgeoning and established movement, "which is unlikely to stop in the near future."[29] The Sabin Centre and Grantham Research Institute maintain climate change adjudication databases, which are updated regularly. In August 2022, these showed a combined total of 3,566 climate change cases in over 40 countries.[30]

There is a considerable body of research relating to climate change adjudication, and it is expected to continue to expand.[31] A 2019 meta-analysis on research in this area reviewed 130 articles from the period 2000-2018.[32] It noted that there was limited scholarly interest in climate change adjudication at the start of the century, with an increasing focus on it from the mid-2000s.[33] A follow-up to this research found a further 57 articles published in 2019 alone, "more than triple the output of each of the previous two years".[34] The resulting body of literature provides an overview of the common actors, causes of action, claims, issues, outcomes, and

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1153 at 1160-1161. Although the original source is dated, this statement remains true, as reflected by its recent use.

28 Brian Preston "Mapping Climate Change Litigation" (2018) 92 ALJ 774 at 1, referring to *Greenpeace Australia Ltd v Redbank Power Co Pty Ltd* (1994) 86 LGERA 143.

29 Laura Burgers "Should Judges Make Climate Change Law?" (2020) 9 TEL 55 at 56.

30 Sabin and Grantham Databases. See Chapter 3.II.C for discussion on the definition of climate change cases.

31 Jacqueline Peel and Hari Osofsky "Climate Change Litigation" (2020) 16 Annual Review of Law and Social Science 21 at 27-28.

32 Joana Setzer and Lisa Vanhala "Climate Change Litigation: A Review of Research on Courts and Litigants in Climate Governance" (2019) 10(3) WIREs: Climate Change e580.

33 At 3.

34 Peel and Osofsky, above n 31, at 25.

significant cases,[35] and more recently, some analysis of the process.[36] The literature considers climate change adjudication in both national and international contexts, as well as the interplay between adjudication and other DR processes.[37] The increasing use of adjudication to address CCDs is signalled by the 2020 publication of guidance from the International Bar Association, setting out legal arguments and precedents for parties wanting to take climate action against governments.[38] As researchers have noted, disputes that are resolved through DR processes other than adjudication generally attract less scholarly attention.[39] There is, however, evidence of these processes being used to address CCDs.

2 Arbitration

Arbitration is another DR process that is commonly referred to in relation to climate-related disputes. However, much of the research about it relates to the potential use of arbitration to address CCDs,[40] and there is less to be found about actual use. This could partly be due to the

35 Jolene Lin and Douglas Kysar (eds) *Climate Change Litigation in the Asia Pacific* (Cambridge University Press, Cambridge, 2020); Joana Setzer and others "Climate Change Litigation and Central Banks" (European Central Bank, Legal Working Paper Series 2021/12, December 2021); Katerina Mitkidis and Theodora Valkanou "Climate Change Litigation: Trends, Policy Implications and the Way Forward" (2020) 9 TEL 11; Joana Setzer and Lisa Benjamin "Climate Litigation in the Global South: Constraints and Innovations" (2020) 9 TEL 77; Javier Solana "Climate Litigation in Financial Markets: A Typology" (2020) 9 TEL 103; Joana Setzer and Catherine Higham *Global Trends in Climate Change Litigation: 2021 Snapshot* (Grantham Research Institute on Climate Change and the Environment and the Centre for Climate Change Economics and Policy, London School of Economics and Political Science, July 2021); Geetanjali Ganguly, Joana Setzer and Veerle Heyvaert "If at First You Don't Succeed: Suing Corporations for Climate Change" (2018) 38 OJLS 841; UNEP *Global Climate Litigation Report: 2020 Status Review* (July 2020); Nicole Rogers "Victim, Litigant, Activist, Messiah: The Child in a Time of Climate Change" (2020) 11 JHRE 103; and Jacqueline Peel, Hari Osofsky and Anita Foerster "Shaping the 'Next Generation' of Climate Change Litigation in Australia" (2017) 41 MULR 793.

36 Geoffrey Palmer "Can Judges Make a Difference?" in Alberto Costi and James Renwick (eds) *In the Eye of the Storm* (SPREP, Victoria University of Wellington and NZACL, Wellington, 2020) 107; Burgers, above n 29; Giuliana Viglione "Climate lawsuits are breaking new legal ground to protect the planet" 2020 579 Nature 184; Jacqueline Peel and Hari Osofsky "Litigation as a Climate Regulatory Tool" in Christina Voigt (ed) *International Judicial Practice on the Environment* (Cambridge University Press, Cambridge 2019) 311; and Elizabeth Fisher, Eloise Scotford and Emily Barritt "The Legally Disruptive Nature of Climate Change" (2017) 80 MLR 173.

37 Daniel Bodansky "The Role of the International Court of Justice in Addressing Climate Change" (2017) 49 Ariz St LJ 689; Philippe Sands "Climate Change and the Rule of Law: Adjudicating the Future in International Law" (2016) 28 JEL 19; and Roda Verheyen and Cathrin Zengerling "International Dispute Settlement" in Kevin Gray, Richard Tarasofsky and Cinnamon Carlarne (eds) *The Oxford Handbook of International Climate Change Law* (Oxford University Press, Oxford, 2016) 418.

38 International Bar Association *Model Statute for Proceedings Challenging Government Failure to Act on Climate Change* (February 2020).

39 Setzer and Vanhala, above n 32, at 11; and Peel and Osofsky, above n 31, at 27.

40 International Chamber of Commerce [ICC] *Commission Report: Resolving Climate Change Related Disputes through Arbitration and ADR* (November 2019); Judith Levine and Camilla Pondel "Updates on the Changing State of the Climate and International Arbitration" (2019) 7 ACICA Review 31; Wendy Miles (ed) *Dispute Resolution and Climate Change: the Paris Agreement and Beyond* (ICC, Paris, 2017); Mark Baker, Holly Stebbing and Cara Dowling "Acclimatising to Climate Change" (2018) GAR 18; Sands, above n 37; Luke Elborough "International Climate Change Litigation" (2017) 21 NZJ ENVTL L 89; and

fact that arbitration can be conducted privately, compared to the public setting and reporting of adjudicated disputes. However, the research indicates that it is in fact used less frequently than adjudication. This work includes consideration of inter-state arbitration under key climate treaties,[41] investor-state arbitration for trade-related disputes, and commercial arbitration for disputes involving corporations, such as force majeure contractual claims.[42]

3 Negotiation

Although much has been written on climate change negotiation, it largely relates to the substance of the ongoing series of international discussions, primarily under the UNFCCC through the COP, and not the specific process of negotiation. Some more relevant research for the purposes of this thesis, started to appear following the "failure" of COP 15 in 2009, suggesting how the process could be improved. This has led to a body of scholarship analysing the effectiveness of negotiation.[43] As well as work examining the UNFCCC Negotiation Process's interplay with adjudication.[44]

4 Mediation

There is less scholarship on climate change-related mediation. Mediation scholarship generally is more limited and often less academically robust compared to other fields of DR, with a prevalence of articles or blogs by practitioners.[45] It would, therefore, be unsurprising to find a

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

41 Such as the UNFCCC, art 14 and the Paris Agreement. See for example, International Bar Association Climate Change Justice and Human Rights Task Force *Achieving Justice and Human Rights in an Era of Climate Disruption* (September 2014).

42 ICC, above n 40; Wendy Miles (ed), above n 40; Baker, Stebbing and Dowling, above n 40; and Sands, above n 37.

43 See for example, Wytze van der Gaast *International Climate Negotiation Factors: Design, Process, Tactics* (Springer International Publishing, Switzerland, 2017); Lawrence Susskind and Saleem Ali *Environmental Diplomacy: Negotiating More Effective Global Agreements* (2nd ed, Oxford University Press, Oxford, 2015); Rory Smead and others "A Bargaining Game Analysis of International Climate Negotiations" (2014) 4 Nature Climate Change 442; Antto Vihma and Kati Kulovesi "Can Attention to the Process Improve the Efficiency of the UNFCCC Negotiations?" (2013) 7(4) CCLR 242; and Peter Kriss and others "Behind the Veil of Ignorance: Self-Serving Bias in Climate Change Negotiations" (2011) 6 JDM 602.

44 Margaretha Wewerinke-Singh and Diana Hinge Salili "Between Negotiations and Litigation: Vanuatu's Perspective on Loss and Damage From Climate Change" (2020) 20 Climate Policy 681 at 689-690; Anna-Julia Saiger "Domestic Courts and the Paris Agreement's Climate Goals" (2020) 9 TEL37; Lennart Wegener "Can the Paris Agreement Help Climate Change Litigation and Vice Versa?" (2020) 9 TEL 17; Alexander Zahar "Collective Obligation and Individual Ambition in the Paris Agreement" (2020) 9 TEL 165; Brian Preston "The Influence of the Paris Agreement on Climate Litigation: Legal Obligations and Norms (Part I)" (2020) 33(1) JEL 1; and Brian Preston "The Influence of the Paris Agreement on Climate Litigation: Causation, Corporate Governance and Catalyst (Part II)" (2021) 33(2) JEL 227.

45 See "Mediation Scholarship" in Grant Morris and Annabel Shaw *Mediation in New Zealand* (Thomson Reuters, New Zealand, 2018) 9.

smaller body of research in this area. However, there is very limited evidence of the use of mediation in relation to CCDs at all. There is some literature on the potential use of mediation as an appropriate and effective way to address these disputes,[46] but very little on actual practice.[47] One international mediator noted that he was not aware of any mediation occurring in this field.[48] This is in contrast to other subject-matter areas where mediation is widespread, for example, in international commercial disputes.[49]

There is also limited scholarship relating to the use of other "alternative" DR processes (such as, facilitation) and diplomatic means (such as, good offices, conciliation and commissions of inquiry) to address CCDs.[50] There is, however, some more recent scholarship relating to a possible role for restorative practices in addressing these disputes.[51]

III Research Description

A Research Problem

This overview of the relevant literature shows that there is a growing body of research related to CCDs. There appear, however, to be several significant gaps in this area of study. First, there does not seem to be an overarching definition and understanding of CCDs. Indeed, there is a general absence of work looking at this broader topic. Instead, the literature defines and analyses CCDs in relation to one particular type of dispute (such as, those based on human

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46 Laura Donkers "Revitalising Embodied Community Knowledges as Leverage for Climate Change Engagement" (2022) 171 Climatic Change Online; Oliver Leighton Barrett "Mediation as the Nexus of Climate Change and Conflict" in Alexia Georgakopoulos (ed) *The Mediation Handbook: Research, Theory, and Practice* (Taylor & Francis Group, New York, 2017) 276; Peng Ding and others "An Application of Automated Mediation to International Climate Treaty Negotiation" (2015) 24 Group Decision and Negotiation 885; Alana Knaster "Resolving Conflicts over Climate Change Solutions: Making the Case for Mediation" (2010) 10 Pepperdine DRLJ 465; and Orren Johnson "On the Possibility of Mediation at the UNFCCC" (Master of Science Thesis, University of Oregon, 2013).

47 The scholarship that does exist on practice is at the more informal end of the scholarly spectrum, for example, Mediators Beyond Borders "Case Studies Demonstrating the Use of Mediation, Consensus Building and Collaborative Problem Solving in Resolving Environmental and Climate-Related Conflicts" (October 2008); and John Sturrock "Mediation in a Changing Climate From Consensus to Confrontation?" (speech to the International Mediation Symposium, Salzburg, 13 June 2019).

48 Interview with Geoff Sharp, International Mediator (the author, Wellington, 26 July 2022).

49 Stacie Strong "Realizing Rationality: An Empirical Assessment of International Commercial Mediation" (2016) 73 Washington & Lee L Rev1973.

50 See Chapter 2.III.B and IV for definition of these terms.

51 Stacy-ann Robinson and D'Arcy Carlson "A Just Alternative to Litigation: Applying Restorative Justice to Climate-Related Loss and Damage" (2021) 42 TWQ 1384; Darren McCauley and Raphael Heffron "Just Transition" (2018) 119 Energy Policy 1; Ben Almassi "Climate Change and the Need for Intergenerational Reparative Justice" (2017) 30 JAGE 199; and Chaitanya Motupalli "Climate Change, Intergenerational Justice, and Restorative Justice" (Doctor of Philosophy Dissertation, University of Berkeley, California, 2017).

rights) or one particular process (most commonly, disputes that are negotiated or adjudicated), as opposed to considering the full scope of the disputes themselves. This is related to the second research gap, specifically, an absence of work looking at the entire DR system for addressing CCDs. As illustrated, there is research considering the use of a specific DR process, but most of it relates to adjudication or the UNFCCC Negotiation Process, and none maps out the full range of DR processes (including arbitration, mediation, indigenous and restorative practices, conciliation and so on). Thirdly, there is limited work considering how effective these processes are in addressing CCDs. Some literature considers aspects of effectiveness (such as, the impact of specific court decisions on mitigation) but there is no assessment of the full scope of processes. Indeed, there is no comprehensive consideration of what "effective" resolution means in relation to CCDs, nor a clear and specific mechanism for assessing it. Therefore, although a cursory consideration suggests that the current approach to resolving CCDs is not effective, as climate change worsens and related disputes increase, this assumption has not been demonstrated by evidence-based examination.

This lack of research examining and assessing the full scope of CCDs and CCDR processes means that there is no substantiated basis on which CCDs can be most effectively identified, understood, resolved or prevented. Research examining the DR response to the 2010/2011 Canterbury earthquakes in New Zealand found that a comprehensive understanding of, and approach to, DR is necessary following natural disasters.[52] CCDs are of an immeasurably larger scale and severity than individual disaster events (both in terms of the disputes themselves, and the impacts of failing to resolve them effectively), amplifying the need for a considered and comprehensive approach to examining and addressing them.

As set out in Section I above, CCDs are a unique type of dispute that require particular attention. Climate change is one of the world's most "wicked" problems.[53] CCDs concern an imminent threat to human survival, involve highly vulnerable parties and fundamental power imbalances, and are burgeoning in complexity and volume. It is, therefore, necessary to have a specific, comprehensive understanding of how and why they arise, and how to most effectively resolve them. Additionally, a systematic CCDR response will not only allow us to respond

[52] Freya McKechnie *Dispute Resolution Following Natural Disasters* (Victoria University of Wellington and GCDR, April 2018) at 31.

[53] Mike Hulme *Why We Disagree About Climate Change* (Cambridge University Press, Cambridge, 2009) 334; and Michel Callon "An Essay on Framing and Overflowing" in Michel Callon (ed), *The Laws of the Markets* (Wiley-Blackwell, Oxford, 1998) in Fisher, Scotford and Barritt, above n 36, at 177.

most effectively to current disputes, but also to anticipate future disputes, therefore ensuring that the CCDR system is adequately future-proofed.

B Research Question

In order to address the research problems outlined above, my overarching research question is, what is the most effective way to resolve CCDs? I have approached this broad question by working through three sub-questions: what are CCDs; what processes are currently used to address CCDs and how effective are they; and are there other DR processes that would more effectively resolve CCDs? As outlined above, one of the research gaps I identified in embarking on this thesis is the lack of a mechanism for assessing the effectiveness of CCDR. Therefore, I have also been required to address the question, what is effective resolution of CCDs?

C Thesis

1 Thesis

My basic hypothesis is that there is not one, best way to resolve CCDs. Such heterogenous disputes will not have an effective homogenous resolution. I contend that different types of CCDs will be most effectively resolved using different processes from across the DR spectrum – from adjudication to restorative and indigenous approaches. I, therefore, argue that those processes should not be viewed as separate, but as parts of a whole, and that it is this comprehensive DR system that will provide the most effective way to resolve CCDs. I also argue that, on the basis of an evidence-based assessment, this system can, and should be improved to enhance its effectiveness.

To some extent, my hypothesis picks up on the seminal DR scholarship idea of the "multi-door courthouse" that was first articulated nearly 45 years ago.[54] My argument is not for a courthouse per se but for a comprehensive DR system incorporating a range of DR processes. Deciding which of these process will be most effective in any given situation is a matter of "fitting the forum to the fuss."[55] This involves considering a number of factors, which are

[54] Frank Sander "Varieties of Dispute Processing" (speech to the National Conference on the Causes of Dissatisfaction with the Administration of Justice, Minnesota, 7-9 April 1976) at 4.

[55] Frank Sander and Stephen Goldberg "Fitting the Forum to the Fuss: A User-Friendly Guide to Selecting an ADR Procedure" (1994) 10 Negotiation Journal 49.

examined through my thesis, including a process's efficacy and the nature of the particular dispute.

I also argue that given the unique nature of CCDs as identified in this thesis, to be effective, a DR process must support the climate response. This argument is based on a liberalism, rule of law-based theory, as detailed in my methodology below.

I predict that CCDs will continue to increase in number, variety, severity, and complexity. These disputes will cover an extensive and rapidly expanding range of subject matters, sources of law, actors, consequences, potential solutions, and contextual settings. On this basis, I also argue that having a specific and effective CCDR system will become increasingly important as this body of disputes grows.

2 Objectives and Relevance

In order to address the research problems outlined above, my thesis has a number of objectives. First, it aims to provide a comprehensive understanding and mapping of CCDs and the current DR system for addressing them. Second, it endeavours to formulate and apply a mechanism for assessing the effectiveness of that system. Third, on the basis of that assessment, it aims to recommend specific improvements to address the identified deficiencies and enhance the system's efficacy. Lastly, it endeavours to propose an overview of a more effective and systematic approach to resolving CCDs through a CCDR system that is comprehensive, cohesive, deliberate, adaptable and preventative.

In achieving these objectives, my thesis aims to broaden efforts to map, explore and analyse the ways in which CCDR can, not only most effectively resolve CCDs, but also play a role in addressing climate change. If I am successful in this endeavour, it will provide a structured way in which CCDs can be more effectively identified, understood, resolved or prevented. Beyond scholarly contribution, practical application of the proposed CCDR system would have climate benefits, as one of its principles is to address climate change.[56]

[56] See Chapter 3.III.

3 Research Limitations

There is a vast and rapidly increasing array of CCDs in both the national and international contexts. It is not feasible to attempt to identify and consider them all. To create a manageable scope, I have used a taxonomical definition of CCDs and examined particular disputes to illustrate each broader subcategory. In order to obtain a global picture of the CCDR system, and given that the two are irrevocably interrelated in this context, I have drawn these examples from both international and national settings. There is also a rapidly, ever-increasing body of relevant climate change-associated literature across science, law, policy, and other areas of research. In order to manage this issue of scope, I have made my research current as at May 2022. Lastly, I am confining my proposal for a more effective CCDR system to a principle-based overview, as opposed to a detailed design.

4 Methodology

This thesis entails predominantly doctrinal and theoretical research. My methodology consists of firstly defining key terms, and then developing a theoretical system from my review and critical analysis of the relevant literature to define, map, assess, and propose improvements to, CCDR. More precisely, my definitional research entails reviewing the work of climate change and DR experts. To obtain a complete picture of the CCDR system, my research covers national and international disputes and processes. Mapping this system involves examining: primary sources of CCD-related international and national law; CCD-related national and international judgments, decisions, awards, and settlements; and relevant reviews by experts. In Chapter Three, I have formulated a CCDR assessment mechanism founded on DR, CCDR and rule of law scholarship. I use this to assess the effectiveness of CCDR with reference to analysis by climate change law and DR experts. For the proposed improvements part of this thesis, I adopt aspects of reform-oriented research, that is, I examine the adequacy of the current CCDR system (as measured by the effectiveness mechanism) and make recommendations for improvements to it. All of this work involves reviewing of research papers, reports, media releases, speeches, websites and other secondary materials. A more detailed outline of the structure of this thesis is provided in Section IV below.

Another important methodological aspect of this thesis is that it proceeds on the basis that climate change should be addressed. This approach is based on a liberalism, rule of law-based theory of law. These are complex and debated notions that are beyond the scope of this thesis to define in depth. Drawing on the work of jurisprudential scholars, I am adopting the following

definitions of these theories. Liberalism theorises that the legal system should provide rights and equality for all, including rights to life and liberty, based on a higher moral code.[57] This approach is captured by the liberalist/substantive theory of the rule of law, which posits that the law has a standard-setting (or normative) function, requiring it to embody and protect certain substantive attributes or ideals such as justice, moral principles, and human rights.[58] As detailed above in Section II, climate change is a common concern of humankind, and the scientifically proven impacts of climate change (both current and future) pose a threat to human survival.[59] Under a liberalism, rule of law theory, the moral principles and protections embodied by the law require that climate change be addressed as it is a threat to fundamental rights, including life and liberty. That is the approach I take in this thesis. This is also consistent with principles of climate justice, such as, support for the climate-vulnerable, and more specifically, the "polluter pays" principle.[60] My approach is further supported by broader, well-established rules and principles of international law, such as the right to reparations for injury caused by violations.[61] This requirement to address climate change is specifically incorporated and applied to CCDR through the effectiveness measure that I formulate, as detailed in Chapter Three.[62]

IV Thesis Outline

A Part A: Background and Definitions

Following on from the general introduction to my topic and thesis in this chapter, Chapter Two defines the basic climate change terms that are used in this thesis, as well as the DR processes referred to, including adjudication, arbitration, mediation, negotiation, restorative practices, and Māori DR.

In Chapter Three, I address the research sub-question, what are CCDs? As mentioned in my research limitations above, it is impossible to precisely define the current multitude of disputes

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57 John Locke *Second Treatise of Government* C Macpherson (ed) (Hackett Publishing Company, Indianapolis, 1980).

58 Ronald Dworkin "Political Judges and the Rule of Law" (1978) 64 Proceedings of the British Academy 259 at 262; Brian Tamanaha *On The Rule of Law: History, Politics, Theory* (Cambridge University Press, Cambridge, 2004) at 92; and Tom Bingham "The Rule of Law" (2007) 66 CLJ 67 at 66.

59 See *Protection of Global Climate*, above n 1.

60 *Report of the UN Conference on Environment and* Development A CONF 151/26/Rev.1(Vol I) (1992) at Principle 16.

61 Wewerinke-Singh and Hinge Salili, above n 44, at 682.

62 See Chapter 3.III.

relating to climate change, let alone imagine those that are likely to arise in the future. I do not, therefore, apply a single, prescriptive definition but instead use the broadest and most inclusive conceptual understanding of CCDs to properly reflect the complexity of this issue, and to give this thesis the widest and most enduring scope. On this basis, I use the "three pillars" of the climate change response to create a taxonomical definition,[63] specifically: Mitigation Disputes, being those related to the reduction and removal of GHG emissions; Adaptation Disputes, being those related to adapting to the impacts of climate change; and Loss and Damage Disputes, being those relating to climate change harms (that have not been reduced or prevented through mitigation efforts or adaptation measures).

Chapter Three also sets out what I mean by "disputes" in this thesis. Again, this is a broad scope, and includes any dispute related to climate change, as opposed to a more limited consideration of legal disputes or those as defined at international law. In this chapter, I also formulate a mechanism for defining and assessing the effectiveness of CCDR, which includes the precept that climate change should be addressed.

B Part B: Current Climate Change DR System

This Part of my thesis addresses my second sub-question: what processes are currently used to address CCDs and how effective are they? The first three chapters in Part B (Chapters Four to Six) are made up of two main sections. The first section maps the current processes being used to address the particular subcategory of dispute (Mitigation, Adaptation, and Loss and Damage) by identifying and analysing the types of disputes that are using them. This addresses the question, what processes are currently used to address CCDs? The second section of these chapters examines the effectiveness of the respective DR processes, which addresses the question, how effective are they? The last chapter in this Part, Chapter Seven, then provides a summary of the overall CCDR system and its effectiveness as detailed through Chapters Four to Six.

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[63] I am adopting the use of the term 'three pillars' from Morten Broberg "State of Climate Law: The Third Pillar of International Climate Change Law" (2020) 10 Climate Law 211.

C Part C: Enhanced Climate Change DR System

Having mapped and assessed the existing CCDR system in Part B, this final Part deals with the third sub-question, are there other DR processes that would more effectively resolve CCDs? Chapter Eight recommends specific improvements to the existing CCDR system to address the deficiencies identified by the assessment in Part B and enhance the system's efficacy. It also examines the appropriateness of the various DR processes by identifying the features of a dispute that can be used to indicate whether one particular process may be more effective than others.

Finally, Chapter Nine summarises my research by outlining the problems and questions considered, and answers provided, by the preceding chapters. It also manages some final gaps in my thesis by identifying and addressing outstanding issues with the proposed CCDR system. It concludes that the current way of considering and approaching CCDR is problematic, and confirms my thesis that there is not one, best way to resolve CCDs. Rather, it concludes that the most effective way to address CCDs is through a system that supports the climate response, is comprehensive, cohesive, deliberate, adaptable, preventative, and, in large part, relies on more and better use of innovative alternative DR processes.

Chapter 2: Definition of Key Terms

I Chapter Introduction

This chapter provides definitions of the key terms that I use throughout this thesis. This includes basic climate change terms, as well as what I mean by DR. It also provides more thorough definitions of the relevant DR processes. In doing so, this chapter demonstrates that there is a very broad and varied range of ways to resolve disputes.

II Climate Change

This thesis does not focus on climate change science. It does not, therefore, provide in-depth definitions of the technical aspects of this subject. Rather, as outlined in Chapter One, my thesis proceeds on the basis that climate change is occurring and is anthropogenic. This is, therefore, the meaning of the term as used throughout. Where I use the term global or climate warming, it means "the rise of the earth's surface temperature predicted to occur as a result of increased emissions of greenhouse gases."[1] These gases are defined by the IPCC as:[2]

> … gaseous constituents of the *atmosphere*, both natural and *anthropogenic*, that absorb and emit radiation at specific wavelengths within the spectrum of terrestrial radiation emitted by the Earth's surface, the atmosphere itself and by clouds. This property causes the greenhouse effect.

References to GHGs and emissions in this thesis mean anthropogenic emissions, that is, those caused by human activities. As defined by the IPCC, "[t]hese activities include the burning of fossil fuels, deforestation, land-use and land-use changes, livestock production, fertilisation, waste management and industrial processes."[3]

The language around climate change has changed over time and continues to evolve. It is becoming increasingly common to see the terms "climate crisis" and "climate emergency" being used in place of climate change, as the impacts of this phenomenon become more apparent and the window of time for reducing GHG emissions becomes smaller. For example, the UN Secretary-General, António Guterres, used the term climate emergency in September

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1 Ministry for the Environment "Glossary of Climate Change Terms" in "Climate Change Effects and Impacts Assessment: A Guidance Manual for Local Government in New Zealand" (May 2022) <www.mfe.govt.nz>.

2 IPCC "Annex 1: Glossary" in *Special Report: Global Warming of 1.5 ℃* (October 2018).

3 IPCC, above n 2.

2018;[4] a journal article in 2019 found, "the evidence from tipping points alone suggests that we are in a state of planetary emergency: both the risk and urgency of the situation are acute";[5] and a later article published in 2020, endorsed by over 11,000 scientists, stated that "the climate crisis has arrived."[6] In addition, 2,098 central and local governments around the world (including the New Zealand Parliament, in December 2020) have made climate emergency declarations since 2016.[7] I am using the term climate change in this thesis as it is still more prevalent at this stage.

III Dispute Resolution

A Overview

The term "disputes" as used in this thesis includes both national (domestic) and international disputes.[8] The latter includes inter-state disputes as well as those between states, institutions, legal persons (or corporations) and individuals in different jurisdictions. The term "dispute resolution", therefore, refers to all processes used for resolving these disputes. There are two broad categories of DR – adjudicative (or judicial) and non-adjudicative (or non-judicial). In this way, the term does not just mean adjudication (or litigation), as it is sometimes used. Dispute resolution processes can be categorised using a number of different characteristics. These include: the level of formality and flexibility in the process itself; the presence and involvement of a third party; and the method of determining the outcome.[9]

Formality of a process relates to the "rules" that govern it, for example: those set out in the relevant treaty or legislation; those of the applicable court; the general rules of evidence; or other legal protocols or traditional practices. The flexibility of the process refers to the ability of the parties to determine how it is conducted in order to best suit their individual circumstances. Some forms of DR involve only the parties to the dispute (and possibly their representatives). Others involve an independent or impartial third party. The role of that third

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4 António Guterres "Secretary-General's Remarks on Climate Change" (speech at the UN Headquarters, New York, 10 September 2018).

5 Timothy Lenton and others "Climate Tipping Points" (2019) 575 Nature 592 at 595.

6 William Ripple and others "World Scientists' Warning of a Climate Emergency" (2020) 70 BioScience 8.

7 Climate Emergency Declaration and Mobilisation in Action "Global Climate Emergency Declaration Data Sheet" <www.cedamia.org>.

8 The full definition of disputes is detailed in Chapter 3.II.C.

9 Tania Sourdin *Alternative Dispute Resolution* (6th ed, Thomson Reuters, Sydney, 2020) at 4-6; and Scott Davidson and Nathan Ross "Peaceful Settlement of Disputes" in Alberto Costi (ed) *Public International Law: A New Zealand Perspective* (LexisNexis Ltd, Wellington, 2020) 979 at 980.

party varies significantly between different processes. This variation can be seen reflected in the method of reaching an outcome – either consensually or by determination.[10] In a consensual process, the parties reach a decision by agreement. In a determinative process, a third party makes a decision about the outcome of the dispute. Outcomes from both consensual and determinative processes may or may not be binding and/or enforceable. All of these characteristics combine to reflect the level of self-determination a particular process allows. This categorisation can be reflected on a spectrum as illustrated in the Figure 1 below:

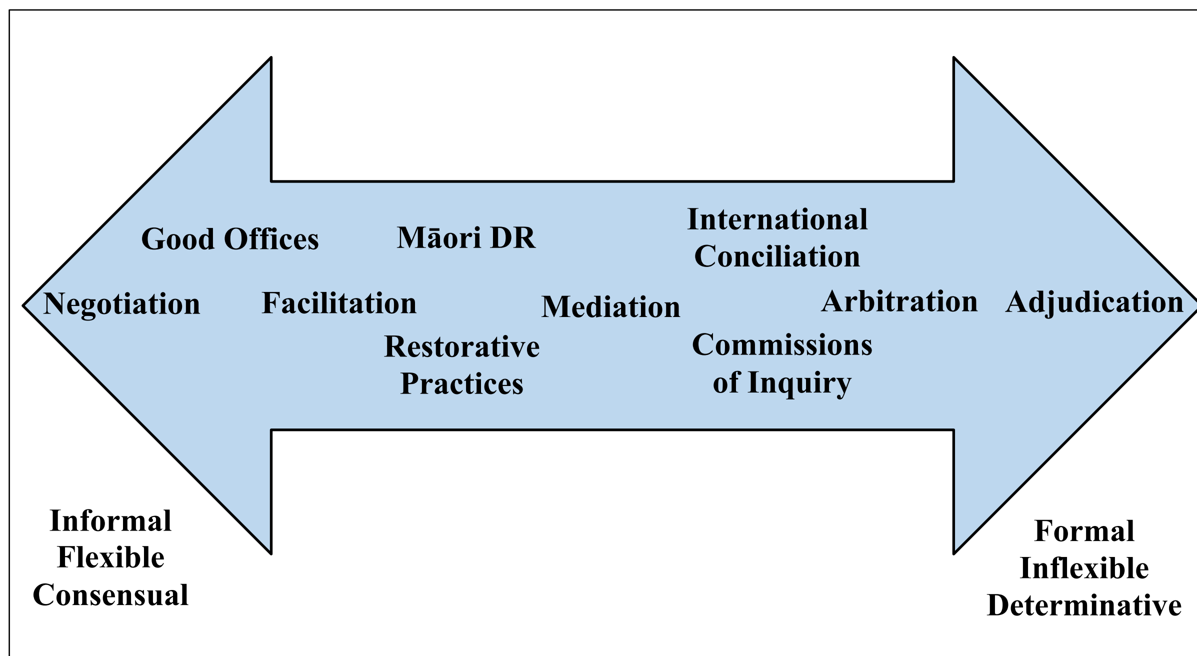

Figure 1: DR Processes on a spectrum of formality, flexibility and method of determining outcome.

The separate DR processes shown in this figure are considered in more detail in Section IV below.[11] In this thesis, I also distinguish DR processes that have a broader focus than the specific dispute immediately before them. I use the term "preventative DR" to refer to processes that are not only focused on resolving the immediate dispute (such as determinative processes) but that have a wider focus on preventing future disputes (such as some consensual processes, including Māori DR and restorative practices).[12]

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[10] GCDR "Dispute Resolution Processes" <www.mbie.govt.nz>.

[11] The mediation, negotiation, and restorative practices definitions in Section IV are informed by Grant Morris and Annabel Shaw *Mediation in New Zealand* (Thomson Reuters, New Zealand, 2018) at 21-44; and Annabel Shaw "ADR and the Rule of Law Under a Modern Justice System" (LLM Thesis, Victoria University of Wellington, 2016) at 11-17 and 55-61.

[12] The role of prevention in DR is discussed in more detail in relation to effectiveness in Chapter 3.III.C.2.

B Alternative DR and Diplomatic Means

1 National

Alternative DR (ADR) is the more common term for non-adjudicative DR in a national law context. ADR was initially named to mean DR that was "alternative" to the traditional court, and so encompasses any process other than adjudication used to resolve a dispute, including, negotiation, facilitation, mediation, indigenous and restorative practices, neutral fact-finding, case appraisal, expert determination, and arbitration.[13] One distinction between some of these ADR processes and adjudication, is confidentiality. Public accountability is a rule of law underpinning of adjudicative DR, requiring both the process and outcome of adjudication be publicly accessible.[14] This is in contrast to some alternative forms of DR, as providing private resolution of disputes was one of the originating objectives of modern ADR. Although the existence and extent of confidentiality within any single process will vary, it will often apply.

It is worth briefly outlining the history of ADR as it provides useful contextual background when it comes to understanding the use and effectiveness of the different DR processes. In relation to national law, there are three generations or distinct periods of ADR. The first or "Old" period is often overlooked, but it is important to note that ADR is not a new approach to resolving disputes. Traditional forms of DR have been used for hundreds of years by cultures around the world, including Māori. As ADR historians note, "its roots run deep in human history."[15] The second period occurred from around the 1920s, with the development of ADR theories,[16] and the increasing use of ADR, especially in relation to post-World War II industrial disputes and the expanding civil rights movement of the 1960s. The third or "modern" period of ADR came about as a part of broader reform of the traditional justice system that occurred around the world from the early 1970s. This reform was born out of dissatisfaction with the existing adjudication-based system, particularly in relation to civil justice, and sought improved access to justice. One of the most apparent objectives of this modern era was the efficient resolution of disputes, including through the increased use of ADR.

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13 See for example, Hazel Genn *Judging Civil Justice* (Cambridge University Press, New York, 2010) at 80-81.

14 See for example, Lord Bingham's definition of the rule of law in Tom Bingham *The Rule of Law* (Allen Lane, London, 2010) at 8.

15 Jerome Barrett and Joseph Barrett *A History of Alternative Dispute Resolution* (Jossey-Bass, San Francisco, 2004) at 2.

16 See, for example, Mary Parker Follett "Constructive Conflict" (paper presented to the Bureau of Personnel Administration Conference, New York, January 1925).

2 International

In inter-state law, processes other than adjudication can be separated into two categories. First, those that do not have legally binding outcomes and are often termed "diplomatic means" of settlement or resolution.[17] This includes negotiation, mediation, good offices, conciliation, and commissions of inquiry. Secondly, those that are a legal means of resolving disputes with a legally binding outcome, such as arbitration.[18] Some international law scholars define arbitration as a form of adjudication.[19] In this thesis, however, I consider arbitration separately, in order to clearly distinguish it as a distinct process from judicial adjudication. In private international law, the meaning of ADR is generally consistent with that explained above in relation to national law.

As with national ADR, it is worth briefly noting the history of these diplomatic means. The use of diplomacy, or the peaceful conduct of relations among nations, to address disputes is as old as nations themselves.[20] Diplomatic means have developed in formality and complexity alongside societal relations.[21] In the aftermath of World War II, the international community explicitly agreed to settle their disputes by "peaceful means in such a manner that international peace and security, and justice, are not endangered."[22] They further specified that they would first seek resolution of any dispute by "negotiation, enquiry, mediation, conciliation, arbitration, judicial settlement, resort to regional agencies or arrangements, or other peaceful means of their own choice."[23] Although not specifically referenced in the Charter, in this thesis, diplomatic means includes the use of good offices.[24] The terms "ADR" and "diplomatic means" are not used frequently in the main body of this thesis, as the focus is on specific and individual processes. The processes that are relevant to my research are defined below.

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17 For example, J G Merrills *International Dispute Settlement* (6th ed, Cambridge University Press, Cambridge, 2017) at 88; and Cesare Romano, Karen Alter and Yuval Shany "Mapping International Adjudicative Bodies, the Issues, the Players" in Cesare Romano, Karen Alter and Yuval Shany (eds) *The Oxford Handbook of International Adjudication* (Oxford University Press, Oxford, 2013) 3 at 5.

18 Merrills, above n 17, at 88.

19 For example, Romano, Alter and Shany, above n 17, at 5.

20 See for example, Philip De Souza and John France (eds) *War and Peace in Ancient and Medieval History* (Cambridge University Press, New York, 2008).

21 Keith Hamilton and Richard Langhorne *The Practice of Diplomacy: Its Evolution, Theory and Administration* (2nd ed, Taylor & Francis Group, London, 2011) at 1-2.

22 Charter of the UN, art 2(3).

23 Charter, art 33(1).

24 As recognized by the General Assembly: *2005 World Summit Outcome* GA Res 60/1 (2005) at [76].

IV DR Processes

This section examines and defines the specific DR processes shown in Figure 1 above. For reasons of scope and relevance, this is not a definitive list. Rather, it includes the main processes that are most likely to be used to address climate change disputes (CCDs). This section first considers the two determinative processes (adjudication and arbitration), and then moves through the consensual processes involving a third party (mediation, facilitation, restorative processes, Māori DR, conciliation, commissions of inquiry, and good offices) before addressing the process that only involves the parties themselves (negotiation).

A Adjudication

1 General Definition

Adjudication is a particular law-based way of reaching a final and legally binding decision in a dispute. It takes place in both adversarial and inquisitorial systems, and occurs in both national and international contexts, in courts and tribunals. There is a variety of terms used to refer to this form of DR, including, litigation, trial, adjudication and courts. For the sake of consistency, I use "adjudication" to capture all of these. As noted above, some scholars also include arbitration within this definition. In this thesis, I consider them separately. Although they are both law-based processes that produce legally binding decisions, they are clearly distinct. More specifically, adjudication occurs by way of a pre-existing judicial body whose authority derives from a public mandate, whereas arbitration takes place through an arbitral body selected and authorised by the parties.[25] As also noted above, this thesis considers both national and international adjudication. Broadly speaking, the main difference is that, at a national level, adjudication is often compulsory and outcomes are enforced by public authorities, whereas, internationally, it generally relies on some form of parties' consent and there is no central body to enforce outcomes.[26] The relevant international adjudication bodies referred to in this thesis include the International Court of Justice, the International Tribunal for the Law of the Sea, the World Trade Organisation Dispute Settlement Body, as well as other specialised and regional international bodies, such as the Human Rights Committee and European Court of Human Rights.

[25] Romano, Alter and Shany, above n 17, at 5.
[26] At 5-6.

2 Climate Change Adjudication

This subsection provides a general definition and overview of adjudication specific to climate change.[27] This has been more specifically defined by scholars Joana Setzer and Rebecca Byrnes, as including disputes:[28]

> … brought before administrative, judicial and other investigatory bodies, in domestic and international courts and organisations, that raise issues of law or fact regarding the science of climate change and climate change mitigation and adaptation efforts.

A definition provided by commercial law academic, Javier Solana, adds a broader elaboration, saying it, "goes beyond judicial authorities to include administrative bodies with regulatory enforcement powers and the authority to issue binding decisions."[29] I use this latter, more expansive definition in this thesis to provide the most comprehensive understanding of CCDs.

Up until 2017, UNEP reported that most jurisdictions had experienced "little or no" climate change adjudication.[30] This was consistent with the findings from Joana Setzer's and Lisa Vanhala's meta-analysis of research from 2000-2018.[31] At the same time, however, leading climate law scholars, Daniel Bodansky, Jutta Brunnée and Lavanya Rajamani stated that the traditionally modest role that courts and tribunals had played in climate change law had started to change, as a growing number of international and national cases was emerging.[32] In 2019, senior members of the New Zealand judiciary reported that climate change adjudication was "a burgeoning area"[33] and by 2021, researchers found that it had become a "truly global phenomenon."[34]

The majority of climate change adjudication to date has taken place in developed countries in the northern hemisphere. Most has occurred in the United States, which accounts for over a

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27 More detail is provided through the discussion of specific disputes in Part B.

28 Joana Setzer and Rebecca Byrnes "Global Trends in Climate Change Litigation: 2020 Snapshot" (July 2020, London, Grantham Research Institute on Climate Change and the Environment and the Centre for Climate Change Economics and Policy, London School of Economics and Political Science) at 5.

29 Javier Solana "Climate Litigation in Financial Markets: A Typology" (2020) 9 TEL 103 at 106.

30 UNEP *The Status of Climate Change Litigation: A Global Review* (May 2017) at 14.

31 Joana Setzer and Lisa Vanhala "Climate Change Litigation: A Review of Research on Courts and Litigants in Climate Governance" (2019) 10(3) WIREs: Climate Change e580 at 5.

32 Daniel Bodansky, Jutta Brunnée and Lavanya Rajamani *International Climate Change Law* (Oxford University Press, Oxford, 2017) at 283-284.

33 Winkelmann, CJ, Glazebrook J and Ellen France J "Climate Change and the Law" (speech to the Asia Pacific Judicial Colloquium, Singapore, 28 May 2019) at 16.

34 Joana Setzer and others "Climate Change Litigation and Central Banks" (European Central Bank, Legal Working Paper Series 2021/12, December 2021) at 3.

third of the world's total number of recorded cases, and Australia is the second most active jurisdiction.[35] There is, however, an increasing geographical spread, and climate change adjudication is growing in low and middle income countries, including the global south.[36] It is important to note, however, that many of the cases recorded as climate change adjudication are not primarily focused on climate change. Indeed, "[t]he majority have climate change as a secondary component of the lawsuit."[37] In other words, it is only incidental, "tangential, or subsidiary, to the main element of the lawsuit."[38] This issue, and how it is dealt with in this thesis, is discussed in Chapter Three.

Climate change adjudication was initially dominated by state actors, but the role of other actors is increasing.[39] The majority of the parties initiating climate change adjudication are citizens, corporations and, increasingly, NGOs.[40] There are also newer categories of claimants emerging, including, indigenous peoples,[41] activists,[42] young people,[43] future generations,[44] investors, shareholders, cities and states.[45] Nearly all defendants are governments, with others increasingly coming from fossil fuel corporations,[46] and more recently, the financial sector.[47]

There are a number of approaches to categorising climate change adjudication cases. They can be considered in relation to the parties or the areas of law and causes of action they involve. This latter categorisation can be broad and general, such as, public and private,[48] national and international, or more granular, for example, constitutional, administrative, human rights, torts, and consumer law. Fewer scholars traditionally categorised climate change adjudication in

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35 Sabin and Grantham Databases.
36 Setzer and Byrnes, above n 28, at 7; Joana Setzer and Lisa Benjamin "Climate Litigation in the Global South: Constraints and Innovations" (2020) 9 TEL 77; and Jacqueline Peel and Hari Osofsky "A Rights Turn in Climate Change Litigation?" (2018) 7 TEL 37.
37 Geetanjali Ganguly, Joana Setzer and Veerle Heyvaert, "If at First You Don't Succeed: Suing Corporations for Climate Change" (2018) 38 OJLS 841 at 843.
38 Clyde and Co "Climate Change: Liability Risks Report" (March 2019) at 11.
39 Mikko Rajavuori "The Role of Non-State Actors in Climate Law" in Benoit Mayer and Alexander Zahar (eds) *Debating Climate Law* (Cambridge University Press, Cambridge, 2021) 379.
40 UNEP, above n 30, at 14.
41 Winkelmann, Glazebrook and Ellen France, above n 33, at 17.
42 Setzer and Byrnes, above n 28, at 4.
43 See for example Nicole Rogers "Victim, Litigant, Activist, Messiah: The Child in a Time of Climate Change" (2020) 11 JHRE 103 at 109-110.
44 Setzer and Byrnes, above n 28, at 18.
45 At 4-5.
46 UNEP, above n 30, at 14.
47 Solana, above n 29.
48 For example, the Sabin Database divides cases outside of the United States into defendant categories: "against government" and "against corporations and individuals".

relation to the specific area of climate change the case concerns, such as mitigation and adaptation. This is, however, starting to change and these terms are appearing more often in this context. For example, environmental law scholar, Valentina Jacometti, made references to mitigation in her 2020 examination of global climate change adjudication, but did not use this as the sole basis for her classifications.[49] In the same year, Jacqueline Peel and Jolene Lin specifically examined adaptation adjudication in Southeast Asia.[50] Grantham Research Institute's annual review of climate change adjudication makes reference to cases concerning adaptation and mitigation,[51] as does Annalisa Savaresi's and Joana Setzer's 2021 work.[52]

Some scholars use broader categorisations that refer to the purpose of the court action. This categorisation is applicable to the nature of my thesis for two reasons. First, because I am categorising the disputes by way of purpose, that is, mitigation, adaptation, and loss and damage.[53] Secondly, because I am using the purpose of supporting the climate response as part of the measure of effectiveness for DR processes.[54] Some researchers focus on the parties' intentions, for example, whether they are for or against climate protection, sometimes labelled as "pro-regulatory" or "anti-regulatory".[55] Climate scholars, Geetanjali Ganguly, Joana Setzer, Veerle Heyvaert, Rebecca Byrnes and Catherine Higham, supply the most useful categorisations.[56] They use the overarching term "strategic" to refer to cases that go beyond the claimants' individual concerns and aim to influence accountability[57] or bring about some broader societal shift.[58] They then separate that group on the basis of the target of the case: "public" being taken against government entities; and "private" against corporations.[59] Public strategic disputes are still the most common, with governments being defendants in over 75

49 Valentina Jacometti "Climate Change Litigation: Global Trends and Critical Issues in the Light of the Urgenda 2018 Decision and the IPCC Special Report" (2020) 20 Global Jurist 1.

50 Jacqueline Peel and Jolene Lin "Climate Change Adaptation Litigation: A View from Southeast Asia" in Jolene Lin and Douglas Kysar *Climate Change Litigation in the Asia Pacific* (Cambridge University Press, Cambridge, 2020) 294.

51 See for example, Joana Setzer and Catherine Higham *Global Trends in Climate Change Litigation: 2021 Snapshot* (July 2021, London, Grantham Research Institute on Climate Change and the Environment and the Centre for Climate Change Economics and Policy, London School of Economics and Political Science).

52 Annalisa Savaresi and Joana Setzer "Mapping the Whole of the Moon: An Analysis of the Role of Human Rights in Climate Litigation" (18 February 2021) SSRN <www.ssrn.com> at 6.

53 See Chapter 3.II.

54 See Chapter 3.III.

55 For example, Jacqueline Peel and Hari Osofsky *Climate Change Litigation: Regulatory Pathways to Cleaner Energy* (Cambridge University Press, Cambridge, 2015).

56 Ganguly, Setzer and Heyvaert, above n 37, at 843; Setzer and Byrnes, above n 28, at 6; and Setzer and Higham, above n 51, at 12.

57 Ganguly, Setzer and Heyvaert, , above n 37, at 843 and Setzer and Byrnes, above n 28, at 6.

58 Setzer and Higham, above n 51, at 12.

59 Ganguly, Setzer and Heyvaert, above n 37, at 843.

per cent of cases as at July 2021.[60] However, disputes against corporations are increasing, as there is a growing awareness that these actors play a vital role in climate change.[61] This is particularly true of the Carbon Majors,[62] and there are a number of CCDs being taken against these emitters on the basis that they have contributed significantly to climate change.[63] The remaining non-strategic or "routine" category covers the many disputes that involve issues that are primarily only of relevance to the parties involved.[64]

B Arbitration

Arbitration is the DR process that most closely resembles adjudication. It is formal, relatively inflexible, and determinative. Unlike other forms of ADR, arbitration is governed by treaty, statute, or other formal rules. These will usually provide that the outcome of arbitration (the arbitral award) is final, binding, and enforceable.[65] As noted above, however, there are a number of key features that distinguish arbitration from adjudication and enhance its level of flexibility and self-determination. First, it is more consensual than adjudication, as the parties enter into the process by agreement.[66] Secondly, the parties are able to select their own decision-maker/s (arbitrator, arbitral panel, body or tribunal) and determine elements of the procedure, such as timing and location (as far as the relevant rules allow). Lastly, arbitration proceedings are often conducted in private and they, along with the award, may be confidential.[67]

As with other forms of ADR, there is no single, agreed definition of arbitration, and there is considerable variation across different forms of the process. In particular, between national and private international arbitration, and that in relation to inter-state disputes. However, a definition provided by David Williams and Amokura Kawhura in relation to private arbitration

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60 Setzer and Higham, above n 51, at 12.
61 Ganguly, Setzer and Heyvaert, above n 37, at 845.
62 The "Carbon Majors" are 100 corporate fossil fuel producers that have produced 52 per cent of global industrial GHG emissions since the industrial revolution: Paul Griffin *The Carbon Majors Database: CDP Carbon Majors Report 2017* (Carbon Disclosure Project, July 2017) at 5.
63 Setzer and Higham, above n 51, at 28.
64 Setzer and others, above n 34, at 10.
65 These latter points will depend on the particular rules the arbitration is occurring under.
66 David Williams and Amokura Kawharu *Williams and Kawharu on Arbitration* (2nd ed, LexisNexis, Wellington, 2017) at 6.
67 This is more generally true in domestic arbitration, for example s 14-14I, Arbitration Act 1996, and less so in international commercial and investment treaty arbitration. See Gary Born *International Commercial Arbitration* (2nd ed, Kluwer Law International, Alphen aan den Rijn, 2014) at 218.

can be amended slightly to provide a relatively comprehensive and all-encompassing definition that I use in this thesis: [68]

> … a process by which parties consensually submit a dispute to a … decision-maker, selected by or for the parties, to render a binding decision resolving a dispute in accordance with neutral, adjudicatory procedures affording the parties an opportunity to be heard. … [I]t is a procedure to determine the legal rights and obligations of the parties …, which is enforceable in law …

One additional point to note, is that parties' consent to submit a dispute to arbitration may be by way of general agreement in advance (that is, for future disputes, such as provided in a commercial contract or international treaty) or it could be by specific agreement once a dispute has arisen. Given that, arbitration can be considered more specifically on the basis of the nature of, and relationship between, the parties. Specifically, contract-based, inter-state, and investor-state arbitration.[69] These three categories are used throughout this thesis so are expanded on in the following subsections.

1 Contract-Based Arbitration

Contract-based (or commercial) arbitrations involve public and/or private entities, such as corporations and states, who are parties to contracts. Historically, contract-based arbitration broadly followed ADR's generational pattern outlined above, but there are some exceptions. As with other forms of DR, its roots can be traced back to antiquity.[70] The mid period of arbitration deviates from the norm, however, as it began much earlier than for other forms of ADR. From the Middle Ages, arbitration was commonly used to resolve trade disputes as part of the law merchant;[71] the first comprehensive arbitration statute appeared in England in the late 17th century;[72] and New Zealand had a compulsory arbitration regime for industrial disputes from the late 19th century.[73] From the 1920s, international arbitration developed as cross-border trade increased, including, the creation of rules and procedures[74] and provisions

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68 Williams and Kawharu, above n 66, at 3.
69 These are the categories used by the Permanent Court of Arbitration: PCA "Cases" <www.pca-cpa.org>.
70 Williams and Kawharu, above n 66, at 22.
71 This function was largely assumed by the courts, however, as the law merchant was assimilated into the English common law. See Williams and Kawharu, above n 66, at 22.
72 Arbitration Act 1698 (Eng) 4 Will III.
73 Industrial Conciliation and Arbitration Act 1894.
74 For example, the Protocol on Arbitration Clauses 27 LNTS 157 (opened for signature 24 September 1923, entered into force 28 July 1924).

for enforcement,[75] which strengthened the process. Modern arbitration came about around the same time as ADR more broadly, for similar reasons, including reducing demand on adjudication.[76] Since then, contract-based arbitration has continued to grow in both national and international jurisdictions.[77]

2 Inter-State Arbitration

The history and practice of arbitration between states varies from contract-based arbitration. Historically, arbitration was the primary legal means of inter-state DR and "provided the inspiration for the creation of permanent judicial institutions."[78] Similarly to contract-based arbitration, it has ancient origins, pre-dating the development of modern international law in the mid-15th Century.[79] Following the Jay Treaty of 1794,[80] the use of inter-state arbitration grew steadily, "so that the nineteenth century can been seen as a kind of golden age of arbitration."[81] Under the 1899 Convention for the Pacific Settlement of International Disputes, it was agreed that a Permanent Court of Arbitration (PCA) of general jurisdiction would be established, which it was in 1903.[82] In reality, however, it is more of a registry than a court, particularly as it does not have compulsory jurisdiction.[83] Although inter-state arbitration has continued to be used since the 20th Century, the focus has shifted away from arbitration as the primary form of DR.[84]

3 Investor-State Arbitration

Part of the development of modern arbitration has been the growth of investor-state (or investment treaty) arbitration.[85] This arose following states' increased use of bilateral and multilateral international investment agreements providing for obligatory arbitration between

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75 Most notably, Convention on the Recognition and Enforcement of Foreign Arbitral Awards 330 UNTS 38 (opened for signature 10 June 1958, entered into force 7 June 1959) [the New York Convention].

76 As noted by Cooke P in *CBI New Zealand v Badger Chiyoda* [1989] 2 NZLR 669 (CA) at 675.

77 Williams and Kawharu, above n 66, at 10 and 11.

78 Merrills, above n 17, at 88.

79 Mary Ellen O'Connell and Lenore VanderZee "The History of International Adjudication" in Romano, Alter and Shany (eds), above n 17, 3 at 42.

80 Through which the United States and Great Britain agreed to use arbitration to resolve any outstanding disputes following the War of Independence.

81 O'Connell and VanderZee, above n 79, at 44.

82 Art 20.

83 Specifically, it was a list of arbitrators that parties could select from if they agreed to arbitration. See for example, Merrills, above n 17, at 90; and Van Vechten Veeder "Inter-State Arbitration" in Thomas Schultz and Federico Ortino (eds) *The Oxford Handbook of International Arbitration* (Oxford University Press, Oxford, 2020) 216 at 222.

84 O'Connell and VanderZee, above n 79, at 47-53.

85 Valentina Vadi "Beyond Known Worlds: Climate Change Governance by Arbitral Tribunals?" (2015) 48 VJTL 1285 at 1315.

states and non-state investors.[86] Generally speaking, the purpose of such provisions was to remove impediments to the free flow of private international investment posed by non-commercial, political risks, and to provide a previously lacking, specialised method of DR for any disputes.[87] In 1962, the PCA amended its rules to expressly allow for these matters,[88] and in 1966, the International Centre for Settlement of Investment Disputes was established to provide arbitration facilities for them.[89] Arbitration continues to be the preferred method of DR for investor-state-disputes.[90]

Arbitration is the principal method of resolving international contract-based and investor-state disputes.[91] This is reflected by the PCA's caseload. In May 2022, it was acting as registry in 65 contract-based cases involving a state or public entity, four inter-state disputes and 105 investor-state cases.[92] Between, and even within, the three different categories of arbitration, there is variation as to how the process is conducted. However, it is the most uniform and transparent of the ADR processes, given it is carried out under specific rules and procedures.

C Mediation

Mediation is more difficult to define than other DR processes, such as, adjudication and negotiation. Although it is often defined in legislation and literature, there is no one, generally accepted definition. This is due to a number of factors: mediation does not have a clear, singular theoretical base; it has a number of different styles (discussed further below); and there is wide-ranging diversity in practice. Additionally, mediation is not as familiar to people in the same way other processes, such as adjudication and negotiation, are.

Historically, mediation was at the centre of the wider, modern ADR movement outlined in Section III above. Available data indicates that mediation is now a more common form of DR

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86 Veeder, above n 83, at 229.

87 Public-Private Partnership Legal Resource Center "Dispute Resolution Mechanisms" (25 April 2022) The World Bank <www.ppp.worldbank.org>.

88 Veeder, above n 83, at 228.

89 Convention on the Settlement of Investment Disputes between States and Nationals of Other States 575 UNTS 159 (opened for signature 18 March 1965, entered into force 14 October 1966), art 1. The Convention also provides for conciliation but this is scarcely used, making up only 1.3 per cent of the total number of cases administered under the ICSID Convention since 1966: International Centre for Settlement of Investment Disputes *The ICSID Caseload - Statistics* Issue 2022-1 at 9.

90 Christoph Schreuer "Investment Arbitration" in Romano, Alter and Shany (eds), above n 17, 295 at 296.

91 Nigel Blackaby and others *Redfern and Hunter on International Arbitration* (6th ed, Oxford University Press, Oxford, 2015) at 1.

92 Permanent Court of Arbitration "Cases" <www.pca-cpa.org>.

than adjudication for national disputes.[93] As outlined above, international DR has historically been dominated by arbitration and, to a lesser extent, adjudication. Mediation, however, has grown in use in more recent years.[94] For inter-state disputes, its use was specifically referenced in the UN Charter,[95] and reaffirmed by the UN's 2011 resolution outlining the international community's commitment to strengthening the role of mediation.[96] It is most commonly used in these disputes.[97] For commercial international disputes, concerns about the costs, delays and formality of arbitration led to an increased focus on mediation.[98] This was further encouraged by the creation of the Singapore Convention, which provided specific enforcement for international mediated agreements.[99] Due to a lack of empirical research, compounded by confidentiality, the extent of actual use in this area is uncertain.[100] Whilst arbitration remains the "default mode" for the resolution of investor-state disputes,[101] the increase in these disputes since the early 2000s has led to a corresponding increase in the use of mediation, and it is a predicted area of growth.[102]

Mediation involves an impartial third party (the mediator) working between the parties to the dispute. The presence of this third party is the biggest difference from negotiation. It is a consensual process, so the mediator's role is to assist the parties in making decisions for themselves. The mediator's lack of decision-making is a key difference from arbitration. Exactly what form the mediator's assistance takes varies depending on the style, and ranges from purely procedural assistance to providing input on the substance or content of the dispute. Any agreement reached through mediation occurs by consent, meaning that it is up to the

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[93] Morris and Shaw, above n 11, at 5.

[94] Catharine Titi and Katia Fach Gómez (eds) *International Commercial and Investment Disputes* (Oxford University Press, Oxford 2019) at viii.

[95] Art 33.

[96] *Strengthening the Role of Mediation in the Peaceful Settlement of Disputes, Conflict Prevention and Resolution* GA Res 65/283 (2011).

[97] For example, between 1945 and 2006, mediation had reportedly been used in 70 per cent of all international conflicts: Jacob Bercovitch and Scott Sigmund Gartner "Is There a Method in the Madness of Mediation?" in Jacob Bercovitch and Scott Sigmund Gartner (eds) *International Conflict Mediation: New Approaches and Findings* (Routledge, New York, 2009) 19 at 19.

[98] Stacie Strong "Realizing Rationality: An Empirical Assessment of International Commercial Mediation" (2016) 73 Washington & Lee L Rev 1973 at 1982-1983.

[99] Convention on International Settlement Agreements Resulting from Mediation (opened for signature 7 August 2019, entered into force 12 September 2020) [*The Singapore Convention*].

[100] Strong's 2016 research, above n 98, is an exception to this but it has not been updated since, and as she noted, there is a "paucity" of empirical research in this area, at 2067. This has also been noted in relation to national commercial mediation by Morris and Shaw, above n 11, at 249.

[101] Catharine Titi "Mediation and the Settlement of International Investment Disputes" in Titi and Fach Gómez (eds), above n 94, 21 at 21.

[102] Titi and Fach Gómez, above n 94, at viii; and Interview with Geoff Sharp, International Mediator (the author, Wellington, 26 July 2022).

parties to decide if, and how, to resolve the dispute. Both the process and outcome of mediation will usually be confidential.

As noted above, there are a number of different styles of mediation. These vary significantly and make a radical difference to what mediation looks like, so it is important to briefly note them. These styles have all developed in different circumstances over time and each has its own particular objectives. Evaluative mediation was modelled on judicial settlement conferences,[103] and involves a mediator who is an expert in the subject matter of the dispute and takes an active, interventionist approach that may influence the outcome.[104] Settlement mediation likely developed in an ad hoc way out of transactional commercial disputes,[105] and involves a mediator taking an active role in determining parties' bottom lines and achieving a compromise through bargaining.[106] It is different from the evaluative style in that mediator does not give advice or express a view on the dispute. Facilitative mediation is the original style of modern mediation and one of the most commonly used.[107] It is largely based on the Interest Based Negotiation philosophy (which is discussed in subsection J below) and focuses on parties' interests and relationships, with the mediator supporting them to understand and resolve the dispute themselves. It has the most clearly defined process.[108] Transformative mediation deliberately sought to reduce the level of mediator intervention found in other styles, so the mediator's role is minimal.[109] The focus is on the behavioural and emotional causes of the dispute as opposed to settlement or problem-solving, and it aims to change relationship dynamics. Narrative mediation also aims to reduce mediator involvement. It is based on psychological theories that people make sense of their experiences by thinking of them in story form.[110] These mediation styles can be depicted on a continuum of self-determination and mediator intervention as shown in Figure 2 below.

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103 Christopher Moore *The Mediation Process: Practical Strategies for Resolving Conflict* (4th ed, Jossey-Bass, San Francisco, 2014) at 56.

104 Morris and Shaw, above n 11, at 134.

105 At 133.

106 Sourdin, above n 9, at 79.

107 Morris and Shaw, above n 11, at 131.

108 At 114.

109 Transformative mediation is largely derived from the work of Joseph Folger and Robert Bush as outlined in their text *The Promise of Mediation: Responding to Conflict Through Empowerment and Recognition* (Jossey-Bass, San Francisco, 1994).

110 John Winslade and Gerald Monk *Narrative Mediation: A New Approach to Conflict Resolution* (Jossey-Bass, San Francisco, 2000).

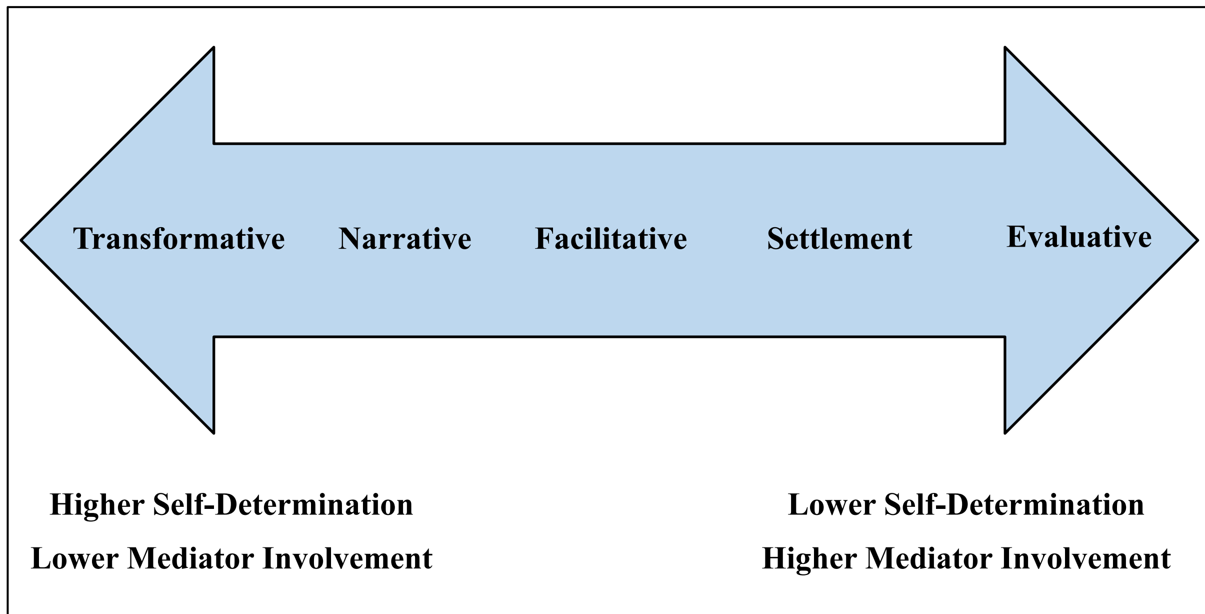

Figure 2: Mediation styles on a spectrum of self-determination and mediator involvement.

Outside of DR scholarship, the particular style is often not specified, and mediation is used as a generic term. What actually happens in a mediation varies depending on the dispute, parties, style, mediator and context. There is, therefore, no standard way in which it is conducted. Although all mediation styles are used within national settings, evaluative, settlement and facilitative are more prominent, with the latter being the most common.[111] In an international context, inter-state mediation is akin to evaluative mediation, conducted through a "shuttle" process of working between separate parties.[112] These mediations take place on an ad hoc basis once a dispute has arisen and may be mediated by international organisations, states or prominent individuals.[113] In some cases, the parties want a mediator who goes further than this and uses their power, resources, pre-existing relationship with the parties, or understanding of the specific dynamics to influence the parties in some way.[114] This possible use of mediators who are not completely impartial distinguishes inter-state mediations from other styles. There is limited examination of styles in international commercial mediation but it would not be unrealistic to expect it reflect the national commercial field, which shows facilitative as the most commonly used style, followed by evaluative and settlement.[115]

[111] See for example, Morris and Shaw, above n 11, at 78 and 131.
[112] Merrills, above n 17, at 26.
[113] Sinisa Vukovic "International Multiparty Mediation" in Alexia Georgakopoulos (ed) *The Mediation Handbook: Research, Theory, and Practice* (Taylor & Francis Group, New York, 2017) 305 at 312.
[114] Merrills, above n 17, at 36; and Sean Byrne "International Mediation" in Georgakopoulos (ed), above n 113, 334 at 338.
[115] Grant Morris and Sapphire Petrie-McVean *Commercial Mediation in New Zealand: The Mediators' Project Report* (Victoria University of Wellington and Resolution Institute, August 2019) at 20-21.

D Facilitation

Facilitation is less clearly understood as a DR process than those considered above. This is partly because there is less scholarly theory, and more practice-based writing, about it,[116] and partly because it has only crystallised as a distinct DR process more recently. The term was originally used in a broad and generic way to mean "meeting management" or "a way of helping groups work together"[117] and was commonly used to refer to workplace, public or other meetings that were "chaired" (facilitated) by a member of the group. In other words, it did not involve a skilled or impartial third party and was not necessarily being used in relation to a dispute. The broader definition and use of facilitation outside of DR is still current. For example, the GCDR definition includes a process through which parties "identify tasks."[118] Adding to the definitional confusion, the role of the facilitator and the process itself are less proscribed than in other ADR processes. Rather, facilitation has been described as a "matrix" of practices that is difficult to define due to its flexibility and versatility.[119]

In this thesis, I define facilitation as a consensual process that involves an impartial third party (the facilitator) assisting the parties (often a group) to make a decision, solve a problem,[120] or resolve a dispute.[121] This includes use where there is no crystallised or legal dispute,[122] but excludes use for more general purposes such as identifying tasks. There are a number of terms used to refer to processes that are either the same as, or very similar to, facilitation, including Public Engagement Techniques, Consensus Building, and Collaborative Decision Making. To manage scope and avoid unnecessary repetition, I am not considering these processes separately but am including them as facilitation, unless there is a material difference, in which case I will note the distinction.

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116 Much of this work is directed at management professionals, for example, John Morgan *Mastering Facilitation: A Guide for Assisting Teams and Achieving Great Outcomes* (Routledge, Florida, 2021).

117 Lawrence Susskind "An Alternative to Robert's Rules of Order for Groups, Organizations, and Ad Hoc Assemblies That Want to Operate by Consensus" in Lawrence Susskind, Sarah McKearnan and Jennifer Thomas-Lamar (eds) *The Consensus Building Handbook* (Sage Publications, Thousand Oaks, 1999) 3 at 7.

118 GCDR "Glossary of Dispute Resolution Terms" <www.mbie.govt.nz>.

119 Australian Dispute Resolution Advisory Council (ADRAC) "Facilitation" (5 September 2017) <www.adrac.org.au>.

120 Marcelle DuPraw "The Role of Mediation in Collaborative Initiatives on Large-Scale Forest Resource Management" in Georgakopoulos (ed), above n 113, 271 at 274.

121 ADRAC, above n 119.

122 As explained elsewhere, this thesis does not use "dispute" in a narrow sense. See Negotiation below and Chapter 3.II for the full definition of dispute.

Although, mediation and facilitation have (incorrectly) been used interchangeably,[123] there are distinctions. Facilitation is more loosely defined, less formalised, and often a more proactive intervention, compared to mediation, which is more commonly used reactively to address a specific dispute.[124] Further, facilitation does not have the same theoretical basis and distinct styles as mediation. There is, however, a distinction that can be made between facilitators who only assist with the process (similar to facilitative, settlement, transformative and narrative mediators) and those that have relevant subject-matter expertise and make interventions in the content as well as the process (similar to evaluative mediators).[125]

As a proactive process, facilitation can be used as a form of preventative DR. For example, Roger Schwarz writes about "developmental" facilitators being those that not only address the issue at hand but also teach skills to prevent future issues arising, compared to "basic" facilitators who only address the immediate issue.[126] This is also referenced by Fred Fisher and David Tees who talk about the facilitators' role as being to help the group "improve the way it identifies and solves problems".[127]

E Restorative Practices

I use restorative practices as an umbrella term for a set of flexible DR processes that seek to improve or repair relationships between, not just the direct parties to a dispute, but also more widely impacted people, such as families and communities, based on values of accountability and inclusiveness.[128] Restorative practices are consensual processes involving a third party, often referred to as a facilitator. They evolved from, and encapsulate, the more well-known DR process of restorative justice, which is used in the criminal justice context. Whereas restorative justice is used reactively after wrongdoing has taken place (and requires there to be some acceptance of accountability),[129] restorative practices can also be used before wrongdoing has occurred in order to prevent it. In other words, to "proactively build relationships and a sense

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[123] Susskind, above n 117, at 9.
[124] DuPraw, above n 120, at 275.
[125] ADRAC, above n 119; and DuPraw, above n 120, at 274.
[126] Roger Schwarz *The Skilled Facilitator* (3rd ed, John Wiley & Sons, Hoboken, 2017) at 23-24.
[127] Fred Fisher and David Tees *Key Competencies for Improving Local Governance* (UN Settlements Programme, Nairobi, 2005) at 126.
[128] Howard Zehr *The Little Book of Restorative Justice* (Good Books, Pennsylvania, 2002) at 37; and Allison Morris "Critiquing the Critics: A Brief Response to Critics of Restorative Justice" (2002) 42 Brit J Criminol 596 at 600.
[129] Fred McElrea "Twenty Years of Restorative Justice in New Zealand" (10 January 2012) Tikkun <www.tikkun.org>; and Declan Roche "Dimensions of Restorative Justice" (2006) 62 JSI 217 at 217.

of community to prevent conflict and wrongdoing."[130] For the purposes of this thesis, I consider restorative justice a subcategory of the broader restorative practices, along with other approaches, including: circle processes; restorative conferences; family group conferences; and various informal adaptations.[131] Such processes are commonly used in family, community, youth, criminal justice, workplace, education and international settings.[132] In the latter context, for example, restorative practices have been used in truth and reconciliation commissions, such as those established following apartheid in South Africa and genocide in Rwanda.[133]

F Māori DR

As explained in Chapter One, indigenous peoples are among the most climate-vulnerable, and so are particularly important to consider in any climate change-related research.[134] Indigenous DR embodies and reflects the cultural values of a particular indigenous community. These processes exist around the world and are enormously diverse.[135] It is beyond the scope of this thesis to consider them all. Given that, and the responsibilities and commitment I have to Te Tiriti o Waitangi, I am focusing on the DR processes of New Zealand's tangata whenua (people of the land). Whilst acknowledging the unique and varied nature of indigenous DR processes, I am also using Māori DR in this thesis as a representative example of other indigenous processes. (This is discussed further at the end of this subsection).

Māori DR is not a formally recognised process of DR in the same way that mediation or arbitration are, for example. Rather, it is a values-based doctrine that can be expressed through different forms or processes. In this way, it is similar to restorative practices. Indeed, Māori DR influenced the development of restorative practices, such as, restorative justice and Family Group Conferences in the youth justice jurisdiction.[136]

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130 Ted Wachtel "Defining Restorative" (2016) International Institute for Restorative Practices <www.iirp.edu>.

131 Ted Wachtel "Restorative Practices and the Life-World Implications of a New Social Science" (2015) (4) Revista de Asistenta Sociala 7 at 7.

132 McElrea, above n 129; Roche, above n 129, at 217-218; and Wachtel, above n 131.

133 Emily Mawhinney "Restoring Justice: Lessons from Truth and Reconciliation in South Africa and Rwanda" (2015) 36 Hamline JPubL&Pol 21 at 27-28.

134 Chapter 1.II.A.

135 Karen King "Indigenous Dispute Resolution" (2001) 13 Legaldate 1 at 1-2.

136 Michael King and others *Non-Adversarial Justice* (Federation Press, Sydney, 2009); and Douglas Mansill "Community Empowerment of Institutional Capture and Control" (PhD Thesis, Auckland University of Technology, 2013) at 106.

Māori DR reflects te ao Māori (the Māori world view). As Māori laws academic, Carwyn Jones, explains it, "[t]he conceptual regulators of Māori society lead to distinctly Māori approaches to resolving disputes."[137] It is, therefore, necessary to have at least a rudimentary understanding of these regulatory values, making this definition more involved than others in this chapter. Jones identifies these values as whanaungatanga, mana, tapu, utu, and manaakitanga/kaitiakitanga.[138] It is important to note that this thesis is not attempting to provide a comprehensive explanation of these complex, important and nuanced concepts. The purpose is to provide a simplified and general overview. Any definitions or translations of Māori concepts from te reo will always be reductive and simplistic at best. The work of Jones and Māori laws academic, Khylee Quince, provides more appropriately thorough descriptions, and is used as the basis of the following definition.[139]

Broadly speaking, te ao Māori could be described as collectivist and reciprocal. The concept of whanaungatanga, which very generally means a connectedness or "relationship through shared experiences and working together which provides people with a sense of belonging",[140] defines the relationships, obligations, and responsibilities between: members of the community; the community and the land; the community and atua (gods); and different generations of the community – past, present, and future.[141] The values of mana (authority) and tapu (sacredness) play an important role in regulating people's actions within this collectivist context, and underpin how a dispute is defined and resolved. Tikanga Māori (Māori law and practice) advocates a balance between all aspects of the human, natural and spiritual worlds. A dispute or offence that challenges someone's mana or breaches tapu upsets this balance. Recompense for such wrongs is governed by the principle of utu (reciprocity and balance). For the dispute to be resolved, the disrupted balance of the community must be restored. Utu determines what actions are required to restore this balance and the relationships concerned to achieve ea (state of resolution).[142] A dispute, therefore, is not viewed as only being between the parties directly involved, but all members of the community. The values of manaakitanga

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137 Carwyn Jones "Māori Dispute Resolution: Traditional Conceptual Regulators and Contemporary Processes" in Morgan Brigg and Roland Bleiker *Mediating Across Difference: Oceanic and Asian Approaches to Conflict Resolution* (University of Hawaii Press, Honolulu, 2011) 115 at 115.

138 Carwyn Jones *New Treaty, New Tradition: Reconciling New Zealand and Māori Law* (UBC Press, Vancouver, 2016) at 66.

139 Jones, above n 137; Jones, above n 138; and Khylee Quince "Māori Disputes and their Resolution" in Peter Spiller (ed) *Dispute Resolution in New Zealand* (2nd ed, Oxford University Press, Auckland, 2007) 256.

140 Te Aka Māori Dictionary (online ed) <www.maoridictionary.co.nz>.

141 Jones, above n 138, at 66.

142 At 75.

(nurturing relationships) and kaitiakitanga (stewardship and guardianship) "reflect the importance of nurturing and the responsibility of looking after those in your care."[143]

As noted above, there is no distinct, singular Māori DR "process" as such. Rather, the values of te ao Māori inform the approach taken to address and resolve a dispute. This is an approach underpinned by principles of collective identity, responsibility, accountability and the importance of relationships. As such, Māori DR seeks to achieve ea by restoring participants back into their communities and repairing *all* relationships within that community that may have been impacted by the dispute. Quince explains that this is done through a process that seeks to, "identify the causes of the dispute, or reasons for the offending, in order to uncover and address the source of the problem."[144] In this way, Māori DR has similarities with aspects of Interest Based Negotiation and facilitative mediation. Once a deeper understanding of the dispute has been reached, a wrongdoer will be encouraged to take responsibility for their actions, and decisions will be made about how the issue will be resolved through a collective, inclusive, future-focused and consensus-based process. Throughout, there will be ample speaking opportunities for anyone who wishes to be heard, in order to properly allow for reintegration and restoration of mana. Quince notes that the process is important in its own regard (as distinct from the outcome) as it "empowers the parties and the community to take responsibility for the future" and "is a large part of the healing process."[145] As a result, adequate time and resources are an important consideration in Māori DR: "The length of time that it takes to arrive at a resolution is … a subordinate concern."[146] Throughout the process, importance is not only placed on the present relationships but also on past and future generations, as well as the natural environment, particularly through the concept of kaitiakitanga. As such, "parties in a dispute, and the values governing their behaviour, are not isolated actors disassociated from the physical, or natural, environment."[147] As with restorative practices, Māori DR is not only concerned with resolving the immediate dispute but also with prevention.[148]

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[143] Jones, above n 138, at 71.
[144] Quince, above n 139, at 286.
[145] At 288.
[146] Jones, above n 137, at 126.
[147] At 128.
[148] Quince, above n 139, at 292-293.

There are modern examples of Māori DR to be found in New Zealand.[149] Marae-based justice processes are one such case. These take place within the criminal justice context and are attached to courts but are intended to divert offenders away from the judicial process, for example, Te Whanau Awhina pilot.[150] This particular process takes place on a marae and incorporates marae kawa. It consists of a meeting between everyone involved in front of a community panel. It aims to give people a chance to be heard, make amends and agree an action plan for reintegration back into the community. Te Pae Oranga: Iwi Community Panels are a related and more recent example of a Māori DR process being used in criminal justice matters.[151] Further, Jones references the Waitangi Tribunal[152] as being a blend of processes that incorporates aspects of Māori DR.[153] He also provides the central North Island forestry settlement as a specific example of Māori DR.[154] That settlement provided for returned land to be allocated by the parties themselves through a "tikanga-based resolution process."[155] There are signs that Māori DR services are growing. For example, a tikanga-based mediation service was introduced into the Māori Land Court in 2021,[156] private Māori DR services, including training in a tikanga-based mediation model, have become available recently,[157] and a professional organisation for Māori DR practitioners has been established.[158]

There are two clear distinctions between Māori DR and other DR processes. First, the impartiality of any third party. In Māori DR (and other indigenous DR processes), it is desirable for the person or people in that role to have an existing relationship with the parties. This is in contrast to adjudication, arbitration, national mediation, and restorative practices, where the impartiality of the third party is of fundamental importance to the process. A second distinction is in relation to confidentiality. The very nature of Māori DR, as a community-based, collective process, runs contrary to confidentiality, which is often an important principle of the other ADR processes, particularly national mediation.

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149 There is some debate about the appropriateness of these processes being referred to as Māori processes. See Quince, above n 139, at 277-280.

150 Te Whanau Awhina <www.hoaniwaitit imarae.co.nz>.

151 Te Pae Oranga: Iwi Community Panels <www.tpo.org.nz>.

152 The Waitangi Tribunal was established by the Treaty of Waitangi Act 1975. It is "a permanent commission of inquiry that makes recommendations on claims brought by Māori relating to Crown actions which breach the promises made in the Treaty of Waitangi." <www.waitangitribunal.govt.nz>.

153 Jones, above n 137, at 115 and 129.

154 Jones, above n 138, at 83.

155 Central North Island Forests Land Collective Settlement Act (New Zealand) 2008, Schedule 2.

156 This service was provided for by the insertion of Part 3A into the Te Ture Whenua Māori 1993 by Te Ture Whenua Māori (Succession, Dispute Resolution, and Related Matters) Amendment Act 2020, s 22.

157 See for example, the Tūhono Collective, established in 2020 <www.tuhono.nz>.

158 Māori Allied Dispute Resolution Organisation, incorporated in 2021 <www.maadro.org.nz>.

As stated above, I am using Māori DR as a representative example of other indigenous DR processes for the purposes of this thesis, specifically, those that share similar underlying values and approaches to disputes. In doing so, I note that the complexity and uniqueness of indigenous cultures makes simplified generalisations difficult and problematic. There are, however, some broad observations that can be made. On this basis, the underlying values I am referring to include, interconnectedness with, and responsibilities to, the environment and to the wider community, including future generations. The approaches to disputes include: disputes being perceived as communal; resolution aiming to restore social harmony, reconcile parties, and reintegrate wrongdoers; and processes being inclusive, discussion-based, led by third parties of social standing (such as elders or leaders), and based on consensus decision making. Examples of indigenous DR processes that reflect these general values and approaches include, those of Aboriginal Australians and Torres Strait Islanders,[159] First Nations People of North America,[160] Pacific Peoples,[161] and African communities.[162]

G Conciliation

1 National

There is no clear definition or shared understanding of conciliation in a national context. It has been recognised as one of the more "poorly understood" DR processes.[163] Based on research in Australia[164] and sources available in New Zealand,[165] conciliation can be defined as a consensual process that usually occurs within the context of a legal or regulatory framework, and in which the parties are assisted in reaching an agreement by an impartial third party (the

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159 Larissa Behrendt "Cultural Conflict in Colonial Legal Systems: An Australian Perspective" in Catherine Bell and David Kahane (eds) *Intercultural Dispute Resolution in Aboriginal Contexts* (UBC Press, Vancouver, 2004) 117 at 121-122.

160 Richard Wheelock "Powerful Parallels" in Karen Jarratt-Snider and Marianne Nielsen (eds) *Indigenous Environmental Justice* (University of Arizona Press, Tucson, 2000) 21; Robert Yazzie "Navajo Peacemaking and Intercultural Dispute Resolution" in Bell and Kahane (eds), above n 159, 107; and Dale Dewhurst "Parallel Justice Systems, or a Tale of Two Spiders" in Bell and Kahane (eds) above n 159, 213.

161 Volker Boege and Lorraine Garasu " Bougainville: A Source of Inspiration for Conflict Resolution" in Brigg and Bleiker (eds), above n 137,163 at 164 -167; Sinclair Dinnen "Restorative Justice in the Pacific Islands: An Introduction" in Sinclair Dinnen (ed) *A Kind of Mending: Restorative Justice in the Pacific Islands* (ANU Press, Canberra, 2010) 1 at 8-9; and Graham Hassall "Alternative Dispute Resolution In Pacific Island Countries" (2005) 9 Journal of South Pacific Law 14.

162 Habeeb Abdulrauf Salihu "Possibilities for the Incorporation of African Indigenous Procedures and Mechanisms of Dispute Resolution in the Administration of Criminal Justice in Nigeria" (2020) 23 Contemporary Justice Review 354 at 357.

163 ADRAC *Conciliation: A Discussion Paper* (October 2019) at xiii.

164 ADRAC *Conciliation: Connecting the Dots* (November 2021) at 11.

165 Morris and Shaw, above n 11, at 85-86; GCDR "Glossary of Dispute Resolution Terms" <www.mbie.govt.nz>; Resolution Institute "Conciliation" <www.resolution.institute>; and Arbitrators' and Mediators' Institute of New Zealand "Conciliation" <www.aminz.org.nz>.

conciliator), who may use their specialist knowledge to express opinions and offer advice on the substance of the dispute. Based on this definition, conciliation is similar to evaluative mediation. The main difference being that conciliation is conducted within a legal or regulatory framework. As national conciliation does not come up in relation to CCDs, it is not explored further.

2 International

There is no such lack of understanding of conciliation in the public international law context, where it has a clear and well accepted meaning. Namely, a consensual process with an impartial third party (Conciliator, Conciliation Body or Conciliation Commission) who investigates an inter-state dispute and makes a non-binding recommendation for possible settlement with the specific aim of the parties' conciliation.[166] Exactly how the process is carried out will vary, depending on the establishing instrument. It is, however, not a commonly used form of international DR. Despite being provided for in over 200 bilateral treaties and a number of multilateral treaties, "[i]n the ninety or so years in which conciliation has been available, less than twenty cases have been heard."[167]

H Commissions of Inquiry

Commissions of inquiry are a related, and specific, form of public international DR. They were provided for in the Hague Conventions for Pacific Settlement of Disputes of 1899 and 1907.[168] They are a consensual process constituted by agreement between the parties through which a Commission undertakes an impartial investigation of disputed facts and provides a non-binding report on its findings. It differs from international conciliation in that it is more narrowly confined to fact finding, as opposed to broader settlement. Similarly though, it is not a commonly used DR process. According to international law academic, John Merrills, only six disputes used commissions of inquiry between 1905-2017.[169]

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[166] Merrills, above n 17, at 70.
[167] At 84.
[168] Convention for the Pacific Settlement of International Disputes (Hague Convention I) 187 CTS 410 (opened for signature 28 July 1899, entered into force 4 September 1900), arts 9-14; and Convention for the Pacific Settlement of International Disputes (Hague Convention I) 205 CTS 233 (adopted 18 October 1907, entered into force 26 January 1910), part 3.
[169] Merrills, above n 17, at 56.

I Good Offices

In inter-state disputes, the mechanisms of "good offices" may be used as a form of DR. This is a consensual process[170] that involves a third party with a more limited role than a mediator, specifically, they "may simply encourage the disputing states to resume negotiations, or do nothing more than provide them with an additional channel of communication."[171] In this way, it could be viewed as a hybrid of negotiation and shuttle mediation or a form of assisted negotiation.[172] Similarly to inter-state mediation, the third party could be a state, organisation, or eminent individual.[173] As with other forms of diplomacy, good offices may be used as a form of preventative DR.[174] There are no clearly identifiable instances of good offices being used in relation to CCDs. This may, however, be due to the fact that it is generally difficult to find actual cases of good offices being used.[175] Regardless, this process is not considered in further detail.

J Negotiation

Negotiation is used in a great variety of contexts and varies significantly but can generally be described as a process of bargaining or discussion with a view to reaching an agreement.[176] It is a consensual process but does not include a third party, rather, it takes place directly between the parties themselves and/or their representatives. It is often confidential, particularly in national settings. Negotiation is the most commonly used DR process both nationally,[177] and internationally for inter-state disputes, where it is used, "more frequently than all the other methods put together."[178] As with mediation, there are several different styles of negotiation, and although the particular style is often not specified in practice, it is necessary to understand them, as they impact on the process and outcome.

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170 As with other inter-state DR processes, consent may have been given in advance in a relevant treaty or may be given in an ad hoc way once the dispute has arisen.

171 Merrills, above n 17, at 26.

172 Sourdin, above n 9, at 68.

173 Ruth Lapidoth "Good Offices" in Anne Peters and Rüdiger Wolfrum (eds) *The Max Planck Encyclopedia of Public International Law* (online ed, last updated December 2006) Oxford University Press <www.opil.ouplaw.com>.

174 See for example, Adam Day and Alexandra Pichler Fong *Diplomacy and Good Offices in the Prevention of Conflict* (UN University Centre for Policy Research, August 2017).

175 Lapidoth, above n 183.

176 Selene Mize and Les Arthur "Negotiation" in Spiller (ed), above n 139, 19 at 19.

177 Morris and Shaw, above n 11, at 5; and Sourdin, above n 9, at 46.

178 Merrills, above n 17, at 2.

The first two styles can be considered "traditional" and are both positional.[179] Competitive negotiation involves parties taking a forcefully persuasive approach to minimise their losses and maximise their gains in competition with, or at the expense of, the other party.[180] This is the most commonly depicted and recognised negotiation style. Compromise negotiation is at the other end of the spectrum, and involves a process of "give and take" bargaining.[181] These two styles reflect the negotiator's dilemma: how can a party get what they want at the same time as getting the other party to agree?[182] The answer is claimed to be found in the third main style – Interest Based Negotiation (IBN). IBN can be traced back to the work of Mary Parker Follett in the 1920s,[183] but was popularised in the 1970s and 1980s, particularly through the Harvard Law School Negotiation Project and Fisher's and Ury's seminal text *Getting to Yes*.[184] The process of IBN is based on four key elements: people, interests, options, and criteria, and has a clearly specified set of steps or stages. "Interests" in this context mean the parties' underlying needs, reasons, or concerns.

In this thesis, I use the term negotiation to refer to a means of DR, as opposed to common, day-to-day negotiations relating to sales and purchases, and so on. I also include negotiations in both national and international settings. In relation to the latter, I am including negotiations that are clearly identifiable as a means of DR at international law, for example, those that take place under treaty provisions such as Article 14 of the UNFCCC. I am, however, also including negotiations that would not be defined as such at international law. Most specifically, the decades-long process of negotiations under the UNFCCC through the COP. Although this is not a dispute from an international law perspective, and these negotiations can be categorised as formal treaty-making negotiations, I am including it as a "negotiation" for the purposes of this thesis, and refer to it as the UNFCCC Negotiation Process. There are two main reasons for this inclusion. First, the term "dispute" as I am using it in this thesis is not restricted to legal disputes (including in the international law context). Rather, I am using a broader definition, in line with DR scholarship, which includes issues addressed through the UNFCCC Negotiation Process.[185] Secondly, there is a clear dispute about global climate governance, involving issues of whether to, and how to, address climate change and its impacts, which was

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179 Morris and Shaw, above n 11, at 77.
180 Sourdin, above n 9, at 51-52.
181 At 48.
182 Mize and Arthur, above n 170, at 45.
183 Parker Follett, above n 16.
184 Roger Fisher and William Ury *Getting to Yes* (Houghton Mifflin, Boston, 1981).
185 See Chapter 3.II.C for the full definition of dispute as used in this research.

apparent during the formation of the UN climate regime and continues to this day. Any consideration of CCDs would be woefully incomplete without this inclusion. Additionally, it is a processes of bargaining or discussion with a view to reaching an agreement as per the above definition of negotiation.

Chapter 3: Climate Change Disputes and Effectiveness Defined

I Chapter Introduction

In order to address my overarching research question, what is the most effective way to resolve climate change disputes (CCDs), I first need to be clear on what CCDs are, and then specify how I will assess effectiveness. This chapter addresses these two issues. In Section II, I deal with the meaning of CCDs. Specifically, I reiterate why it is necessary for me to propose a general definition and then provide one, based on the three pillars of the climate change response, namely: mitigation; adaptation; and loss and damage. I also specify what I am including as "disputes" for the purposes of this thesis. In Section III, I deal with how I will assess effectiveness. Specifically, by first explaining why it is necessary for me to formulate my own assessment measure and then setting out what that will be. As this chapter concludes Part A of my thesis, I provide a summary of this in Section IV.

II Climate Change Disputes

A Need to Define Climate Change Disputes

As found in Chapter One, existing scholarship does not consider CCDs as a comprehensive subject, rather, it focuses on individual types, such as those based on human rights, or specific processes for resolving them, such as adjudication.[1] As a result, one of the research gaps is the absence of a general definition of these disputes in their own right. As also identified in Chapter One, this lack of a definition is problematic because it means that there is no comprehensive understanding of the causes and scope of CCDs. This limits the ability to identify, resolve or prevent these disputes most effectively, as understanding a dispute is critical to understanding how to best resolve it.[2] This is even more crucial in relation to CCDs, given their unique nature,[3] and the fact that this is still a relatively "young" and emerging area of DR.[4]

Bringing this disjointed area of research together as a whole by defining CCDs as a unique and distinct category within the broader DR field (in the same way that family DR or employment

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1 Chapter 1.III.A.

2 See for example, GCDR "Understanding Dispute Resolution" <www.mbie.govt.nz>. Also, see Chapter 8.VI, which examines the appropriate use of DR processes based a disputes' particular features.

3 As described in Chapter 1.II.B.

4 The history of CCDs is examined through Chapters Four to Seven. This shows that although the UNFCCC Negotiation Process has been ongoing since the 1990s, the broader development of CCDs has happened over the last decade. Also, see Chapter 8.II.C.

DR, are for example) addresses this research problem. This has theoretical and practical benefits. More specifically, having a theoretical framework of CCDs allows for the identification and consideration of the common causes and responses to these disputes (as examined in Chapters Four to Seven). This allows for improvements to be made to both the separate processes and the DR system as a whole, in order to provide more effective resolution and prevention of CCDs (as discussed in Chapters Eight and Nine).

B Defining Climate Change Disputes

Given the pervasive causes and multitudinous impacts of climate change (many of which are still undetermined), it is not possible to precisely identify and define the multitude of current disputes relating to climate change, let alone imagine those that are likely to arise in the near future, not to mention the decades to come. In other words, the inherently complex nature of the topic makes it problematic to capture in a fixed and prescriptive definition. I am, therefore, using the broadest and most inclusive conceptual understanding of CCDs to properly reflect the complexity of this issue, and to give this thesis the widest and most enduring scope. Taking this broad and non-definitive approach also minimises the risk that certain disputes will go undetected, unexamined, or unresolved. I therefore simply define CCDs as "disputes related to the causes, impacts or harms of climate change." In order to provide a manageable structure to consider this vast topic within the bounds of my thesis, I am taking a taxonomic approach and considering these disputes under the three pillars of climate change, specifically: mitigation; adaptation; and loss and damage.[5]

In terms of the precise meaning of "related to", I have taken guidance from scholarship on defining climate change adjudication.[6] One of the issues identified by Joana Setzer and Lisa Vanhala in their meta-analysis on climate change adjudication research, was that although a case may have been solely brought about or motivated by climate change it would not

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[5] There is some reference to these three subcategories in the relevant literature. On arbitration, for example, International Chamber of Commerce *Commission Report: Resolving Climate Change Related Disputes through Arbitration and ADR* (November 2019); and on facilitation, Lawrence Susskind and others *Managing Climate Risks in Coastal Communities* (Anthem Press, London and New York, 2015) but it is predominantly in relation to adjudication, for example, Joana Setzer and Lisa Vanhala "Climate Change Litigation: A Review of Research on Courts and Litigants in Climate Governance" (2019) 10(3) WIREs: Climate Change e580, at 4; and UNEP *Global Climate Litigation Report: 2020 Status Review* (July 2020). It is also used in relation to potential causes of action, for example, Patrick Toussaint "Loss and Damage and Climate Litigation" (2021) 30 RECIEL 16.

[6] For example, Jacqueline Peel and Hari Osofsky "Climate Change Litigation" (2020) 16 Annual Review of Law and Social Science 21 at 23-24.

necessarily be defined as climate change adjudication if it did not expressly mention the term.[7] As they explain, this definitional exclusion may even exist where those cases had a profound effect on the climate response, such as influencing a state's energy policy or GHG emissions.[8] Some of the broader definitions of climate change adjudication that address this problem include: cases in which climate change is a contributing or key consideration;[9] or where the case has connection to,[10] or is regarding[11] climate change, but excludes cases where it is incidental and immaterial.[12] Another suggestion is the "but for" test, that is, a case that only comes about because of climate change, regardless of whether it is expressly mentioned, for example, "opposition to a coal-fired power plant permit might allege only technical procedural error as the legal basis for the litigation but be based entirely on concerns about climate change."[13] This illustrates that using an "express mention" definition for CCDs or using "about" as the link between the subject matter and the dispute would be too exclusive and restrictive. I have, therefore, chosen "related to" in order to be as broad as possible, and within this phrase am including the various approaches outlined here (that is, contributing, key, consideration, connection, regarding, "but for") but am excluding disputes where climate change is incidental or immaterial. In the next subsections, I define "disputes", before going on to describe the three subcategories (Mitigation Disputes; Adaptation Disputes; and Loss and Damage Disputes) in more detail.

C Disputes

The scope of the "disputes" that I am considering is a broad one. In the context of my thesis, it includes *any* dispute related to climate change. As already noted in previous chapters,[14] it is not limited to legal disputes, such as those arising under torts, common law, contracts,

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7 Setzer and Vanhala, above n 5, at 3.
8 At 3.
9 Geetanjali Ganguly, Joana Setzer and Veerle Heyvaert, "If at First You Don't Succeed: Suing Corporations for Climate Change" OJLS (2018) at 3; and Clyde and Co "Climate Change: Liability Risks Report" (March 2019) at 11.
10 Mark Clarke and Tallat Hussain "Climate change litigation: A new class of action" White and Case (2018) at 1.
11 UNEP, above n 5, at 6.
12 At 6.
13 JB Ruhl "What is Climate Change Law?" (22 August 2015) Oxford University Press Blog <www.blog.oup.com>.
14 See Chapter 2.IV.D in relation to facilitation and 2.IV.J in relation to the UNFCCC Negotiation Process.

legislation or treaties,[15] nor is it restricted to disputes as defined by international law.[16] Rather, a dispute for the purposes of this thesis is a disagreement between two or more people (natural or legal) over perceived or actual differences in facts, beliefs or values.[17] Under this broad definition, CCDs will involve a wide range of actors, including, states, public authorities, individuals, corporations, and other legal entities, such as NGOs. I refer to these as the parties to a dispute.

The reason for using this broad definition is that the law only recognises a limited category of harms, and, as noted by DR scholars Hilary Astor and Christine Chinkin, "[r]eal disputes do not always fit easily into recognised legal categories."[18] This is particularly true of climate change, as the law in this area is still developing, as is climate change itself. Many CCDs, therefore, will not fall within the traditional national or international legal frameworks. As a result, a narrow definition would exclude them from the scope of this thesis. This risk is particularly apparent in relation to the UNFCCC Negotiation Process.[19] This is an ongoing, 32-year-old disagreement about whether and how the international community should respond to the causes, impacts and harms of climate change. Given the global nature of climate change, this is arguably the most significant CCD. If I were applying the legal or international definition of dispute this would be excluded, making my consideration of CCDs woefully inadequate.

A further reason for adopting this broad definition is that addressing non-legal issues is a necessary function of a modern justice system, as it prevents these issues from escalating into legal claims at a volume that would overwhelm the formal system and threaten the rule of law.[20] Including non-legal issues as disputes is also consistent with the approach taken in other

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[15] This broader approach is in line with the approach Fisher, Scotford and Barritt take to climate change adjudication: Elizabeth Fisher, Eloise Scotford and Emily Barritt "The Legally Disruptive Nature of Climate Change" (2017) 80 MLR 173 at 200.

[16] As defined by the Permanent Court of International Justice in 1924 as "a disagreement on a point of law or fact, a conflict of legal views or interests between two persons." *The Mavrommatis Palestine Concessions (Greece v Britain*) (1924) PCIJ, Series B3 at 12. Or as defined by international law scholars as, "a specific disagreement concerning a matter of fact, law or policy in which a claim or assertion of one party is met with refusal, counter claim or denial by another. …[W]henever such a disagreement involves governments, institutions, juristic persons (corporation) or private individuals in different parts of the world." J G Merrills and Eric De Brabandere *International Dispute Settlement* (7th ed, Cambridge University Press, Cambridge, 2022) at 1.

[17] This is based on the definition provided by Christopher Moore *The Mediation Process: Practical Strategies for Resolving Conflict* (4th ed, Jossey-Bass, San Francisco, 2014) at 23.

[18] Hilary Astor and Christine Chinkin *Dispute Resolution in Australia* (2nd ed, LexisNexis Butterworths, New South Wales, 2002) at 67.

[19] As noted in Chapter 2.IV.J

[20] Annabel Shaw "ADR and the Rule of Law Under a Modern Justice System" (LLM Thesis, Victoria University of Wellington, 2016) at 51-52.

areas of DR. For example, New Zealand's employment legislation was deliberately drafted to allow a broad range of disputes, including non-legal issues, to be addressed by the DR regime.[21] This was done partly for access to justice reasons, including the prevention of delays in the formal justice processes.[22]

It is worth noting that there can be a difference between "dispute" and "conflict". Some scholars make a distinction on the basis of complexity and resolvability, and view these two concepts on a scale by which a dispute can escalate into a conflict.[23] Narrowing the definition of dispute in this way, however, could not only cause problematic exclusion of some matters but it would also bring unnecessary complexity and unmanageable scope given the reality of applying such a distinction in practice. I therefore use the term "dispute" where scholars have used "conflict" unless there is a clear and material distinction. I do not, however, include low level differences of opinions, arguments or quarrels as included in the dictionary meanings of these two terms.[24]

D Mitigation Disputes

Climate change mitigation refers to efforts to reduce GHG emissions or enhance sinks of them.[25] Specific examples of such efforts include, "using fossil fuels more efficiently, … switching to solar energy or wind power, … and expanding forests and other "sinks" to remove greater amounts of carbon dioxide from the atmosphere."[26] Some mitigation activities are already clearly identified and understood (such as renewable energy and forest planting) but

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21 Employment Relations Act 2000, s 144.

22 Shaw, above n 20, at 44-45.

23 John Burton *Conflict: Resolution and Provention* (St Martin's Press, New York, 1990) at 4; and Timothy Keator "Dispute or Conflict? The Importance of Knowing the Difference" (22 August 2011) Mediate.com <www.mediate.com>.

24 *Oxford English Dictionary* (Online ed, Oxford University Press, 2000). The relevant entry for conflict includes: "The clashing or variance of opposed principles, statements, arguments, etc." and dispute includes "a controversy; also, in weakened sense, a difference of opinion; frequently with the added notion of vehemence, a heated contention, a quarrel."

25 UNFCCC Secretariat "Climate, Get the Big Picture: A Guide to the UNFCCC and its Processes" <www.unfccc.int>; IPCC "Annex 1: Glossary" in *Special Report: Global Warming of 1.5℃* (October 2018); and Ministry for the Environment "Glossary of Climate Change Terms" in "Climate Change Effects and Impacts Assessment: A Guidance Manual for Local Government in New Zealand" (May 2022) <www.mfe.govt.nz>.

26 UNFCCC Secretariat "The Convention - Glossary of climate change acronyms and terms" <www.unfccc.int>. "Sinks" are defined in this same source as, "A reservoir (natural or human, in soil, ocean, and plants) where a greenhouse gas, an aerosol or a precursor of a greenhouse gas is stored", and in the UNFCCC itself, in art 1.8, as "any process, activity or mechanism which removes a greenhouse gas, an aerosol or a precursor of a greenhouse gas from the atmosphere."

this area also involves developing technologies. For example, the use of geoengineering to mitigate climate change is a new and relatively unknown science and technology that is in the early stages of development.[27]

Mitigation Disputes can be broadly defined as disputes related to the reduction and removal of GHG emissions. They will include, for example: international disputes over GHG emission reductions; national disputes about achieving reduction targets; emissions-related claims against high-emitters; and intellectual property disputes about mitigation technologies. Disputes within this subcategory are the most likely to expressly mention climate change, as they specifically relate to reducing GHG emissions in order to limit global temperature increase. They are also arguably the most common and well-recognised, as they have been occurring for the longest period.[28] These factors make them the easiest to identify of the three subcategories.

E Adaptation Disputes

In the simplest terms, climate change adaptation refers to the actions taken to adjust to actual or expected impacts of climate change in order to minimise harms or maximise opportunities.[29] These actions can range from "building flood defences, setting up early warning systems for cyclones and switching to drought-resistant crops, to redesigning communication systems, business operations and government policies."[30] The specific impacts of climate change that need adapting to are detailed in Chapter One. Broadly speaking, they can be categorised as slow-onset (longer-term changes, such as sea level rise) and sudden-onset (extreme events or natural disasters, such as, droughts and floods).[31] Improvements in the science of weather attribution mean that there is an ever increasingly clearer picture of the exact cause of extreme weather events, with many being directly attributed to climate change.[32]

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27 See for example, Gabriel Weil "Global Climate Governance in 3D: Mainstreaming Geoengineering within a Unified Framework" (2021) 13 Climate Change Law and Policy eJournal.

28 Dating back to the establishment of the UNFCCC in 1994.

29 IPCC, above n 25; and Ministry for the Environment, above n 25.

30 UNFCCC Secretariat, above n 26.

31 See Chapter 1.I.A.

32 For example, the work being undertaken by World Weather Attribution, a global scientific collaboration studying attribution of extreme weather events: < www.worldweatherattribution.org>.

Adaptation Disputes can therefore be defined as disputes related to adapting to the impacts of climate change. Examples of such disputes include: national conflicts about protection from climate impacts (for example, over the building of a seawall) or the avoidance of them (for example, land zoning or other permitting and planning decisions) or the retreat from them (that is, managed retreat). It also includes disputes about managing climate change impacts more generally, such as private law disputes about the risk of those impacts and the requirements to disclose them.

Adaptation Disputes are more qualitative than Mitigation Disputes. Disputes falling within this category are less likely than Mitigation Disputes to expressly mention climate change, as they are a step removed from the cause (GHG emissions) and relate to the physical and social impacts. Adaptation is becoming better recognised, however, as the impacts of climate change become more immediate and apparent, partly due to improvements in attribution science mentioned above, and as the reality of the impacts become more evident and widely accepted.[33]

F Loss and Damage Disputes

Defining this subcategory of CCDs requires more in-depth consideration because loss and damage is a more nebulous concept compared to mitigation and adaptation. This subsection first outlines the reasons for including Loss and Damage Disputes as a distinct subcategory, and then makes a brief examination of the definitional challenges, before defining the term as used in this thesis.

I am including Loss and Damage Disputes as a distinct subcategory (as opposed to including it as a subset of Adaptation Disputes) for two main reasons. First, doing so is in line with the UN climate regime. Although loss and damage was originally treated as a subset of adaptation, this has changed over time, and now, particularly following the adoption of the Paris Agreement, it is a "third pillar" of the climate response, alongside mitigation and adaptation. Secondly, it is of particular concern to the climate-vulnerable,[34] and therefore, from a climate

[33] See for example, the NZ SeaRise: Te Tai Pari O Aotearoa programme that released an online tool in 2022 showing location specific sea level rise projections out to the year 2300 for the coast of Aotearoa New Zealand <www.searise.nz>.

[34] See for example, IPCC *Special Report: Global Warming of 1.5℃* (October 2018) at 553; Philippe Sands "Climate Change and the Rule of Law: Adjudicating the Future in International Law" (2016) 28 JEL 19 at 34; and Reinhard Mechler and others "Loss and Damage and Limits to Adaptation" (2020) 15 Sustainability Science 1245 at 1246-1247.

justice perspective, deserving of separate consideration.[35] I discuss these two issues in more detail in the examination of the disputes being addressed through the UNFCCC Negotiation Process in Chapter Six.

I now turn to considering the meaning of this term. In its 2018 Special Report, the IPCC defined loss and damage as "harm from (observed) *impacts* and (projected) *risks*."[36] Examination of the work within the UNFCCC regime found that loss and damage refers to "the actual and/or potential manifestation of climate impacts that negatively affect human and natural systems."[37] There is, however, no agreed definition of loss and damage in relation to climate change, partially due to the dispute between states on the issue (as detailed in Chapter 6.II.A) and the different scholarly approaches taken to defining it. The debate about how to approach the definition largely considers the distinctions between: the two terms ("loss" and "damage"); loss and damage in relation to policy and law; and adaptation and loss and damage. This thesis does not examine this debate in depth. Rather, it briefly addresses these three main issues in order to provide a broad but meaningful definition.

On the first issue, I consider loss and damage as a single notion, in order to manage issues of scope.[38] On the second issue, I make no distinction between "Loss and Damage" (capitalised letters) to refer to the political, policy debate under the UNFCCC and "loss and damage" (lowercase letters) to refer to harms in a physical or legal sense, as the IPCC did.[39] Rather, I adopt the approach reflected in the Paris Agreement and other UNFCCC documentation, and taken by scholars such as Margaretha Wewerinke-Singh and Diana Hinge Salili,[40] and use the term "loss and damage" to refer to both.

The last issue, that is, the distinction between loss and damage and adaptation, requires a slightly more detailed examination. This is largely because the distinction is difficult to determine in practice, and remains unclear. Morten Broberg's recent research considered the

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35 Veera Pekkarinen, Patrick Toussaint and Harro van Asselt "Loss and Damage after Paris" (2019) 13 CCLR 31 at 31.

36 IPCC, above n 34, at 553 (citation omitted).

37 Toussaint, above n 5, at 16.

38 This is also consistent with the approach taken by other scholars, such as, Morten Broberg "State of Climate Law: The Third Pillar of International Climate Change Law" (2020) 10 Climate Law 211 at 219.

39 IPCC, above n 34, at 553.

40 Margaretha Wewerinke-Singh and Diana Hinge Salili "Between Negotiations and Litigation: Vanuatu's Perspective on Loss and Damage from Climate Change" (2020) 20 Climate Policy 681 at 682.

diverging approaches taken to distinguishing between them, and found them all problematic in some regard, so looked at the pillars' objectives instead, which led him to determine:[41]

> Adaptation is … where an adverse impact is prevented, whereas [loss and damage] applies where such impact is not prevented, irrespective of why. … In other words, adaptation is about avoiding harm from occurring, whereas [loss and damage] is about addressing the harm that occurs, whether or not it could have been reduced by adaptation.

Phillipe Sands provides a similar definition.[42] Additionally, Meinhard Doelle and Sara Seck provide a useful articulation of the interplay between the two concepts: "[a]daptation efforts are critical to reducing the amount of [loss and damage] caused by climate change".[43] Jacqueline Peel and Hari Osofsky usefully distinguish all three pillars: "Loss and damage … refers to climate change-related harms that cannot be avoided through efforts to reduce greenhouse gas emissions [(mitigation)] or ameliorated through adaptation measures addressing impacts."[44]

One last definitional issue to address is clarification of what impacts may cause these harms and what harms are included in relation to loss and damage.[45] There is general consensus that slow-onset processes are included as impacts.[46] As explained in relation to other definitions, this thesis is intended to have broad coverage and I, therefore, also include harms resulting from sudden-onset weather events or processes. In terms of the harms themselves, I take a similarly broad approach and include: those that are reparable/reversible as well as irreparable/irreversible; those that occur in human systems as well as natural systems; and those that are economic in nature as well as some that are non-economic.[47]

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41 Broberg, above n 38, at 223.

42 Sands, above n 34, at 34.

43 Meinhard Doelle and Sara Seck "Loss and Damage from Climate Change: From Concept to Remedy?" (2020) 20 Climate Policy 669 at 670.

44 Peel and Osofsky, above n 6, at 27.

45 See Chapter 1.I.A for further discussion on climate impacts.

46 See IPCC, above n 34, at 553; Sarah Mead and Margaretha Wewerinke-Singh "Recent Developments in International Climate Change Law: Pacific Island Countries' Contributions" (2021) 23 IntCL Rev 294 at 304-306; Mechler and others, above n 34, at 1246-1247; and Broberg, above n 38, at 219.

47 The inclusion of non-economic harms is another point on which there is general consensus. See, Broberg, above n 38, at 219; Mechler and others, above n 34, at 1246-1247; and Wewerinke-Singh and Hinge Salili, above n 40, at 682.

New Zealand author, Briony Bennett, provided a detailed taxonomy of climate harms, and found loss and damage to have far-reaching scope and severity.[48] This is not an exhaustive list, but examples of climate related impacts and the harms they may cause include: slow-onset processes (such as ocean acidification, sea level rise and desertification) and sudden-onset events (such as droughts, floods, fires and storms) causing loss of life and physical injuries, as well as loss or damage to: arable and habitable land, including coastal settlements; food sources; freshwater supplies; buildings and infrastructure; and economic activities or livelihoods (such as agriculture, aquaculture and tourism). They may also cause loss of: territory; cultural heritage and identity; indigenous knowledge; and cultural benefits related to biodiversity and natural environments. Further, increases in airborne diseases and other health issues, including hunger and malnutrition, as well as, rising insurance costs. In addition, these impacts may lead to climate displacement, possibly to the extent that some populations will be left stateless. This is a possibility that threatens a number of the Pacific Island and other low lying states, such as, Kiribati, Tuvalu, and the Maldives.[49]

For the purposes of this thesis, climate displacement refers to climate-induced population displacement and resettlement. More specifically, intra and international migration in response to, or in anticipation of, climate-related harms that result in people being unable to access necessary resources, sustain their livelihoods or live in safe conditions.[50] Climate displacement differs from manged retreat in that it is not planned or organised movement (the latter is included under Adaptation Disputes).

Based on the above material, I am adopting the following definition of Loss and Damage Disputes: disputes relating to loss and damage caused by climate change-related harms that have not been reduced or prevented through mitigation efforts or adaptation measures. Examples include: international disagreements between developing and developed nations about how these harms should be addressed, including on issues of liability, climate-displacement and territory loss; and disputes over damage from climate impacts such as floods, storms, and droughts, including against high-emitters.

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48 Briony Bennett "Big Oil, Big Liability: Fossil Fuel Companies and Liability for Climate Change Harm" (2019) 23 NZJEL 153 at 156-157.

49 Nathan Ross "Low-Lying States, Climate Change-Induced Relocation, and the Collective Right to Self-Determination" (Doctor of Philosophy Thesis, Victoria University of Wellington, 2019) at 1.

50 Jane McAdam "Current Developments: Protecting People Displaced by the Impacts of Climate Change" (2020) 114 AJIL 708 at 711-712.

III Measuring Effectiveness

In order to address my overarching research question (what is the most effective way to resolve CCDs?), I require a way to assess or measure "effectiveness" in relation to resolving CCDs. As outlined in Chapter One, the lack of such a measure is one of the research gaps this thesis seeks to address.[51] In this Section, I briefly outline the broader reasons necessitating an effectiveness measure; analyse the relevant literature on the effectiveness of DR; and then, based on that work, set out the effectiveness measure I will use in this thesis.

A Reasons for the Measure

Having a consistent and meaningful way to measure the effectiveness of DR not only allows me to answer my research question, but also has wider importance. There is no generally accepted definition of effectiveness in relation to DR.[52] It is, therefore, important to clearly and specifically articulate what I mean by it. There is, however, a further imperative for having a robust definition and measure in a DR context. As noted in the history of modern ADR, its development was partially driven by dissatisfaction with adjudication.[53] ADR, therefore, was put forward as superior and preferable to adjudication. This is still reflected in much of the promotion of ADR, with it being claimed to be more effective in terms of speed, cost and stress, but with little empirical basis.[54] Such promotion has been criticised as an attack on the rule of law.[55] The association between effectiveness and this "oppositional contrasting"[56] makes it even more important from an academic integrity perspective that I use a transparent and robust measure of effectiveness. As does the general lack of empirical evidence when it comes to measuring DR. A significant, longstanding and continuing lack of data, evaluation and research, in relation to ADR in particular, means that much of it is unmeasured.[57] Further,

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51 Chapter 1.III.A.

52 See, in relation to ADR, for example, Australian Dispute Resolution Advisory Council (ADRAC) *Effectiveness in ADR: Key Issues* (3 December 2019) at 1.

53 See Chapter 2.III.B.

54 Shaw, above n 20, at 21.

55 See for example, Judith Resnik "Failing Faith: Adjudicatory Procedure in Decline" (1986) 53 U Chi L Rev 494 at 537; Hazel Genn *Judging Civil Justice* (Cambridge University Press, New York, 2010) at 73; and Helen Winkelmann, Chief High Court Judge, "ADR and the Civil Justice System" (speech to the Arbitrators and Mediators' Institute of New Zealand Conference, Auckland, 6 August 2011) at 4-5.

56 A term used by restorative practices researcher, Mary Koss, in "The RESTORE Program of Restorative Justice for Sex Crimes" (2014) 29 JIV 1623 at 1655.

57 For example, National Australian Dispute Resolution Advisory Council (NADRAC) *The Resolve to Resolve: Embracing ADR to Improve Access to Justice in the Federal Jurisdiction* (Report, Commonwealth of Australia, 2009) at [6.51]; ADRAC, above n 52; and Tania Sourdin *Alternative Dispute Resolution* (6th ed, Thomson Reuters, Sydney, 2020) at 656 and 659.

having a transparent and robust measure for effectiveness is especially critical given that my hypothesis – that no, one DR process is most effective for resolving CCDs – relies on such a measure. In addition, and in a more practical sense, an examination and understanding of the effectiveness of DR processes provides a basis for improving them (as I detail in Part C).

A further reason for defining effectiveness in the context of this thesis, is that it needs to be specific to CCDs. As explained in the introduction to my research, I am working on the basis that CCDs are a unique type of dispute and that climate change should be addressed.[58] The need to consider and treat CCDs as unique also applies to the way in which they are resolved. Therefore, any measure of the effectiveness of Climate Change DR (CCDR) needs to explicitly include consideration of its impact on the climate response.

B Relevant Research

Despite the research gap in relation to an effectiveness measure for CCDR, there is some relevant research that I can draw on. However, the majority of it is either abstract or only relevant to a particular process, and almost none of it is specific to CCDs. For example, there is research that examines the objectives or standards applicable to ADR (thereby excluding adjudication) in a broad sense.[59] There is also some specification of those standards in a generic sense,[60] such as, the GCDR's best practice principles.[61] These principles include broad concepts of accessibility, resolution and prevention, efficiency, fairness, independence, impartiality and confidentiality. As such, they do not provide clear and specific measures that can be applied in a practical sense. Further, they are not all relevant to the entire range of DR processes considered in this thesis, for example, they are focused on national processes, and confidentiality does not apply to adjudication and many diplomatic means.

DR scholars, Cecilia Albin and Daniel Druckman, constructed a more precise effectiveness "index" specific to negotiation that included, "process efficiency (time to reach agreement) and quality of agreement (issues resolved, degree, and type of agreement)."[62] This measure could

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58 Chapter 1.II.B and C.4.

59 For example, Sourdin, above n 57, at 29 and 656; and Grant Morris "Resisting the Vague: Creating Clear Standards for New Zealand's Dispute Resolution Regimes" (2021) 1 *Dispute Resolution Review* 55.

60 For example, see NADRAC *National Principles for Resolution of Disputes* (April 2011); and NADRAC *A Framework for ADR Standards* (Attorney-General's Department, 2001).

61 GCDR "Assessing a Dispute Resolution Scheme" <www.mbie.govt.nz>.

62 Cecilia Albin and Daniel Druckman "Negotiating Effectively: Justice in International Environmental Negotiations" (2017) 26 Group Decision and Negotiation 93 at 96.

be applied more broadly to some other consensual processes but is not relevant to those that are not predominantly focused on timely resolution (narrative and transformative mediation, restorative practices, and Māori DR). Process efficiency is relevant to determinative processes, as well as to international conciliation and commissions of inquiry, but the measures of an agreed outcome are not.

Roger Fisher and William Ury proposed a three-part criterion for "judging" negotiation in their work on Interest Based Negotiation (IBN).[63] Specifically, it should: produce a wise agreement, if agreement is possible ("wise" meaning the agreement meets the interests of the parties' to the extent possible, resolves conflicting interests fairly, is durable, and takes community interests into account); be efficient; and improve, or at least not damage, the relationship between parties.[64] Despite its vagueness, this measure could be applied to facilitative mediation, and could arguably extend to good offices. It also contains aspects that could apply to determinative processes. Specifically, efficiency, and elements of a "wise" outcome (when taken to mean 'decision') including, fair and durable, and taking community interests into account, which are relevant to adjudication by way of the rule of law.[65] As with Albin's and Druckman's index, however, this measure is not comprehensive enough for the full range of DR processes, nor is it specific to CCDs.

The research that refers to the effectiveness of CCDR specifically is also constrained to specific processes, predominantly adjudication. For example, Peel and Osofsky specifically examined the impact of climate change adjudication on regulatory change.[66] This work provides some aspects that can be used more generally. Most notably, that DR processes can have both direct and indirect effects on the climate response.[67] "Direct" meaning the legal and regulatory effects, such as leading to observable changes in law or policy, and "indirect" meaning effects

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63 Roger Fisher, William Ury and Bruce Patton *Getting to Yes* (3rd ed, Random House, London, 2012).

64 At 4.

65 See subsection C.3 below for an examination of the rule of law.

66 Jacqueline Peel and Hari Osofsky "Climate Change Litigation's Regulatory Pathways: A Comparative Analysis of the United States and Australia" (2013) 35 Law and Policy 150; and Jacqueline Peel and Hari Osofsky *Climate Change Litigation: Regulatory Pathways to Cleaner Energy* (Cambridge University Press, Cambridge, 2015).

67 As noted by the authors in Peel and Osofsky, above n 6, at 33.

such as: increased public awareness; changes in attitudes and behaviour;[68] financial and reputational consequences; and impacts on other disputes.[69]

This overview of the relevant research makes it apparent that effectiveness does not have a simple meaning, particularly in the context of CCDR. Rather, it is multifaceted, comprising of a number of different, and sometimes contradictory, aspects. The literature also highlights that a thorough and relevant measure clearly needs to capture elements that relate to both process and outcome, and that are broad enough, yet still meaningful enough, to apply to all processes – consensual and determinative, national and international. In the following subsection, I formulate an effectiveness measure that meets these requirements, and that I will use throughout this thesis. It is made up of three criteria, specifically: support for the climate response, resolution and prevention, and rule of law.

C Effectiveness Measure

1 Support for the Climate Response

As discussed above, my thesis assumes that climate change should be addressed and, therefore, the measure that I use to assess a DR process's effectiveness must include this criterion. In other words, it must somehow be able to assess whether a DR process, "actually help[s] to address the problem of climate change in a meaningful way."[70] In order to make this more specific and applicable to DR, I am articulating this criterion as "supporting the climate response." The three subcategories of disputes that I am considering (Mitigation, Adaptation, and Loss and Damage) reflect the three key areas of the climate response. Therefore under this criterion, a DR process will be effective if it supports mitigation or adaptation, or addresses loss and damage.[71] In keeping with Peel and Osofsky above, the assessment under this criterion will consider both the direct and indirect impacts a process has on the climate response.[72] I include non-anthropogenic effects as direct impacts, such as, the tangible slowing or limiting of climate change.

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[68] Peel and Osofsky, above n 6, at 33.
[69] Joana Setzer and others "Climate Change Litigation and Central Banks" (European Central Bank, Legal Working Paper Series 2021/12, December 2021) at 12.
[70] As noted in relation to adjudication by Peel and Osofsky, above n 6, at 33.
[71] See Chapter 6.III for further discussion on the more precise meaning of "addresses loss and damage."
[72] Peel and Osofsky, above n 6.

2 Resolution and Prevention

Generally speaking, DR processes seek to resolve disputes. Therefore, as reflected by Albin and Druckman, and Fisher and Ury, one measurement of effectiveness often referred to in relation to consensual ADR, is whether the parties settled or agreed an outcome.[73] This is not relevant to determinative processes, as these result in imposed outcomes by way of an arbitral award or judicial decision. It also does not account for diplomatic means of DR, the success of which may be viewed not as settlement but as discussions continuing, reducing tensions, de-escalation, or non-escalation.[74] Taking resolution to simply mean "settled" is, therefore, a narrow and incomplete measure that "excludes many other dimensions of effectiveness."[75] Consequently, I am using the term "resolution" with a wider meaning. More specifically, it is not limited to definitive resolution, rather, it reflects the applicable, wider range of outcomes, including: partial resolution; de-escalation; or continuing discussions. Further, it includes: the parties' satisfaction with the process and the outcome; and the durability of that outcome, which incorporates the effective enforcement of it and/or the parties' compliance with it.

Even with this comprehensive meaning, however, resolution does not capture the entirety of a DR process's potential effectiveness in relation to outcomes. As defined in Chapter Two, DR can be preventative.[76] There are two levels of such prevention. First, the process may prevent further disputes between the original parties, for example, restorative practices have been found to prevent future disputes between immediate parties.[77] Secondly, and more broadly, a DR process may prevent future disputes between unrelated parties, for example, adjudication can raise public awareness in a way that leads to broader behavioural change.[78] I am, therefore, specifically including prevention as a part of this criterion.

A further reason for including a resolution and prevention criterion is the cost of CCDs. Although disputes are generally regarded as "costly",[79] there is no definitive research

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73 Albin and Druckman, above n 62; and Fisher, Ury and Patton, above n 63 at 4.
74 See Chapter 2.III.A.
75 ADRAC, above n 52.
76 Chapter 2.III.B.
77 See Ministry of Justice "Reoffending Analysis for Restorative Justice Cases 2008-2011" (April 2014) <www.justice.govt.nz>; and Lawrence Sherman and others "Are Restorative Justice Conferences Effective in Reducing Repeat Offending?" (2015) 31 J Quantitative Criminology 1. In this context, I am including the victim, offender and state as parties.
78 See for example, Ganguly, Setzer and Heyvaert, above n 9, at 866-867; and Daniel Bodansky, Jutta Brunnée and Lavanya Rajamani *International Climate Change Law* (Oxford University Press, Oxford, 2017) at 287.
79 Sourdin, above n 57, at 13.

quantifying these costs. The New Zealand GCDR states broadly that the "full costs of all types of disputes to government, parties and society are considerable, and are a significant impediment to economic prosperity."[80] Disputes have direct costs on the parties involved, as well as indirect costs for others, and these costs are not only financial. Direct costs include: settlements, compensation or other awards; legal, expert and administrative fees; insurance costs; and financing costs. By way of example, the GCDR notes that the direct cost of employment disputes in New Zealand is estimated at $440 million per annum.[81] Indirect costs include: lost profits; lost opportunity; reputational costs; other personal costs such as stress and illness; and broader costs to society and the economy.[82] Javier Solana has found that our current understanding of the costs associated with climate change adjudication alone is "very poor."[83] Our current understanding of the costs of all CCDs is even worse. However, the types of costs outlined here will also be arising from CCDs. Effective resolution, particularly in the early stages of a dispute, will help minimise these costs, and preventative DR can avoid them altogether.

3 Rule of Law

As explained in the introduction to my thesis, this work adopts and reflects the rule of law theory.[84] As described by jurisprudence scholar, Brian Tamanaha, the rule of law is "an exceedingly elusive notion"[85] and so requires some elaboration. Broadly speaking, it is a principle that underpins the way our society is governed, including through our justice system.[86] There is considerable complexity and debate when it comes to defining the rule of law in any more precise terms.[87] Addressing this is outside the scope of this work. I am, therefore, accepting the broad, liberalist/substantive version of the rule of law that includes certain substantive attributes or ideals such as justice, moral principles, and human rights.[88]

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80 GCDR "The Costs of Disputes" <www.mbie.govt.nz>.
81 GCDR, above n 89.
82 Setzer and others, above n 69 at 58; and Sourdin, above n 57, at 36.
83 Javier Solana "Climate Change Litigation as Financial Risk" (2020) 2 Green Finance 344 at 344.
84 Chapter 1.III.C.4.
85 Brian Tamanaha *On The Rule of Law: History, Politics, Theory* (Cambridge University Press, Cambridge, 2004) at 3.
86 *The Rule of Law and Transitional Justice in Conflict and Post-Conflict Societies: Report of the Secretary-General* SC 2004/616 (2004) at [6].
87 Shaw, above 20, at 9-10.
88 See for example, Ronald Dworkin "Political Judges and the Rule of Law" (1978) 64 Proceedings of the British Academy 259 at 262; SA de Smith and R Brazier *Constitutional and Administrative Law* (8th ed, Penguin Books London, 1998) at 17; Tamanaha, above n 85, at 92; Tom Bingham "The Rule of Law" (2007) 66 CLJ 67 at 66; and Philip Joseph *Constitutional and Administrative Law in New Zealand* (4th ed, Brookers Ltd, Wellington, 2014) at 159.

As a DR process is a part of a justice system, it should comply with this rule of law. Considering rule of law compliance is particularly important in relation to ADR, as it has been strongly criticised as being inconsistent with, or undermining of, the rule of law since its modern development.[89] I am, therefore, including it as an effectiveness criterion. A further reason for doing so is that it encapsulates a number of necessary components detailed in the relevant scholarship above, specifically: assessing process (as opposed to only outcome); standards of fairness and independence; and the need for DR outcomes to be broadly consistent with public interests, or take community interests into account.[90]

Under the definition I am adopting, a DR process will comply with the rule of law if it provides: public good benefits (including public interest, public accountability, and broader social certainty); access to justice (including relative efficiency of time and cost); equality before the law (including independence and addressing power imbalances); and fair process.[91] Studies from the field of procedural justice research have identified the elements required for parties to perceive DR as fair, including, the ability to speak, be heard, and participate.[92] I am including these elements in this criterion. The term "power imbalance" as used in this thesis, refers to a situation where one party has some form of advantage over another. This may be as a result of them having greater financial or legal resources, more or better information, and/or less of a stake in the outcome and therefore less to lose.[93]

4 Excluded Criteria

As described above, impartiality is commonly included as an ADR standard,[94] and is relevant for adjudication through the rule of law requirement that the law apply equally to all. I do not, however, include it as a criterion in my effectiveness measure for three reasons. First, it is not relevant to all DR, specifically, Māori DR and some diplomatic means, such as good offices and inter-state mediation, where relationships with, and the influence of, the third party is an

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89 See for example, Owen Fiss "Against Settlement" (1984) 93 Yale L J 1073 at 1705; Genn, above n 55, at 121; and Winkelmann, above n 55, at 4.

90 See subsection III.B above.

91 This definition reflects the work of Tom Bingham *The Rule of Law* (Allen Lane, London, 2010).

92 See for example, Cynthia Alkon "Lost In Translation: Can Exporting ADR Harm Rule Of Law Development?" (2011) J Disp Resol 165 at 173-174; Rebecca Hollander-Blumhoff and Tom Tyler "Procedural Justice and the Rule of Law" (2011) J Disp Resol 1 at 5-6; and Michael King and others *Non-Adversarial Justice* (Federation Press, Sydney, 2009) at 14.

93 See for example, Fiss, above n 89, at 1076.

94 Also, as found by Morris' work, above n 59.

important aspect of the process.[95] Second, the relevance of impartiality is being rethought in regard to the DR process that it has most traditionally been associated with, that is, national mediation. Australian DR academics, Rachael Field and Jonathan Crowe, thoroughly examined the current theory and practice of impartiality and concluded that, while it had "been of central importance to the history, development and legitimacy of the mediation process to date, mediation now requires a new sustainable, realistic and relevant paradigm of practice", specifically, one that "does not include neutrality or impartiality as a central feature".[96] This diminished relevance further validates its exclusion. Third, given my assumption that climate change should be addressed and DR must, therefore, support the climate response, impartiality in CCDR needs to be qualified. More specifically, although there should be no inherent bias, favour or partiality to any party, CCDR cannot be impartial on the subject of climate change. This does not exclude CCDR from the requirement to be independent, meaning free from the control of any party through some form of political or financial power, to the extent that there are no perceived conflicts of interest.[97] These two applicable criteria, impartiality except as to supporting the climate response, and independence, are included in my effectiveness measure by way of equality before the law through the rule of law, as explained above.

Confidentiality is another common ADR standard that I do not include in my effectiveness measure. This is partly because it is not relevant to all DR (adjudication, diplomatic means and Māori DR, in particular). Further, it can reduce CCDR's ability to support the climate response, as private processes limit the necessary consideration and involvement of the public interest, which, given climate change is a global threat to humankind, is fundamental to CCDR.[98] I am not proposing that confidentiality should never apply to ADR processes within the CCDR system. Rather, as it has limited applicability and can have negative consequences for the climate response, it is not an appropriate measure of effectiveness.

Although this qualified approach to impartiality and ADR confidentiality may require change in the way DR is traditionally conceived and delivered, it is vital, given the realities of CCDs as explained in this thesis.[99] Climate change requires us to confront orthodox positions and take

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95 See Chapter Two for detailed definitions of these processes.

96 Rachael Field and Jonathan Crowe *Mediation Ethics* (Edward Elgar Publishing Ltd, Gloucestershire, 2020) at 247.

97 As defined, and distinguished from impartiality, by Morris, above n 59, at 74.

98 This is explored in more detail through the assessment of the existing CCDR system in Part B.

99 More specifically, CCDs concern an imminent threat to human survival, involve highly vulnerable parties and fundamental power imbalances, and are burgeoning in complexity and volume. See Chapter 1.II.B.

bold action on every front, including the way in which we address the disputes it causes. The way in which climate change-qualified impartiality and confidentiality can be implemented in practice is discussed as a part of the suggested improvements to the CCDR system in Part C.

5 Applying the Measure

On the basis of the above, measuring the effectiveness of any CCDR process (or group of processes) throughout this thesis will entail a consideration of the following questions:

1. How well does it support mitigation or adaptation, or address loss and damage?
2. How well does it resolve and prevent disputes?
3. How well does it comply with the rule of law?

IV Part A Summary

This is the final chapter of Part A – the introductory portion of my thesis. This Part has provided the necessary foundations upon which I can meaningfully examine the topic. More specifically, in Chapter One, I have given a general introduction to this work. This has provided the necessary context, established the need for this research, and determined its purpose and my thesis. In Chapter Two, I have provided the basis for clarity and consistency by defining the key terms relating to climate change and DR that I am using throughout. In this final chapter, I have established the subcategory definition of CCDs and established a novel, criteria-based effectiveness measure that will enable me to properly address my research question. In summary, Part A has provided necessary clarity, filled a gap in the research (by establishing an effectiveness measure) and begun to address my research sub-question, what are CCDs? Additionally, the subcategory definition of CCDs and assessment measure provide the structure for the proceeding Part B, which will allow me to meaningfully manage the scope of this topic as I move on to mapping and assessing CCDR.

Part B: Current Climate Change DR System

In order to address the research problem outlined in Chapter One, my overarching research question is, what is the most effective way to resolve climate change disputes (CCDs)?[1] As further outlined in that chapter, I am approaching this broad question through three sub-questions.[2] In Chapter Three, I started addressing the first of these, what are CCDs, by outlining a definitional taxonomy that categorises the disputes under the three pillars of climate change, specifically: Mitigation Disputes; Adaptation Disputes; and Loss and Damage Disputes.

In this next Part of my thesis, which consists of Chapters Four to Seven, I address my second research sub-question, what processes are currently used to address CCDs and how effective are they? I do this by mapping and assessing the current system of DR processes being used to resolve CCDs. Chapters Four to Six respectively map and assess the three subcategories of Mitigation, Adaptation, and Loss and Damage Disputes. To conclude Part B, Chapter Seven provides a summary of the overall system of climate change DR (CCDR) and its effectiveness. The work in this Part also adds more depth to the answer to my first sub-question (what are CCDs?) provided in Part A.

Chapter 4: Mitigation Disputes

I Chapter Introduction

This chapter maps and assesses Mitigation DR. In Section II, I map this subcategory by identifying the DR processes currently being used to address them. In Section III, I assess the effectiveness of those processes using the measure established in Chapter Three.

As defined in Chapter Three, Mitigation Disputes relate to the reduction or removal of GHG emissions. They commonly include issues related to increased mitigation ambition and enforcement of existing mitigation targets. In an international context, Mitigation Disputes are likely to be interstate and investor-state disputes. In a national context, they are mostly disputes between individuals and the state. More recently, however, there has been a shift from purely government accountability for emissions to corporate accountability as well, and so they now include disputes between individuals or state actors and corporate entities.

[1] Chapter 1.II.A.
[2] Chapter 1.II.B.

II Mapping Mitigation DR

This section maps the current processes being used to address Mitigation Disputes by analysing the types of disputes that are using them. Analysing types of disputes includes consideration of who they involve (the parties), what they are about (the claims or issues), and why they are being raised (the parties' purpose or aim). In this context, I am using specific disputes as representative examples. As explained in Chapter One, this mapping provides an understanding of the scope and causes of disputes, as well as the current CCDR system.[3] The processes that are currently being used to address Mitigation Disputes are negotiation, adjudication and arbitration.

A Negotiation

This subsection examines the types of Mitigation Disputes that are currently using the process of negotiation as a means of resolution. As it illustrates, negotiation is one of the most commonly used DR processes for addressing Mitigation Disputes. Some of these negotiations, specifically the UNFCCC Negotiation Process addressing the global emissions disputes, are well examined and researched, whereas others, specifically, private mitigation negotiations, are not only less commonly examined but are largely unidentifiable. These two types of negotiation are considered in turn.

1 UNFCCC Negotiation Process

The largest and arguably most significant Mitigation Dispute is that between states as to agreeable international GHG emissions reductions. This longstanding and ongoing dispute is being addressed through a series of international negotiations that have been taking place for over a quarter of a century under the auspices of the UN. More specifically, negotiations that led up to, and have then been taking place under, the UNFCCC (the UNFCCC Negotiation Process). As explained in Part A, these are included as a dispute and DR process for the purposes of my thesis, although they are not at international law.

There are several areas of clear dispute about mitigation that became apparent during the negotiations for the UNFCCC and continue to this day. The central disputed issues that have been negotiated through this process include: whether there should be legally binding,

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[3] Chapter 1.III. This understanding is necessary to achieve my research aims as set out in Chapter 1.III.C.2.

quantitative GHG emission reductions (also referred to as "targets"); what categories of parties should be used for determining or distinguishing different targets and responsibilities, particularly what responsibility developed versus developing countries should have for mitigation; and whether reduction commitments should be internationally negotiated or nationally determined (also referred to as a "top-down or bottom-up" approach[4]). There have also been a number of more specific, detail-focused issues in dispute, such as, whether states should be able to use market mechanisms to implement their reduction commitments, and whether removal of emissions ("sinks") would be included as well as reductions. A brief (and necessarily simplified, given its complexity) overview of this process highlighting the parties involved (that is, states, including developed and developing countries, and climate-vulnerable parties) and their various aims, as well as the main issues in dispute, reinforces the inclusion of the UNFCCC Negotiations as a DR process, and also highlights the scope and causes of the dispute.

In 1988, the UN General Assembly adopted its first resolution on climate change, declaring it a "common concern of mankind."[5] In 1990, it established the Intergovernmental Negotiating Committee to negotiate a convention that contained appropriate commitments for action to combat climate change.[6] This concluded with the creation of the UNFCCC in 1992, which was signed by 166 parties, including New Zealand, by the time it entered into force in 1994.[7] The UNFCCC's "ultimate objective" was to achieve "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."[8] While it is a legal instrument, it did not include any specific, legally binding targets or timeframes for achieving this objective. The only specific provision to limit GHG emissions was expressed as an aim as opposed to a legal commitment.[9] As such, the UNFCCC did not definitively resolve the three fundamental issues outlined above. This meant that the mitigation dispute remained unresolved, and from that point on there has been over a quarter of a century of ongoing negotiations. This began formally at the first COP in 1995 and over the years since has led to a number of both binding and non-binding

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4 Daniel Bodansky, Jutta Brunnée and Lavanya Rajamani *International Climate Change Law* (Oxford University Press, Oxford, 2017) at 2.

5 *Protection of Global Climate for Present and Future Generations of Mankind* GA Res 43/53 (1988), art 1.

6 *Protection of Global Climate for Present and Future Generations of Mankind* GA Res 45/212 (1990), art 1.

7 UN "Treaty Depository: Status of Treaties" <treaties.un.org>. Currently, there are 198 parties to the Convention.

8 Art 2.

9 Art 4.2.

instruments. This includes, most notably, the Kyoto Protocol that was agreed in 1997 and entered into force in 2005, and the Paris Agreement that was agreed in 2015 and entered into force the following year. Negotiations over the details of the Paris Agreement are continuing, and the core disputed issues have still not been definitively resolved.[10]

The actual process of the UNFCCC Negotiations generally begins with states debating process issues and restating their positions, which although not conducive to meaningful engagement on the issues, gives parties the opportunity to express their views and concerns, and hear those of others. The substantive engagement, through traditional bargaining, often occurs late in the process as parties realise that they will need to compromise in order to avoid failure, and usually only involves a small group of key delegates.[11] This reflects a positional bargaining style of negotiation.[12]

A number of the dynamics in this UNFCCC Negotiation Process have remained constant over time, particularly in relation to certain parties' positions on issues, which reflect national interests and domestic political dynamics.[13] For example, the EU consistently arguing for strong, legally binding targets, the United States consistently arguing for nationally determined commitments, and China and India consistently resisting the imposition of binding targets. There have, however, been a number of significant changes in the dynamics of the dispute over time, including: the growing strength and clarity of the scientific evidence on the causes and effects of climate change; government changes within key states; global economic changes (such as the emergence of China as an economic power); the increasing number of states and groups playing significant roles in the negotiations, including private actors and climate-vulnerable groups such as youth[14] and indigenous peoples; and the growth in the size and responsibility of the UNFCCC secretariat.

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[10] Daniel Bodansky and Lavanya Rajamani "The Issues that Never Die" (2018) 3 CCLR 184 at 184.
[11] Bodansky, Brunnée and Rajamani, above n 4, at 103.
[12] See Chapter 2.IV.J.
[13] Bodansky, Brunnée and Rajamani, above n 4, at 115-116.
[14] See for example, Harriet Thew, Lucie Middlemass and Jouni Paavola "Does Youth Participation Increase the Democratic Legitimacy of UNFCCC-Orchestrated Global Climate Change Governance?" (2021) 30 Environmental Politics 873.

2 UN Climate Regime DR

The UNFCCC provides a DR mechanism for addressing any dispute about the interpretation and application of the Convention. This mechanism has been incorporated into the Paris Agreement, and provides for the establishment of a multilateral consultative process to resolve questions regarding implementation of the UNFCCC.[15] However, the parties have never reached agreement on the composition of the consultative committee and it has never been established.[16] The mechanism also specifically deals with dispute settlement, providing that states in dispute "shall seek a settlement of the dispute through negotiation or any other peaceful means of their own choice."[17] If this is unsuccessful, the parties may submit their dispute to conciliation, arbitration or the International Court of Justice.[18] Negotiation is, therefore, the primary DR process for disputes about the interpretation and application of the UNFCCC and Paris Agreement. These specific DR mechanisms, however, have never been used and no negotiation has taken place under them.[19]

3 Other Negotiations

As explained in Chapter Two, negotiation is the most commonly used DR process,[20] and there is no reason for that to be different in relation to Mitigation Disputes outside of the UNFCCC Negotiation Process. For example, most contracts, agreements, and treaties in both a national and international context will include a DR provision that typically provides for negotiation as the first step to attempt to resolve any dispute under that agreement.[21] It is difficult, if not impossible, however, to know how many disputes are resolved in this way, as these are largely unreported and/or confidential. As well as these specific agreement-based disputes, negotiation is likely also being used to address other legal Mitigation Disputes (such as those outlined in relation to adjudication below). Although not definitive proof, some indication of this type of dispute can be found by looking at the work of climate change lawyers, which shows, for example, disputes about the workings of emissions trading schemes.[22] There are also political Mitigation Disputes being negotiated at a national level. For example, negotiating cross-party

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15 Art 13.
16 Bodansky, Brunnée and Rajamani, above n 4, at 154.
17 Paris Agreement, art 14(1).
18 UNFCCC, art 14(2)-(7).
19 Bodansky, Brunnée and Rajamani, above n 4, at 155.
20 Chapter 2.IV.J.
21 For example, in relation to investment treaties, see Judith Levine and Nicola Peart "Procedural Issues and Innovations in Environment-Related Investor-State Disputes" in Kate Miles (ed) *Research Handbook on Environment and Investment Law* (Edward Elgar Publishing Limited, Gloucestershire, 2019) 209 at 210.
22 See for example, Bell Gully "Expertise: Climate Change" <www.bellgully.com>.

support for New Zealand's Zero Carbon Act, and Emissions Reduction Plan.[23] The routine and confidential nature of the Mitigation Disputes being negotiated make it unfeasible to determine the parties, issues, and aims with any more specificity. The information that is available, however, suggests that the Mitigation Disputes being negotiated involve a broad range of public and private parties, include a broad variety of issues, including commercial and political, and are largely routine (with the exception of political Mitigation Disputes).

B Adjudication

This section examines the types of Mitigation Disputes that are currently using the process of adjudication as a means of resolution. As outlined in Chapter One, adjudication has become an increasingly common way to address CCDs.[24] This is particularly true of Mitigation Disputes, as adjudication "has become an instrument used to enforce or enhance climate commitments made by governments."[25] As set out in Chapter Two, there are a number of different subcategories that can be used to consider climate change adjudication.[26] In this section, I use the "public strategic" and "private strategic" categorisation as a means to map the disputes, with specific types of claims as subcategorises where that provides useful clarity.

1 Public Strategic Disputes

In the context of mitigation, public strategic disputes are those through which parties seek to hold public bodies (governments or states) to their treaty, legislative, or policy commitments made in relation to emissions.[27] A brief overview of significant strategic adjudication shows development of these disputes over time, with different types of claims being used by various parties in attempts to force or strengthen government action on mitigation.

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23 Climate Change Response (Zero Carbon) Amendment Act 2019. "119 of 120 MPs just voted to pass NZ's historic Zero Carbon Bill into law" *The Spinoff* (online ed, New Zealand, 7 November 2019). Ministry for the Environment *Te hau mārohi ki anamata Towards a Productive, Sustainable and Inclusive Economy: Aotearoa New Zealand's First Emissions Reduction Plan* (May 2022). "National broadly supports Govt emissions reduction plan" *Radio New Zealand News* (online ed, New Zealand, 17 May 2022).

24 Chapter 1.II.C.

25 Joana Setzer and Catherine Higham *Global Trends in Climate Change Litigation: 2021 Snapshot* (July 2021, London, Grantham Research Institute on Climate Change and the Environment and the Centre for Climate Change Economics and Policy, London School of Economics and Political Science) at 6.

26 Chapter 2.IV.A.

27 Geetanjali Ganguly, Joana Setzer and Veerle Heyvaert, "If at First You Don't Succeed: Suing Corporations for Climate Change" (2018) 38 OJLS 841 at 843.

In 2011, a "wave" of Mitigation Disputes based on the public trust doctrine was started across the United States by the Children's Trust. The most prominent of these was the *Juliana* case against the federal government,[28] and the majority were unsuccessful.[29] Several years later, citizens and environmental NGOs in other jurisdictions started bringing public strategic Mitigation Disputes, but increasingly using human rights-based arguments and the emissions-related obligations of the Paris Agreement. This second wave of disputes was partly influenced by the ultimate success in 2019 of one of the most significant disputes in this area, *Netherlands v Urgenda Foundation* (*Urgenda*).[30] In that case, an environmental group took a claim on behalf of approximately 900 Dutch citizens seeking an injunction compelling the government to reduce emissions. A number of similar examples have been seen in Europe,[31] and there is evidence of this type of dispute continuing.[32]

Environmental NGOs are not the only parties initiating this type of Mitigation Dispute. There is an emerging trend of parties who have already been impacted by climate change seeking enhanced mitigation action.[33] A number of other disputes are being raised by climate-vulnerable parties, including youth and indigenous people. Groups of young people in various jurisdictions are arguing that governments' inadequate mitigation action specifically breaches their rights, as well as those of future generations.[34] This trend of youth action has also been

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28 *Juliana v United States* 947 F 3d 1159 (9th Cir 2020) [*Juliana*].

29 Nicole Rogers "Victim, Litigant, Activist, Messiah: The Child in a Time of Climate Change" (2020) 11 JHRE 103 at 110-111.

30 *Netherlands v Urgenda Foundation* [2019] Netherlands Supreme Court 19/00135 [*Urgenda*]. Joana Setzer and Rebecca Byrnes *Global Trends in Climate Change Litigation: 2020 Snapshot* (July 2020, London, Grantham Research Institute on Climate Change and the Environment and the Centre for Climate Change Economics and Policy, London School of Economics and Political Science) at 1.

31 For example, *Assoc of Swiss Senior Women for Climate Protection v Swiss Federal Council* SC of Switzerland IC37/2019, 5 May 2020; Case T-330/18 *Carvalho v The European Parliament and the Council* [2018] OJ C 285/34; *Friends of the Irish Environment v Government of Ireland* [2020] IESC 49 [*Ireland Climate case*]; *Notre Affaire à Tous v France* Paris Administrative Court Cases 1904967, 1904968, 1904972 and 1904976/4-1, 3 February 2021; and *Commune de Grande-Synthe v France* Conseil d'Etat Case 427301, 1 July 2021;

32 For example, the upcoming case in the United Kingdom taken by NGOs ClientEarth and Friends of the Earth against the government challenging the adequacy of its mitigation plans. "News: We've got a hearing date" <www.clientearth.org>.

33 For example, the Australian case of *Bushfire Survivors for Climate Action Inc v Environment Protection Authority* [2020] NSWLEC 152.

34 For example, *Penã v Ministry of the Environment* Supreme Court of Colombia 11001220300020180031901, 5 April 2018 [*Future Generations case*]; *ENvironnement JEUnesse v Attorney General of Canada* 2021 QCCA 1871; *Sacchi v Argentina* UN Committee on the Rights of the Child CRC/C/88/D/104-108/2019, 8 October 2021; *Neubauer v Germany* Federal Constitutional Court Case No BvR2656/18/1, BvR78/20/1, BvR96/20/1, BvR288/20, 24 March 2021 [*Neubauer*]; and the ongoing case in the European Court of Human Rights of *Agostinho v Portugal and 32 Other States* (application 39371/20, filed 2 September 2020).

seen in South Korea[35] and New Zealand, with the 2017 application for judicial review taken against the Minister of Climate Change Issues by law student Sarah Thomson challenging the Government's emission reduction targets.[36] Disputes involving indigenous people are seen in both national and international jurisdictions. Examples of the former include the application for an urgent hearing filed in New Zealand's Waitangi Tribunal in 2017 on behalf of a District Māori Council claiming that the Government had breached its obligations to Māori by failing to implement policies to address climate change,[37] and a claim reportedly filed in 2019 in New Zealand's High Court seeking a declaration that the Government will be in breach of duties owed to Māori unless it reduces emissions.[38] There are similar cases to be found in other jurisdictions as well, including Canada and Australia.[39] In an international context, an example of this type of dispute is provided by the Petition of Torres Strait Islanders to the UNHRC Alleging Violations Stemming from Australia's Inaction on Climate Change against the Australian government under the International Covenant on Civil and Political Rights, lodged in 2019. Other public strategic disputes have been raised using national planning and international laws. These are now considered in turn.

(a) National Planning Disputes

Another type of public Mitigation Dispute using adjudication relates to governments' environmental review, planning, or permitting decisions. More specifically, disputes about decisions authorising third-party activity that leads to increased GHG emissions. These are often taken by individuals, NGOs or corporations against government or local authorities, and are usually about new projects, such as wind farms, coal-fired power plants, or coal mines.[40] As of May 2021, Joana Setzer and others identified 24 such cases across 16 jurisdictions.[41]

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35 *Do-Hyun Kim v South Korea* Constitutional Complaint filed in the Constitutional Court on 13 March 2020: Sabin Database.

36 *Thomson v Minister of Climate Change Issues* [2017] NZHC 773.

37 Waitangi Tribunal *Decision on Application for an Urgent Hearing* (Wai 2607, 2017).

38 Michael Neilson "Iwi leader suing Government over 'failure' to protect Māori from climate change" *NZ Herald* (online ed, Auckland, 16 July 2019).

39 For example, *Lho'imggin v Her Majesty the Queen* 2020 FC 1059 and *Pabai v Australia* filed 22 October 2021 in the FCA (VID622/2021).

40 In New Zealand for example, see *Genesis Power Ltd v Franklin District Council* [2005] NZEnvC 148 and *West Coast ENT Inc v Buller Coal Ltd* [2013] NZSC 87.

41 Joana Setzer and others "Climate Change Litigation and Central Banks" (European Central Bank, Legal Working Paper Series 2021/12, December 2021) at 17.

In 2019, Setzer and Rebecca Byrnes distinguished planning disputes from strategic cases, referring to them as "routine" instead.[42] This distinction appears to be shifting, however, as various environmental NGOs are taking these disputes strategically.[43] Two European cases challenging airport expansions demonstrate this. Specifically, the *Heathrow Case*,[44] which was the first major ruling based on the Paris Agreement,[45] and the *Austrian Case*,[46] which, although ultimately unsuccessful, demonstrates the use of strategic disputes. This type of dispute is also apparent in Australia, with the *Rocky Hill Case*,[47] in which a new coal mine proposal was rejected on grounds that included its inconsistency with the Paris Agreement,[48] and in New Zealand, with the judicial review application filed by All Aboard Aotearoa against a proposed roading project,[49] as well as other parts of the world, including Africa.[50] There are also examples of different types of claims being used by young people in these strategic disputes to stop fossil fuel projects. In the Australian case of *Sharma*,[51] eight teenagers challenging the extension to an existing coal mine successfully claimed that federal government Ministers owe a novel duty of care under the law of negligence to avoid causing personal injury to Australian children. Youth Verdict's objection to a coalmine being heard in the Queensland Land Court,[52] and Students for Climate Solutions' challenge to a decision to grant permits for onshore oil and gas exploration in New Zealand,[53] show that these types of disputes are continuing. Despite these strategic exceptions, however, many planning-related Mitigation Disputes still remain "routine".

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42 Joana Setzer and Rebecca Byrnes "Global Trends in Climate Change Litigation: 2019 Snapshot" (July 2019, London, Grantham Research Institute on Climate Change and the Environment and the Centre for Climate Change Economics and Policy, London School of Economics and Political Science).

43 For example, the Norwegian case *Nature and Youth Norway v Ministry of Petroleum and Energy* [2020] Supreme Court Case No 20-051052SIV-HRET, 22 December 2020 [*People v Arctic Oil case*], which unsuccessfully challenged the issuing of deep sea oil and gas permits and, in June 2021, was appealed by the applicants to the European Court of Human Rights.

44 *R (Friends of the Earth Ltd) v Heathrow Airport Ltd* [2020] EWCA 214 (Civ).

45 Giuliana Viglione "Climate Lawsuits are Breaking New Legal Ground to Protect the Planet" 2020 579 Nature 184 at 184.

46 *In re Vienna-Schwechat Airport Expansion* Constitutional Court E875/2017 and E886/2017, 29 June 2017.

47 *Gloucester Resources Ltd v Minister for Planning* [2019] NSWLEC 7 [*Rocky Hill Case*].

48 Jacqueline Peel and Hari Osofsky "Climate Change Litigation" (2020) 16 Annual Review of Law and Social Science 21 at 25.

49 *All Aboard Aotearoa v Waka Kotahi*, which was filed in March 2021 but withdrawn when the government announced the project would not go ahead.

50 For example, *Save Lamu v National Environmental Management Authority* National Environmental Tribunal Appeal Net 196, 26 June 2019 in Kenya.

51 *Sharma v Minister for the Environment* [2021] FCA 560.

52 The case is due to conclude in August 2022, following the dismissal of a number of challenges by the mining company, the latest being *Waratah Coal Pty Ltd v Youth Verdict Ltd (No 5)* [2022] QLC 4.

53 *Students for Climate Solutions v Minister of Energy and Resources* filed 9 November 2021 in NZHC: Grantham Database.

(b) International Disputes

As yet, no Mitigation Disputes have been taken before an international judicial body. Some scholars believe, however, that developing international obligations (including those under the Paris Agreement) may lead to an emerging use of international adjudication for public strategic Mitigation Disputes.[54] This possibility is examined in Chapter Eight.[55] There are, however, some examples of strategic Mitigation Disputes being raised in other international adjudicative arenas, using human rights and heritage-based claims in attempts to compel mitigation action. In 2005, the Inuit Circumpolar Conference petitioned the quasi-adjudicative body, the Inter-American Commission on Human Rights (IACHR) alleging that the United States had violated their human rights, including the rights to culture, life, health and shelter, by failing to mitigate its GHG emissions.[56] The IACHR rejected the petition without reasons, on the merits.[57] There have also been some less direct, international Mitigation Disputes based on human rights, such as, the Inter-American Court of Human Rights' 2018 advisory opinion recognising a right to a healthy environment.[58] There was also a group of Mitigation Disputes taken to the World Heritage Committee (WHC)[59] in the mid-2000s by several environmental NGOs, arguing that climate change was a threat to a number of world heritage sites, such as the Great Barrier Reef, and that states had obligations under the World Heritage Convention to reduce their emissions in order to protect those sites. Although the WHC noted the impacts of climate change on heritage sites and established a working group and management strategy on the issue, it did not compel any actions of mitigation.[60]

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54 Paula Henin "Adjudicating States' International Climate Change Obligations Before International Courts and Tribunals" (2019) 113 ASIL Proceedings 201; Daniel Bodansky "The Role of the International Court of Justice in Addressing Climate Change" (2017) 49 Ariz St LJ 689; Philippe Sands "Climate Change and the Rule of Law: Adjudicating the Future in International Law" (2016) 28 JEL 19; and Roda Verheyen and Cathrin Zengerling "International Dispute Settlement" in Kevin Gray, Richard Tarasofsky and Cinnamon Carlarne (eds) *The Oxford Handbook of International Climate Change Law* (Oxford University Press, Oxford, 2016) 418 at 426-429.

55 Chapter 8.IV.A.

56 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).

57 Verheyen and Zengerling, above n 54, at 423.

58 *The Environment and Human Rights (Advisory Opinion)* (2017) Inter-Am Ct HR OC-23/18, Series A 23.

59 The body responsible for the implementation of the World Heritage Convention. Although not an adjudicative body as such, I am including it here in order to capture the full scope of CCDs.

60 *Threats to World Heritage Properties* WHC Decision 29COM7B.a WHC-05/29.COM/22 (9 September 2005); and *Issues Relating to the State of Conservation of World Heritage Properties: The Impacts of Climate Change on World Heritage Properties* WHC Decision 30COM7.1 WHC-06/30.COM/19 (23 August 2006).

2 Private Strategic Disputes

This subsection examines the second subcategory of Mitigation Disputes being addressed through adjudication, namely, strategic disputes involving private parties (corporations). As shown in Chapter Two, these types of disputes are increasing.[61] Those that relate to mitigation involve parties seeking to reduce emissions through changes to corporate behaviour. These disputes are being raised against the emitters themselves, particularly the "Carbon Majors", and, more indirectly, the financial sector. They are also emerging in relation to disinformation claims.

(a) Carbon Major Disputes

The "Carbon Majors" are 100 fossil fuel producers that have produced 52 per cent of global industrial GHG emissions since the industrial revolution.[62] As Setzer and Byrnes identified in 2020, there is an emerging type of dispute with the strategic aim of forcing these companies to reduce their emissions.[63] The most prominent of these is *Milieudefensie*.[64] This dispute was taken by a number of environmental NGOs and over 17,000 citizens, claiming that Royal Dutch Shell had a duty of care under Dutch law and human rights obligations to reduce its emissions. It resulted in the first major climate change adjudication ruling against a corporation, with the court ordering Shell to reduce its global GHG emissions. There is also evidence that this type of Mitigation Dispute is being extended beyond the Carbon Majors to include other heavy emitting corporations. In New Zealand, for example, a climate activist is pursuing a claim against a number of corporations, including those in the meat and dairy industry, seeking that they cease emitting GHGs by 2030.[65] Disputes against this industry have been predicted to increase.[66]

61 Chapter 2.IV.A.2.
62 Paul Griffin *The Carbon Majors Database: CDP Carbon Majors Report 2017* (Carbon Disclosure Project, July 2017) at 5.
63 Setzer and Byrnes, above n 30, at 22. See, for example, the French case of *Notre Affaire à Tous v France*, above n 31.
64 *Milieudefensie v Royal Dutch Shell* Hague DC C/09/571932/HAZA19–379, 26 May 2021 [*Milieudefensie*].
65 *Smith v Fonterra Co-operative Group Ltd* [2020] NZHC 419, which is currently under appeal before the Supreme Court: *Smith v Fonterra Co-operative Group Ltd* [2022] NZSC 35.
66 Adam Grossman and Arianna Libera "The Next Wave of Climate Change Litigation: Industrial Meat" *Carrier Management Magazine* (online ed, United States, 7 June 2022).

(b) Financial Sector Disputes

Other strategic Mitigation Disputes seeking to change corporate behaviour are those raised, not directly with the emitters, but more indirectly in the financial sector. This is happening as it becomes increasingly well recognised that, as noted in the Paris Agreement,[67] "[f]inance plays a central role in climate change."[68] A number of these disputes are being adjudicated. In the context of financial markets, I am including as adjudication, "ordinary courts as well as financial supervisory authorities and ombudsman schemes."[69] These disputes are being taken by investors or shareholders against corporate parties such as banks, institutional investors, and corporate borrowers in relation to high emission investments, such as in the fossil fuel industry. Although the initiating party in these disputes may not explicitly identify a reduction in GHG emissions as their aim, they can be categorised as Mitigation Disputes as they are seeking to either directly discourage fossil fuel investment or indirectly make such investment more burdensome, therefore reducing emissions. Javier Solana's 2019 research found that these disputes were a relatively recent phenomenon, but that their number was increasing and that growth would continue.[70] One of the early examples of this type of dispute was an unsuccessful claim taken by students against Harvard University seeking to compel the divestment of the university's endowment in fossil fuel companies.[71] These disputes are also starting to extend beyond private parties, to include state financial supervisory authorities and regulators, and central banks.[72] In 2021, for example, an environmental NGO filed a case against the Belgian National Bank in relation to its purchase of bonds from high-emitting companies.[73]

(c) Disinformation Disputes

Also referred to as "climate-washing", this is an emerging type of dispute based on a claim that a commercial party is providing misleading information about climate related issues.[74] This disinformation may relate to a company's: services, products, or commitments; or the

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67 Art 2 includes as one of its aims, to make "finance flows consistent with a pathway towards low greenhouse gas emissions and climate resilient development."

68 Joana Setzer and Lisa Vanhala "Climate Change Litigation: A Review of Research on Courts and Litigants in Climate Governance" (2019) 10(3) WIREs: Climate Change e580 at 7.

69 Javier Solana "Climate Litigation in Financial Markets: A Typology" (2020) 9 TEL 103 at 106.

70 At 123.

71 *Harvard Climate Justice Coalition v President and Fellows of Harvard College* 60 NE 3d 380 (Mass App Ct 2016). The claim was unsuccessful on the basis that the claimants lacked standing.

72 Setzer and others, above n 41, at 20-21.

73 *Client Earth v Belgian National Bank*, originally filed 13 April 2021, currently pending before the Brussels Court of Appeal - Sabin Database.

74 Lisa Benjamin and others *Climate-Washing Litigation: Legal Liability for Misleading Climate Communications* (The Climate Social Science Network, Policy Briefing, January 2022).

disclosure of its climate investments, financial risks, or harms. There have been almost 50 of these disputes taken before adjudication bodies in the United States, Australia, Europe, and New Zealand since 2008, and they are predicted to increase.[75]

In Mitigation Disputes, the specific claim will be that a corporation is providing incorrect information about GHG emissions.[76] A number of these are strategic disputes about advertisements. The Dutch case of *Milieudefensie* mentioned above provides such an example,[77] as one of the applicants' claims was that Shell had been using a misleading public relations strategy about its emissions.[78] Another example is the ongoing consumer protection dispute being taken by the state of Massachusetts against Exxon Mobil Corporation, which includes allegations that it deceived consumers and investors by misleadingly advertising its products and engaging in greenwashing campaigns.[79] This type of dispute is also being adjudicated in a broader sense by "supervisory authorities." For example, in 2019, ClientEarth complained to the UK Contact Point under the OECD Guidelines for Multinational Enterprises that a BP advertising campaign provided inaccurate information about its emissions savings.[80] In 2021, Lawyers for Climate Action took a complaint to the New Zealand Advertising Standards Board alleging that an advertising campaign by energy company, Firstgas, about "zero carbon gas" was misleading.[81]

3 Non-Strategic Disputes

As identified above in relation to national planning disputes, many Mitigation Disputes are not strategic in nature. This includes disputes relating to offsetting and international trade. Offsetting refers to the mechanisms put in place as a part of emission reduction efforts, such as forestry and emissions markets, including emissions trading schemes (ETS).[82] Routine disputes arise about the obligations and operation of these schemes, or how they interact with

75 Benjamin and others, above n 74, at 5-6.
76 Setzer and Byrnes, above n 30, at 21.
77 *Milieudefensie*, above n 64.
78 Sabin Database "Unofficial English Translation of the Summons" (5 April 2019) at 142-143.
79 The latest decision in this case was *Commonwealth v Exxon Mobil Corp* 187 NE 3d 393 (Mass Supreme Ct 2022).
80 Setzer and Brynes, above n 30, at 21.
81 *Lawyers for Climate Action v Firstgas Group* Advertising Standards Authority Complaints Board Complaint Number 21/194, 6 July 2021.
82 Elizabeth Fisher, Eloise Scotford and Emily Barritt "The Legally Disruptive Nature of Climate Change" (2017) 80 MLR 173 at 194.

other legal regimes, and some of these are resolved through adjudication.[83] As noted above, however, many of these disputes will be resolved through negotiation and therefore not escalate to adjudication. Routine Mitigation Disputes are also taking place in international trade matters, for example, Malaysia's and Indonesia's disputes at the World Trade Organisation claiming that the European Union's emission savings criteria are discriminatory against palm-oil-based biofuels.[84]

C Arbitration

This section examines the types of Mitigation Disputes that are currently using the process of arbitration as a means of resolution. As referred to in Chapter One, although there is a body of research on climate-related arbitration, there is less evidence of the actual use of it. The Mitigation Disputes that can be found using arbitration are more simply mapped than those using adjudication. This is partly because there is less strategic use of arbitration, and the disputes generally fall into the three categories of arbitration defined in Chapter Two: contract-based (both national and international); inter-state; and investor-state disputes.[85]

1 Contract-Based Disputes

Many contract-based Mitigation Disputes relate to contracts that come about under inter-state or investor-state agreements. These may involve contracts under investment treaties, including "investment agreements, procurement agreements, construction contracts, financing agreements, tariff agreements and/or insurance contracts."[86] They could also relate to contracts coming about under regimes created by international treaties, such as Clean Development Mechanisms (CDM) or Joint Implementation (JI) Projects, involving the pricing and trading of carbon commodities.[87] This latter category has a number of features that indicate a likelihood

[83] For example, *Carbonext Tecnologia Ltd v Amazon Imóveis* Sao Paolo Civil District Court, Action 1072768-63.2021.8.26.0100, 7 October 2021 - a Brazilian commercial dispute over the seller's failure to execute its contractual obligation to transfer ownership of carbon credits.

[84] *European Union - Certain Measures Concerning Palm Oil and Oil Palm Crop-Based Biofuels (Indonesia)* WT/DS593/10, 13 November 2020 (Constitution of the Panel Established at the Request of Indonesia); and *European Union and Certain Member States - Certain Measures Concerning Palm Oil and Oil Palm Crop-Based Biofuels (Malaysia)* WT/DS600/7, 16 April 2021 (Constitution of the Panel Established at the Request of Malaysia).

[85] Chapter 2.IV.B.

[86] International Chamber of Commerce *Commission Report: Resolving Climate Change Related Disputes through Arbitration and ADR* (November 2019) at 57 [*ICC Report*].

[87] Martijn Wilder "Overview of Private Contractual Obligations Relating to Environmental Protection in International Investment Contracts" in Wendy Miles (ed) *Dispute Resolution and Climate Change: the Paris Agreement and Beyond* (International Chamber of Commerce, Paris, 2017) 50 at 50.

of disputes, specifically: it was a unique arrangement (these are regimes created under international treaty being applied to private transactions); it often involves parties with disparate interests and power (such as, developing countries and private sector actors); and those from different parts of the world, creating possible cross-cultural challenges. It, therefore, likely gave rise to a number of disputes. However, they are often resolved before reaching the arbitration hearing,[88] and, as they are often private, those that are arbitrated are likely to remain confidential, making them difficult to identify. Nevertheless, there is some evidence of the use of arbitration in this context. In 2019, it was reported that the Permanent Court of Arbitration (PCA) had administered nine such disputes related to CDM projects under the UNFCCC and Kyoto Protocol.[89] It appears these disputes took place between 2009 and 2015.[90] Also in 2019, the International Chamber of Commerce reported that climate change-related commercial contract disputes were likely to increase exponentially.[91] Two specific examples heard in the PCA are a 2015 dispute over the payment of certain fees under an agreement to develop a CDM landfill project,[92] and a 2016 dispute about an investment in an emissions trading JI project under the Kyoto Protocol.[93]

2 Inter-State Disputes

Along with the possibility of adjudication through the International Court of Justice, the UNFCCC dispute settlement mechanism provides for the possibility of compulsory arbitration if the parties have accepted that procedure in advance.[94] As of May 2022, the Netherlands, Solomon Islands, and Tuvalu are the only states to have accepted this jurisdiction.[95] As no disputes have been raised under this provision, the arbitration procedures have not been utilised. There are no other inter-state Mitigation Disputes to be found in other arbitral fora either.

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88 Wilder, above n 87, at 51.

89 Judith Levine and Camilla Pondel "Updates on the Changing State of the Climate and International Arbitration" (2019) 7 ACICA Review 31 at 35; and ICC Report, above n 86, at 16.

90 Judith Levine "Adopting and Adapting Arbitration for Climate-Change-Related Disputes" in Miles (ed), above n 87, at 26.

91 ICC Report, above n 86, at 16.

92 *Individual (African) v Company (European)* PCA 2015-14.

93 *Naftrac Ltd v National Environmental Investment Agency of Ukraine (Award)* PCA 2009-18, 4 December 2012 (PCA Environmental Rules). Verheyen and Zengerling label this an Investor-State case (Verheyen and Zengerling, above n 54, at 424) but it is contract-based under my categorisations as it does not arise under an International Investment Agreement. This is consistent with Freya Baetens' definition: Freya Baetens "Combating Climate Change Through the Promotion of Green Investment:" in Miles (ed), above n 87, 107 at 120).

94 UNFCCC, art 14.2 and Paris Agreement, art 24.

95 UNFCCC "Declarations Status of Ratification of the Convention" <www.unfccc.int>.

3 Investor-State Disputes

This is most prolific area of arbitration for Mitigation Disputes. These arise under bilateral or multilateral international investment agreements (IIA) where foreign investors allege that a host state has breached agreement provisions by adopting or repealing regulation in order to reduce emissions. The treaties often provide for arbitration to resolve any disputes arising under them,[96] which would most likely be through the PCA or the International Centre for Settlement of Investment Disputes (ICSID). These are generally referred to as Investor-State Dispute Settlement (ISDS) cases.[97] Many of these disputes relate to investments in renewable energy or fossil fuels.[98] These disputes fall into two categories, described by Professor of International Economic Law, Valentina Vadi, as either a shield protecting mitigation or sword against it.[99]

In the "sword" category, fossil fuel investors are bringing disputes against states challenging mitigation-related regulatory measures, on the basis that those measures are a breach of a host states' obligations under the relevant IIA. These are usually challenges to states' decisions to ban, restrict or phase out certain activities (such as fracking[100] or oil and gas exploration[101]) in efforts to reduce emissions, and involve claims for considerable damages to compensate for the reduced value of assets or investments. For example, two cases filed in 2021 by German energy companies against the Netherlands allege that the state's plan to phase out coal by 2030 violates the IIA,[102] with one alone estimating its damages at €1.4 billion.[103] Other Mitigation Disputes, however, may be using investor-state arbitration as a way to protect economic interests that in fact support mitigation, such as those in renewable energy.[104] A number of these "shield" disputes challenge states' decision to modify or withdraw particular investment incentives. The *Solar Cases* brought against a number of European states in 2018-2019 are an example of this type of dispute.[105]

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96 Henin, above n 5, at 204.
97 See for example, UNEP *Global Climate Litigation Report: 2020 Status Review* (July 2020) at 32.
98 As at 2020, approximately 17 per cent of ISDS cases filed since 2012 (at least 173 cases) related to fossil fuel sector investments: Matteo Fermeglia and others "Commentary: Investor-State Dispute Settlement" Grantham Research Institute on Climate Change and the Environment (June 2021) <www.lse.ac.uk>.
99 Valentina Vadi "Beyond Known Worlds: Climate Change Governance by Arbitral Tribunals?" (2015) 48 VJTL 1285 at 1318-1319.
100 For example, *Lone Pine Resources Inc v Canada (Pending)* 2012 ICSID UNCT/15/2.
101 For example, *Rockhopper v Italy (Pending)* 2017 ICSID ARB/17/14.
102 *RWE v Netherlands (Pending)* 2021 ICSID ARB/21/4 and *Uniper v Netherlands (Pending)* 2021 ICSID ARB/21/22.
103 *RWE v Netherlands*, above n 102.
104 Vadi, above n 99, at 1318.
105 Including, *NextEra Energy Global Holdings BV v Spain (Award)* ICSID ARB/14/11, 31 May 2019; *Greentech Energy Systems v Italy (Award)* SCC V2015/095, 23 December 2018; and *Antaris Solar GmbH v Czech Republic (Award)* PCA 2014-01, 2 May 2018.

III Assessing Mitigation DR

This section assesses the effectiveness of the DR processes identified above as currently being used to address Mitigation Disputes. It does this by applying the effectiveness measure established in Chapter Three and assessing each process against its three criteria, namely: support for the climate response; resolution and prevention; and rule of law.[106] This assessment addresses my research question about the effectiveness of these approaches through a clear process of evaluation. The considerations that apply to CCDs generally (and not Mitigation, Adaptation or Loss and Damage specifically) are included here. This evaluation shows that none of the processes examined above provide an ultimately effective way to resolve Mitigation Disputes.

A UNFCCC Negotiation Process

This section only relates to the UNFCCC Negotiation Process' efforts to address Mitigation Disputes as there is not enough evidence to speculate on other instances of negotiation (as established in Section II.A.3 above).

1 Supports Mitigation

Despite the extensive and ongoing negotiations, and the various agreements reached since the UNFCCC regime began, the parties have been unable to achieve its ultimate objective of stablishing emissions, or even unequivocally agree on "appropriate commitments for action to combat climate change" as it was intended they would in 1990.[107] As the following evidence attests, however, the UNFCCC Negotiation Process has achieved *some* support for mitigation.

International lawyer and academic, Philippe Sands, said in 2016 that this process had led to some progress, specifically, "some emissions have been curtailed, in some parts of the world, some new policies and actions taken, some change of consciousness initiated."[108] Following the Paris Agreement, Bodansky, Brunnée and Rajamani listed a number of progressive changes achieved through the UNFCCC Negotiation Process, including: the creation and benefits of market mechanisms; the development of systems of measurement, reporting, and review; the inclusion of global (as opposed to only developed countries') emissions; and the increasing

[106] Chapter 3.III.C.
[107] *Protection of Global Climate* (1990), above n 6.
[108] Sands, above n 54, at 21.

number of national climate change policies being implemented, including, "in some cases quite strong policies."[109] Bodansky commented further that the negotiations are likely more effective than other DR processes, "in influencing state behavior and bending the emissions curve."[110] In 2019, Joana Setzer and Lisa Vanhala noted that, "[a]ll Paris Agreement signatories have at least one law addressing climate change or the transition to a low-carbon economy and 139 states have framework laws that address climate mitigation and/or adaptation holistically."[111] Further, the UNFCCC Negotiation Process is increasingly raising public awareness, especially since the Paris Agreement, which can create pressure on negotiators to increase ambitions.[112]

Despite these gains, however, the UNFCCC Negotiation Process is failing to achieve the goal of adequately mitigating emissions.[113] Global GHG emissions continue to increase.[114] The UNEP's 2021 Emissions Gap Report shows that the current mitigation targets put the world on track for a global temperature rise of 2.7°C by the end of the century, which is "well above" the goals of the Paris Agreement, and would "lead to catastrophic changes in the Earth's climate."[115] In short, the UNFCCC Negotiation Process has not achieved the necessary mitigation, and has not made progress on it quickly enough. It is difficult to see how it is ultimately going to be successful in resolving the global Mitigation Disputes given the time it is taking.[116] Other features of the UNFCCC Negotiation Process that may be contributing to its lack of effectiveness in achieving the necessary mitigation, include the fact that the process, particularly when it follows a positional bargaining style, can lead parties to a middle point.[117] While parties reaching agreement on a middle ground may be viewed as effective for some disputes, it is not the case for mitigating GHG emissions, especially, as time progresses and more urgent, more radical action is required to achieve mitigation.

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109 Bodansky, Brunnée and Rajamani, above n 4, at 115-116.
110 Bodansky, above n 54, at 705.
111 Setzer and Vanhala, above n 68, at 7.
112 Stefano Carattini and Andreas Löschel "Managing Momentum in Climate Negotiations" (November 2020) SSRN <www.ssrn.com>.
113 Peel and Osofsky, above n 48, at 34.
114 WMO *United in Science* (September 2021).
115 UNEP *Emissions Gap Report 2021* (October 2021) at xvi.
116 Wytze van der Gaast *International Climate Negotiation Factors: Design, Process, Tactics* (Springer International Publishing, Switzerland, 2017) at 133.
117 Bodansky and Rajamani, above n 10, at 184.

2 Resolution and Prevention

As discussed above, there have been a number of agreements reached through the UNFCCC Negotiation Process, and some have been particularly significant. The Paris Agreement, for example, was the first truly global agreement on climate change, with 195 parties,[118] including developing states, committing to reduce GHG emissions and hold global warming "to well below 2°C".[119] In addition to specific resolutions, the process has been effective in terms of creating a mechanism for continuing attempts to address global emissions. The benefit of this continuous engagement is demonstrated by the progress made between the "failure" of COP 15 in 2009 and the Paris Agreement only six years later. It cannot be said, however, that a comprehensive resolution of the global emissions dispute has been reached. Despite this, the mechanism for ongoing discussions may have prevented some issues from escalating into disputes. Although this is hard to measure (as such information is not specifically captured), this assumption is supported by comparison to other international regimes that have not benefited from the continuous engagement that COP has provided and have, in contrast, become more contentious and less progressive, such as, the World Trade Organisation.[120]

Although the agreements reached through the UNFCCC Negotiation Process are non-binding and largely self-enforcing, these features can in fact be beneficial in terms of compliance. As political economists Katharina and Axel Michaelowa explain, "no supranational institution can impose a treaty with emissions mitigation commitments on governments and actually enforce compliance. Thus, emissions mitigation treaties must be self-enforcing to be effective."[121] There is evidence to suggest that negotiated mitigation outcomes, particularly those involving a higher degree of party autonomy, have a higher chance of compliance. Climate researcher, Wytze van der Gaast, refers to the difference between states' commitment to UNFCCC as opposed to the Kyoto Protocol in this regard, crediting the former's bottom-up, more self-determining construction with higher party commitment, compared to the Kyoto Protocol's more top-down approach leading to more parties withdrawing.[122] Bodansky provides a number of reasons negotiated mitigation agreements have higher compliance, including: parties having

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[118] As of August 2022, 195 states and the European Union had signed the Agreement, and 190 states and the EU had ratified or acceded to the Agreement. UNFCCC "Paris Agreement - Status of Ratification" <www.unfccc.int>

[119] Paris Agreement, art 2.1(a).

[120] See for example, Jianzhi Jin "The Failure of Special and Differential Treatment in International Trade" (30 August 2019) SSRN <www.ssrn.com>.

[121] Katharina Michaelowa and Axel Michaelowa "Negotiating Climate Change" (2012) 5 Climate Policy 527 at 527.

[122] Van der Gaast, above n 116, at 8.

a stronger commitment to outcomes they have agreed and have ownership of, rather than those imposed on them; the reputational and relational costs of breaching a negotiated agreement, including the impact on future negotiations; agreed oversight mechanisms that increase those costs; and the effect of inter-party monitoring, with other parties reciprocating or retaliating in response to non-compliance.[123] On the other hand, however, the nature of the resolutions reached through the UNFCCC Negotiation Process may lead to more limited outcomes (including targets), as parties are more likely to agree to mitigation measures that they know will be easier for them to comply with, thereby failing to properly resolve the issue.

3 Rule of Law

The next criterion used to measure the UNFCCC Negotiation Process' effectiveness is how well it complies with the rule of law. There are some general concerns in relation to negotiation in this regard. The first relates to power imbalances. In the international context generally, there are significant differences in the influence and economic power states hold. In relation to climate change specifically, there is a considerable difference in states' responsibility for producing emissions, as well as the impacts and harms they will experience as a result of it. In the context of the UNFCCC Negotiation Process, these power divisions are seen most clearly between developed and developing states, with the poor, developing countries in a particularly vulnerable negotiating position. As Michaelowa and Michaelowa explain, "[t]hese countries are the least responsible for climate change and yet, many of them are expected to suffer the most from it. By definition, they lack the external power resources that help richer countries push through their positions."[124] Although it is true that smaller, poorer states are in a less powerful negotiating position than larger, wealthy ones, apparent power imbalances do not always play out through this negotiation process. For example, the Alliance of Small Island States has at times been influential, and in some instances large and powerful states have been less so, for example the United States, most notably in the context of the Kyoto Protocol.[125]

Another rule of law concern about the UNFCCC Negotiation Process relates to access to justice. Despite the general claim that as a form of ADR, negotiation is a fast and cost effective form of DR,[126] that is not true in relation to the UNFCCC Negotiation Process given the length

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[123] Bodansky, above n 54, at 706.
[124] Michaelowa and Michaelowa, above n 121, at 528.
[125] At 528.
[126] See for example Nadja Alexander "Global Trends in Mediation" in Nadja Alexander (ed) *Global Trends in Mediation* (2nd ed, Kluwer Law International, The Netherlands, 2006) 1 at 16.

of time and high transactional costs involved.[127] New Zealand's first climate change ambassador, Adrian Macey, has described the UNFCCC process as "bewilderingly" complex, bureaucratic and taxing on parties' resources, all of which create barriers to access for small, climate-vulnerable states.[128]

B Adjudication

This section assesses the effectiveness of adjudication as a means of resolving Mitigation Disputes by examining how well it: supports mitigation; resolves and prevents these disputes; and complies with the rule of law. By far the most scholarship to be found about the effectiveness of a DR process relates to adjudication, making this a more detailed assessment.

1 Supports Mitigation

It is more difficult to assess the impact of adjudication (and other DR processes) on the climate response as compared to the UNFCCC Negotiation Process, as this latter process directly relates to the reduction of emissions at an international level. Outcomes from adjudication, on the other hand, are indirect and isolated, making it difficult to trace causal links between specific disputes and particular impacts.[129] Additionally, this assessment faces a number of methodological problems, such as how to define "impact", what timeframe to use, and how to account for the negative, as well as positive, impacts.[130] The task is further complicated by the dynamic nature of the subject matter, and its social, political and scientific context.[131]

As referred to in Chapter Three, the climate response criterion in my effectiveness measure includes an assessment of both the direct and indirect impacts.[132] Direct impacts in this context include the legal and regulatory effects of an adjudicated dispute, such as leading to observable changes in law, policy or decision-making procedures. Indirect impacts include broader effects, such as: increased public awareness; changes in opinions, attitudes or behaviour; financial and

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[127] Bodansky, above n 54, at 703.

[128] Adrian Macey "The 2020 Climate Change Regime – Fit for Purpose for the Pacific?" in Alberto Costi and James Renwick (eds) *In the Eye of the Storm* (SPREP, Victoria University of Wellington and NZACL, Wellington, 2020) 97 at 104.

[129] Jacqueline Peel and Hari Osofsky "Litigation as a Climate Regulatory Tool" in Christina Voigt (ed) *International Judicial Practice on the Environment* (Cambridge University Press, Cambridge 2019) 311 at 329.

[130] Peel and Osofsky, above n 48, at 32; and Setzer and Vanhala, above n 68, at 12.

[131] Peel and Osofsky, above n 48, at 33.

[132] Chapter 3.III.

reputational consequences; and further litigation.[133] As my assessment is primarily concerned with how well a DR process supports mitigation, I am considering the direct and indirect impacts that both support mitigation (positive) as well as those that do not (negative).

(a) Positive Direct Impacts

The majority of parties initiating adjudication to address public Mitigation Disputes are seeking to promote and advance regulation of emissions,[134] and overall, courts have tended to support, rather than oppose, these actions.[135] There are some landmark cases against governments that show adjudication having direct impacts on mitigation. One particularly notable example is *Urgenda*, which was the first case to successfully challenge the adequacy of a government's mitigation approach.[136] It directly resulted in the Dutch government increasing efforts to reduce emissions, including, by phasing out coal by 2030 and implementing a €35 billion package of specific reduction measures.[137] Although this action has not resulted in a consistent 25 per cent reduction (as ordered by the court), it is having some impact on emissions.[138] Another example is the *Ireland Climate case*,[139] the outcome of which was an important contributor to the Irish Government's decision to produce a more ambitious climate action plan.[140] Following the court's decision upholding a claim challenging the constitutionality of Germany's mitigation approach in *Neubauer*,[141] the German Cabinet increased its mitigation targets to net-zero by 2045.[142] In the United States, the earlier case of *Massachusetts v Environmental Protection Agency*[143] resulted in a judgment that "paved the way for extensive federal regulation … of greenhouse gas emissions from industrial sources and motor vehicles."[144]

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133 Setzer and others, above n 41, at 12; Peel and Osofsky, above n 48, at 33; and Peel and Osofsky, above n 129, at 329.

134 Jacqueline Peel and Hari Osofsky *Climate Change Litigation: Regulatory Pathways to Cleaner Energy* (Cambridge University Press, Cambridge, 2015) at 30-32.

135 Alina Averchenkova, Sam Fankhauser and Michal Nachmany "Introduction" in Alina Averchenkova, Sam Fankhauser and Michal Nachmany (eds) *Trends in Climate Change Legislation* (Edward Elgar Publishing Limited, Gloucestershire, 2017) 1 at 12; and Setzer and Higham, above n 25, at 18.

136 Setzer and others, above n 41, at 15.

137 "Coalition deal presented with €35B for climate" *NL Times* (online ed, Netherlands, 15 December 2021) and "Netherlands: Law prohibiting coal in electricity production" Sabin Database.

138 Although this 25 per cent target was achieved in 2020, that has largely been attributed to the Covid pandemic, and it was not achieved in 2021. However, the Urgenda Foundation believes that the government is doing a lot and there has been a real change in its policies: Isabella Kaminski "Urgenda Two Years On: What Impact Has the Landmark Climate Lawsuit Had?" (8 June 2022) CarbonCopy <www.carboncopy.info>.

139 *Friends of the Irish Environment v Government of Ireland*, above n 31.

140 Setzer and others, above n 41, at 44.

141 *Neubauer*, above n 34.

142 Setzer and others, above n 41, at 13.

143 *Massachusetts v Environmental Protection Agency* 549 US 497 (2007).

144 Peel and Osofsky, above n 48, at 25.

Other types of public Mitigation Disputes, such as those taken under planning laws targeting specific fossil fuel projects, also demonstrate the direct positive impact adjudication can have in reducing emissions.[145] The Australian *Rocky Hill Case* demonstrates this.[146] As a direct result of the court's decision to uphold the refusal of permission for a coal mine, almost 40 million tonnes of CO_2 equivalent emissions were prevented.[147]

Private strategic adjudication is also beginning to be impactful on mitigation. Up until recently, there had been limited success with these cases, but scholars' belief that it "could generate a considerable global impact"[148] has started to become evident. In the 2021 decision in *Milieudefensie*, the District Court of The Hague found that Carbon Major, Shell, owed a duty of care to the plaintiffs to reduce emissions from its operations by 45 per cent by 2030 (relative to 2019 emission levels).[149] This is an amount "roughly equivalent to four times Britain's annual emissions."[150] This decision represents a world first, with the court taking the unprecedented step of holding a company legally responsible for its individual emissions. Although Shell is appealing the decision, it has "nonetheless announced its intention to increase the speed of its planned transition in line with the judgment."[151] The impact of this type of dispute will be strengthened by progressive developments in attribution science.[152]

It is more difficult to trace direct, causal effects from the cases involving the financial sector,[153] and there is no evidence to date showing a reduction in emissions as a result of any specific disputes. This type of dispute is at an early stage, however, and more progress maybe made in the future, as law and science has moved on since the court's decision in the *Harvard* case.[154] Further, the ability of adjudication to bring private parties, including Carbon Majors and those in the financial sector, into Mitigation Disputes is crucial, as these actors are essential to mitigation efforts.[155] Overall, this assessment shows that adjudication is having direct positive impacts on mitigation in a number of different ways, including, on government policy and

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145 Bodansky, Brunnée and Rajamani, above n 4, at 286; and Setzer and Byrnes, above n 30, at 2.
146 *Rocky Hill Case*, above n 47.
147 *Rocky Hill Case*, above n 47, at [515].
148 Ganguly, Setzer and Heyvaert, above n 27, at 845.
149 *Milieudefensie*, above n 64.
150 Shadia Nasralla and Tom Hals "Big Oil May Face More Climate Lawsuits After Shell Ruling, Say Lawyers, Activists" (Insurance Journal, 28 May 2021).
151 Setzer and others, above n 41, at 14. (The appeal was filed in March 2022: Grantham Database).
152 Setzer and Vanhala, above n 68, at 9.
153 Solana, above n 69, at 134.
154 *Harvard Climate Justice Coalition v President and Fellows of Harvard College,* above n 71.
155 Solana, above n 69, at 103.

corporate behaviour, and by bringing the global problem of mitigation to a national and regional level.[156]

(b) Positive Indirect Impacts

Peel and Osofsky found that the indirect impacts of climate change adjudication "can often be as significant as, or even more significant than, direct legal change brought about by particular cases."[157] The successful, high profile, strategic cases, such as those examined above, clearly have a number of these broader, indirect influences, but they can also be seen in relation to "ostensibly unsuccessful" cases.[158]

As a public process, adjudication produces indirect impacts by influencing other disputes.[159] Environmental law academic and Chief Judge, Brian Preston, calls this the ripple effect: "[l]ike a pebble dropped into a pond, the ripples of a judicial decision gradually expand outward across the whole pond."[160] This effect is not just caused by outcomes, but also by the nature of the parties, their claims and arguments, the accepted evidence, and the courts' reasoning. As a result, certain landmark disputes have had influential transnational impacts on global climate litigation.[161] For example, Setzer's and Higham's 2021 analysis identified almost 40 cases around the world that followed the approach taken in *Urgenda*.[162] This includes the successful cases of *Neubauer* and *Milieudefensie*,[163] which are also predicted to have significant positive ripple effects of their own, *Milieudefensie* in particular.[164] Although Shell has announced it will appeal, and there are questions about how transferable the dispute is to other jurisdictions,[165] a number of scholars predict it will prove significantly impactful, including climate adjudication expert and Executive Director of Sabin Centre for Climate Change Law,

156 Setzer and Vanhala, above n 68, at 8; and Brian Preston "The Influence of the Paris Agreement on Climate Litigation: Legal Obligations and Norms (Part I)" (2021) 33(1) JEL 1.

157 Peel and Osofsky, above n 129, at 332.

158 Jacqueline Peel and Hari Osofsky "Climate Change Litigation's Regulatory Pathways: A Comparative Analysis of the United States and Australia" (2013) 35 Law and Policy 150 at 155.

159 Peel and Osofsky, above n 48, at 31.

160 Brian Preston "The Influence of the Paris Agreement on Climate Litigation: Causation, Corporate Governance and Catalyst (Part II)" (2021) 33(2) JEL 227 at 247.

161 At 247.

162 Setzer and Higham, above n 25, at 23.

163 Setzer and others, above n 41, at 46.

164 Isabelle Gerretsen "Shell ordered to slash emissions 45% by 2030 in historic court ruling" (26 May 2021) Climate Change News <www.climatechangenews.com>.

165 Andreas Hösli "*Milieudefensie et al v Shell*: A Tipping Point in Climate Change Litigation against Corporations?" 11 (2021) Climate Law 195 at 209.

Michael Burger.[166] Given the continuing growth of strategic disputes,[167] and the evidence of *Urgenda*'s influence, this is likely to be the case. The ripple effect is also seen with the *Rocky Hill Case*, which has influenced at least two subsequent decisions limiting coal mining.[168]

Unsuccessful cases have also had indirect impacts on the climate response. One of the commonly referred to examples is the *Inuit Petition*, which was found to have "considerable impact",[169] partly because of the general role it played "in political agenda-setting at the regional and UN level."[170] More recently, although the court dismissed the strategic case against a French energy company in *Notre Affaire à Tous*,[171] it is predicted to inspire similar disputes against Carbon Majors.[172] Other examples show how unsuccessful cases can provide building blocks or "judicial nudging" for future disputes.[173] For example, in *Juliana*,[174] although the United States Court of Appeals dismissed the youth plaintiffs' claim that the federal government was violating their rights by promoting and subsidising the use of fossil fuels, the decision included statements recognising climate change risks.[175] In the case of *People of the State of New York v Exxon Mobil Corp*,[176] the Court was careful to note that its decision to dismiss the case did not exempt Exxon from possible liability for climate change, as the dispute only related to issues of disinformation and not climate change more generally. Further, the unsuccessful Norwegian case of *People v Arctic Oil case*[177] provided important legal clarification on aspects of corporate liability.[178] These are all examples of adjudication providing statements or clarifications that can be used in future disputes seeking to support mitigation.

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166 Nasralla and Hals, above n 150.
167 Setzer and Higham, above n 25, at 5.
168 Specifically, the New South Wales Independent Planning Commission's refusal of a five year extension to the Dartbrook Coal Mine and rejection of the new Bylong Coal Project based on similar reasoning on climate change used by Preston CJ in the *Rocky Hill Case*: "Gloucester Resources ("Rocky Hill") Case" Environmental Law Australia <www.envlaw.com.au>.
169 Jacqueline Peel and Hari Osofsky "A Rights Turn in Climate Change Litigation?" (2018) 7 TEL 37 at 47.
170 Setzer and Vanhala, above n 68, at 11.
171 *Notre Affaire à Tous v France*, above n 31.
172 Setzer and Byrnes, above n 30, at 22.
173 Ganguly, Setzer and Heyvaert, above n 27, at 866.
174 *Juliana*, above n 28.
175 Setzer and Byrnes, above n 30, at 1.
176 *People of the State of New York v Exxon Mobil Corp* 65 Misc 3d 1233(A) (NY 2019).
177 *People v Arctic Oil case*, above n 43.
178 Christina Voigt "The Climate Judgment of the Norwegian Supreme Court" (23 February 2021) SSRN <www.ssrn.com> at 17.

Raising public awareness can positively impact mitigation, as it can lead to change.[179] Both successful and unsuccessful cases can have this effect.[180] For example, *Massachusetts v EPA*[181] was found to have had "significant indirect effects on the public perception of climate change in the United States"[182] and the *People v Arctic Oil case* "contributed to increased public, academic and political awareness of climate change within and outside Norway."[183] Using strategic disputes to garner public support as part of a wider climate campaign can "amplify" the indirect impacts of cases.[184] This is said to have been demonstrated by Dutch policymakers' level of engagement on climate issues following the *Urgenda* decisions.[185] The growing public interest and engagement in climate change adjudication makes it potentially even more impactful. For example, *Notre Affaire à Tous* was supported by over 2.3 million members of the public who signed a petition submitted with the court filings.[186]

Mitigation adjudication is also positively influencing corporate emitters.[187] For example, *Massachusetts v EPA*[188] was found to have had "significant indirect effects … on the behaviour of businesses."[189] The fear of possible adjudication has been found to have "motivated companies to reduce their emissions, and institutional investors to divest from fossil fuel companies."[190] This includes the fear of loss, costs and reputational damage,[191] and can impact not only on the parties involved but also wider industries. For example, it can lead other private actors and their insurers to change behaviour in order avoid the risk of adjudication.[192] Disinformation disputes can also raise awareness about corporate behaviour. For example, the decision by the New Zealand Advertising Standards Authority that the *Firstgas* campaign was misleading and must be withdrawn, received national press coverage.[193]

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179 Ganguly, Setzer and Heyvaert, above n 27, at 866-867.
180 Bodansky, Brunnée and Rajamani, above n 4, at 287.
181 *Massachusetts v EPA*, above n 143.
182 Peel and Osofsky, above n 129, at 323-324.
183 Voigt, above n 178, at 17.
184 Peel and Osofsky, above n 129, at 332.
185 Setzer and Higham, above n 25, at 18.
186 *Notre Affaire à Tous v France*, above n 31; and Setzer and Higham, above n 25, at 16.
187 Ganguly, Setzer and Heyvaert, above n 27, at 843.
188 *Massachusetts v EPA*, above n 143.
189 Peel and Osofsky, above n 129, at 323-324.
190 Margaretha Wewerinke-Singh and Diana Hinge Salili "Between Negotiations and Litigation: Vanuatu's Perspective on Loss and Damage from Climate Change" (2020) 20 Climate Policy 681 at 689-690.
191 Setzer and Byrnes, above n 30, at 10.
192 Ganguly, Setzer and Heyvaert, above n 27, at 845.
193 Olivia Wannan "First Gas 'zero carbon' gas advert pulled for misleading claims" *Stuff* (online ed, Wellington, 23 July 2021).

The way in which a DR process interplays with others can also be relevant to its effectiveness. For example, adjudication is playing a part in addressing the failings of the UNFCCC Negotiation Process to mitigate climate change.[194] Further, adjudication can: provide an impetus to global negotiations; contribute to clarifying international legal principles and obligations;[195] and support or bolster international negotiations.[196]

(c) Negative Direct Impacts

Much of the research emphasises the positive impacts of adjudication on mitigation,[197] but there are clearly negative impacts, both direct and indirect, that reduce its effectiveness. Directly, adjudication can weaken or undermine mitigation, for example, through disputes that challenge climate protection or support policy deregulation.[198] Further, it can be used to prevent mitigation action being taken, such as local communities taking legal challenges against wind farms.[199] Setzer and Higham have identified this as a growing phenomenon.[200] This includes cases where a party intentionally opposes mitigation action, as well as those that incidentally result in delays to, or reductions of, action or policies. Peel and Osofsky found that these anti-regulatory disputes can act as a "significant brake" on mitigation achievements, citing a series of American cases challenging the Environmental Protection Agency's authority to regulate emissions from coal plants, which limited positive mitigation impacts.[201] Additionally, adjudication can be used as a direct tool against climate supporters through cases known as SLAPP suits (strategic lawsuit against public participation) that intend to limit supporters' ability to "police environmental harms."[202] Study from 2020, by climate law researcher, Grace Nosek, found that the fossil fuel industry was utilising adjudication in this way to target and restrict climate change protesters in the United States in order to undermine and "chill" climate protest.[203]

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194 Peel and Osofsky, above n 129, at 311.
195 Verheyen and Zengerling, above n 54, at 418.
196 Bodansky, above n 54, at 705.
197 Setzer and Vanhala, above n 68, at 12.
198 Setzer and Byrnes, above n 30, at 5.
199 Setzer and Vanhala, above n 68, at 12.
200 Setzer and Higham, above n 25, at 5
201 Peel and Osofsky, above n 129, at 332.
202 Setzer and Vanhala, above n 68, at 10.
203 Grace Nosek "The Fossil Fuel Industry's Push to Target Climate Protesters in the US" (2020) 38 Pace Envtl L Rev 53.

(d) Negative Indirect Impacts

The indirect negative impacts of adjudication on mitigation suffer particularly from a lack of study. There are, however, a number of possible impacts that can undermine mitigation, including: bad precedent; the economic costs of adjudication; and the constraints of the process.[204] As positive decisions and statements from adjudication can have positive effects, negative ones can work in the opposite way. As Peel and Osofsky found, unsuccessful cases "risk the establishment of bad legal precedent and/or may entrench particular legal interpretations favoured by opponents."[205] For example, in dismissing a 2016 judicial review challenge to a Minister's decision to approve a coal mine, an Australian court accepted the government's argument that estimated emissions from the mine (4.7 billion tonnes CO_2 equivalent[206]) would have no unacceptable impact on the Great Barrier Reef World Heritage Area.[207] This argument was in part based on a decision from a 2006 case.[208]

The economic implications of climate change adjudication are especially ambiguous, and require further study to be properly understood.[209] There are some clear, direct financial impacts that can be identified, however, including: administrative costs; legal fees; experts' fees; fines or compensation awards. Other, more vague, indirect impacts, include: lost opportunity costs; disincentivising investment due to litigation risks; increased liability insurance premiums; changes in market valuation or stock prices; and even the possibility of broader destabilising effects at a systemic level.[210] Whether these impacts support or undermine the climate response will depend on who bears them. As outlined above, for example, they can be motivators for positively changing corporate behaviour.

Another negative impact on adjudication's ability to support mitigation are the constraints of the process. Using adjudication to address a Mitigation Dispute requires that it be framed within existing legal claims and causes of action, which, as seen in relation to private tortious claims being taken against corporate actors, for example, are often inadequate.[211] This has been described as "the difficulty – and probably inutility – of "squeezing" climate change challenges

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204 Setzer and Vanhala, above n 68, at 10 and 12; and Peel and Osofsky, above n 48, at 32.
205 Peel and Osofsky, above n 129, at 327.
206 *Australian Conservation Foundation Inc v Minister for the Environment* [2016] FCA 1042 at [136].
207 At [46].
208 *Wildlife Preservation Society of Queensland Prosperine/Whitsunday Branch Inc v Minister for the Environment and Heritage* (2006) 232 ALR 510.
209 Solana, above n 69, at 135.
210 At 135.
211 Clyde and Co "Climate Change: Liability Risks Report" (March 2019) at 21.

into traditional legal boxes."[212] The constraints of the law that adjudication must work within can mean that even apparently significant and successful cases may not be effective in terms of mitigation. For example, despite the court's significant and novel decision in *Sharma*, a few months following it, the Minister approved the disputed coal mine extension.[213] This extension will result in additional emissions estimated at 100 mega tonnes of CO_2 equivalent.

Adjudication is further limited by the various jurisdiction and procedural rules of the courts, including standing.[214] It is also constrained by the science. For example, inter-state adjudication is currently not feasible largely due to a lack of provable attribution. Indeed, the constraints of the process are particularly apparent for all international adjudication. This has been demonstrated recently by *Sacchi v Argentina*.[215] In that case, a group of young people filed a petition alleging that Argentina, Brazil, France, Germany and Turkey had violated their rights under the UN Convention on the Rights of the Child by failing to curb emissions to levels that would limit global warming to 1.5°C. The Committee on the Rights of the Child found the case inadmissible due to a failure to exhaust local remedies, despite accepting arguments that: states are legally responsible for the harmful effects of emissions originating in their territory on children in other states; the fact that all states are causing climate change does not absolve states of individual responsibility; and that the youth are victims of foreseeable threats to their rights to life, health, and culture. The Committee's finding was despite evidence from the petitioners that pursuing domestic remedies would be futile. This shows the failing of international adjudication to support mitigation.

Lastly, there is a view that adjudication can detract from the effectiveness of the UNFCCC Negotiation Process by diverting attention away from it, increasing tensions between states, or making them more reluctant to agree to provisions they fear will be used in adjudication.[216] In my view, however, this is a less convincing argument and there is little evidence to substantiate it.

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212 Carlo Giabardo "Climate Change Litigation and Tort Law" (2020) (Rivista Diritto e Processo (University of Perugia Law School Yearbook) 361 at 381-382 (footnotes omitted).
213 Maddie Reynolds "Vickery Mine Extension Approved" (18 September 2021) A Rich Life <www.arichlife.com.au>.
214 Emily Davies "Recommendations for Effectively Resolving Climate Change Disputes Against Investors" (2020) 1 CCLR 49 at 53.
215 *Sacchi v Argentina*, above n 34.
216 Bodansky, above n 54, at 707-708.

(e) Summary

There are challenges to meaningfully assessing how well adjudication supports mitigation. Although a definitive answer may not be possible on the basis of current evidence, it is clear that this process has both positive and negative impacts on mitigation. As such, adjudication is not a "silver … bullet for climate change."[217] However, while adjudication is not always effective in supporting mitigation, it can be. In this way, it is often viewed as a "tool" to be used for this purpose.[218] As Peel and Osofsky state, adjudication "is *a* tool but not *the* tool to achieve needed climate policy and behavioral responses."[219]

2 Resolution and Prevention

The next criterion to measure the effectiveness of adjudication is how well it has resolved and prevented Mitigation Disputes. The resolution rate of adjudication is easier to measure than negotiation's, due to adjudication's public nature and outcome focus. Although, as noted in establishing this criterion, it is not only limited to a definitive resolution.[220] As explained in Chapter Three, compliance and enforcement are important aspects of resolution. Adjudication provides binding and enforceable outcomes for Mitigation Disputes. However, this does not necessarily guarantee compliance. For example, enforcement of the Columbian Supreme Court's novel decision in the *Future Generations* case requiring, in part, that the government take action to address deforestation,[221] has proved challenging in the face of continued deforestation.[222] This is also an issue that has been raised in relation to any potential international climate adjudication.[223]

Adjudication can also be used to give legal effect to and/or enforce agreements from other processes.[224] As the above examination of Mitigation Disputes shows, adjudication is starting to play a role in the implementation and enforcement of state's emission reduction

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217 Viglione, above n 45, at 184.
218 See for example Ganguly, Setzer and Heyvaert, above n 27, at 841-842; Setzer and Byrnes, above n 30, at 10; and Luke Elborough "International Climate Change Litigation" (2017) 21 NZJ ENVTL L 89 at 125-126.
219 Peel and Osofsky, above n 48, at 33-34 (citations omitted).
220 Chapter 3.III.C.2.
221 *Future Generations case*, above n 34.
222 Setzer and Byrnes, above n 30, at 7
223 Bodansky, above n 54, at 705. Also, see Chapter 8.IV.A.1 for further discussion.
224 Setzer and Vanhala, above n 68, at 8.

commitments. In terms of prevention, adjudication can assist in facilitating negotiations and influencing legislative changes, which can prevent future disputes.[225]

3 Rule of Law

The next criterion for measuring adjudication's effectiveness is how well it complies with the rule of law. As the main DR process in a rule of law system, adjudication is generally considered compliant in this regard. The rule of law function of holding parties to public account is a particular strength of adjudication in the context of supporting mitigation, as discussed above in relation to the impact of public awareness. As is the further public benefit of the creation of law under the doctrine of *stare decisis* through nation courts, given the positive indirect impacts adjudicated decisions can have, as also outlined above. Adjudication also plays a role in public education, as it can communicate the urgency and science of climate change.[226] There are, however, some concerns about adjudication's compliance with the rule of law when addressing Mitigation Disputes.

First, the extensive costs and time involved in adjudication can act as barriers to access to justice. This has been highlighted in relation to climate change adjudication,[227] with some scholars finding that "bringing a case can be prohibitively expensive."[228] Secondly, there is a view that adjudication does not provide an impartial and certain process (required to ensure rule of law's equality before the law) because of the attitudes of courts to the nature of the subject matter. Specifically, judges may be reluctant to make decisions that force significant policy change on mitigation. This is especially relevant in jurisdictions where courts are politically appointed, such as the United States.[229] This concern is corroborated by the fact that the odds of a positive climate outcome in the United States are lower compared to other jurisdictions.[230] The concern about judicial partiality is seen in Peel's and Osofsky's reference to judges as "actors" in climate change adjudication,[231] environmental law academic, Katrina

225 Elborough, above n 218, at 95.
226 Peel and Osofsky, above n 48, at 28.
227 Joana Setzer "Climate Litigation Against Carbon Majors: Economic Impacts" (16 July 2020) Open Global Rights <www.openglobalrights.org>; Kim Bouwer and Joana Setzer *Climate Litigation as Climate Activism* (The British Academy, COP26 Briefing Series, October 2020) at 3; and Setzer and Byrnes, above n 30, at 10.
228 Bouwer and Setzer, above n 227, at 3.
229 See Ann Carlson's views in Viglione, above n 45, at 185.
230 Shaikh Eskander, Sam Fankhauser and Joana Setzer *Global Lessons from Climate Change Legislation and Litigation* (National Bureau of Economic Research, Working Paper, June 2020) at 21.
231 Peel and Osofsky, above n 48, at 28.

Kuh's identification of an overall trend of "judicial restraint" in the same,[232] and Kent Roach's characterisation of courts in Mitigation Disputes as taking a remedially "modest" approach.[233] There does, however, appear to be a shift taking place in this "reluctant" judicial attitude to a more progressive approach.[234] This is reflected in recent decisions requiring governments to reduce emissions, such as *Urgenda* and the *Ireland Climate Case*.

Thirdly, there is a related concern about whether courts are the appropriate forum for these disputes, and whether the judiciary making decisions about mitigation is a breach of the separation of powers, on the basis that these are political decisions that should be made by the legislature.[235] There is, however, enough evidence to counter this concern. Elizabeth Fisher, Eloise Scotford and Emily Barritt, for example, conclude that even if CCDs are socio-political rather than legal disputes this should not preclude adjudication.[236] Climate scholar and lawyer, Scott Novak considers that they are not political disputes, and courts not addressing them on that basis may in fact, "undermine the legitimacy of the judiciary, as well as the rule of law itself."[237] Climate change legal scholar, Laura Burgers, considered the issue in depth, and concluded that there is a "growing consensus" that the environment is of constitutional value and, in turn, a prerequisite for democracy, and that this provides adjudication the necessary democratic legitimacy to address these disputes.[238] Bodansky stated in relation to international climate change adjudication that it does not raise any separation of powers issues, as the "UNFCCC itself explicitly contemplates adjudication as a method of dispute settlement."[239] There is an additional counter argument to this concern, as the separation of powers requires checks and balances between the branches of government, the judiciary is in fact upholding this doctrine by addressing these cases, and doing so is part of the judiciary's role to remedy legislative failures or fill legislative gaps through interpretation. This is particularly true in relation to judicial review, as noted by the New Zealand High Court in a Mitigation Dispute in 2017.[240]

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232 Katrina Fischer Kuh "The Legitimacy of Judicial Climate Engagement" (2019) 46 Ecology LQ 731.

233 Kent Roach "Judicial Remedies for Climate Change" (2021) 17 JLE 105 at 110 and 112.

234 Bodansky, Brunnée and Rajamani, above n 4, at 285-286.

235 See for example Lucas Bergkamp and Scott Stone "The Trojan Horse of the Paris Agreement on Climate Change" (2015) 4 Environmental Liability 119; Bodansky, above n 54, at 701; and Fisher, Scotford and Barritt, above n 82, at 174.

236 Fisher, Scotford and Barritt, above n 82, at 180.

237 Scott Novak "The Role of Courts in Remedying Climate Chaos" (2020) 32 Geotown Envtl L Rev 743.

238 Laura Burgers "Should Judges Make Climate Change Law?" (2020) 9 TEL 55 at 75.

239 Bodansky, above n 54, at 704, referring to art 14.

240 *Thomson v Minister of Climate Change Issues*, above n 36, at [5].

C Arbitration

This section assesses the effectiveness of adjudication as a means of resolving Mitigation Disputes, by applying the following criteria: how well does it support mitigation; resolve and prevent mitigation disputes; and comply with the rule of law?

1 Supports Mitigation

The evidence gap in relation to the effectiveness of arbitration is considerably larger than that existing for negotiation and adjudication. This may be because many Mitigation Disputes using arbitration are routine and not strategic, and also because arbitration is often confidential. Most of the relevant scholarship that can be found relates to disputes concerning international trade and investment. This mostly falls into the investor-state category identified above, with some about international, contract-based disputes. This is likely due to the prevalence of this type of arbitration, as well as the fact it is more visible, as most private arbitration will be confidential.

Much that is written about arbitration and the climate response is negative. This is not always due to the process itself, however, but more about the nature of the investor-state regime it often operates within. Many of the investor-state disputes are inherently problematic when it comes to supporting the climate response, as they often bring financial interests and the climate into direct competition.[241] This has led one author to state that the investor-state regime, "by its very nature presents an insidious threat to environmental measures."[242] In this context, therefore, arbitration can be used in a way that undermines mitigation. For example, after pipeline investors filed a claim for more than USD15 billion compensation against the United States,[243] the government reversed its decision to prevent construction of a crude oil pipeline that would add 387,000 metric tons of CO_2 per day to the country's emissions.[244] Although this decision was made following a change in government, it is illustrative of the prospects of future investor-state arbitration.[245]

241 For example see Vadi, above n 99, at 1351; and Baetens, above n 93, at 113.
242 Elborough above n 218, at 130-131.
243 *TransCanada Corp v United States of America (Notice of Arbitration*) ICSID ARB/16/21, 24 June 2016.
244 The claimants estimated that the pipeline would transport approximately 900,000 barrels per day, *Notice of Arbitration*, above n 243, at 10. The calculation to metric tons is based on the United States Environmental Protection Agency's calculation of 0.43 metric tons of CO_2 per barrel: "Greenhouse gases equivalencies calculator" <www.epa.gov>.
245 UNEP, above n 97, at 32.

Even where an outcome does not directly undermine mitigation, there are negative impacts that indirectly effect it. These include, the length of time, high costs, and uncertainty over outcomes involved in arbitration, which cause governments to delay specific mitigation policy or action. This is a significant concern, given that strong and timely action is required to effectively mitigate climate change.[246] Relatedly, these cases mean that significant resources are being diverted away from climate action.[247] For example, the settlement in *Vattenfall* cost the German government over €1.4 billion.[248] In addition, there is evidence that arbitral tribunals are: ad-hoc in nature;[249] limited in their mandate; inconsistent in their consideration of the environmental aspects of CCDs;[250] or even inherently averse to considering them.[251] These factors further limit arbitration's effectiveness in supporting mitigation.

Like adjudication, arbitrated disputes can also indirectly impact the wider regulatory environment.[252] For example, by influencing government decisions, corporate investment or divestment, public awareness and discourse.[253] Given the majority of identifiable arbitral awards do not support the climate response (as outlined in Section II.C above), this broader impact may operate in the same way and create a more general "regulatory chill" by disincentivising strict climate regulation.[254] Empirical research from 2021 on whether investor-state cases influence national environmental regulation, found a "robust relationship" between those cases and regulatory downturn, and posited that arbitration "may be used strategically by investors to impede regulatory processes."[255]

There are, however, some cases of arbitration being used more effectively to support mitigation. For example, where investors in mitigation-friendly enterprises (such as renewable energy) have used arbitration to challenge regulatory changes that negatively affect those

[246] Kyla Tienhaara "Regulatory Chill in a Warming World: The Threat to Climate Policy Posed by Investor-State Dispute Settlement" (2018) 7 TEL 229 at 250.

[247] Matteo Fermeglia and others "Commentary: Investor-State Dispute Settlement as a New Avenue for Climate Change Litigation" (2 June 2021) Grantham Research Institute on Climate Change and the Environment <www.lse.ac.uk>.

[248] Jack Ballantyne "Vattenfall Saga at an End" *Global Arbitration Review News* (online ed, London, 12 November 2021).

[249] Baetens, above n 93, at 123.

[250] Vadi, above n 99, at 1351.

[251] Elborough, above n 218, at 122.

[252] Vadi, above n 99, 1318.

[253] Elborough, above n 218, at 110.

[254] UNEP, above n 97, at 32.

[255] Tarald Laudal Berge and Axel Berger "Do Investor-State Dispute Settlement Cases Influence Domestic Environmental Regulation?" (2021) 12 JIDS 1 at 24 and 25.

investments, or sought to enforce a state's environmental policies that they relied on in making their investments, such as the 2018-2019 Solar Cases.[256] Although some scholars believe that this may signal a "possible conceptual switch towards greater focus on the protection of the environment" in investor-state cases, this is still to be borne out.[257] As Vadi surmised in her research, investor-state arbitration is "double-edged" in relation to the climate response and, on balance, is not the best process for these disputes.[258] She is not alone in this view.[259]

2 Resolution and Prevention

As with adjudication, the ability to reach a final and binding resolution is one of the benefits of arbitration as a determinative process. The enforceability of these resolutions is one of the specific benefits of arbitration in relation to disputes involving cross-jurisdictional parties. In particular, under the New York Convention, which enables cross border recognition and enforcement of arbitral awards.[260] This point is often articulated in comparative terms to adjudication, claiming the multi-jurisdictional advantages of arbitration make it better suited for these disputes.[261] Given the confidentiality of many arbitrations, they may lack the preventative elements of some other processes. However, those awards that are published can provide guidance in other cases.

3 Rule of Law

The next criterion for measuring arbitration's effectiveness is how well it complies with the rule of law. From a positive perspective, there are claims that arbitration provides access to justice for CCDs.[262] However, arbitration is expensive,[263] and this negatively impacts access to justice. There are a number of other concerns expressed about arbitration's rule of law compliance in CCDs as well. Most of these relate to the inherent public interest element of Mitigation Disputes being inconsistent with arbitration's private settlement and lack of transparency.[264] This private justice concern is expressed by climate law scholars, Roda

[256] ICC Report, above n 86, at 56; and see Jeff Sullivan and Valeriya Kirsey "Environmental Policies: A Shield or a Sword in Investment Arbitration?" (2017) 18 JWIT 100 at 104.
[257] Sullivan and Kirsey, above n 256, at 130.
[258] Vadi, above n 99, at 1351.
[259] For example, Elborough, above n 218, at 122.
[260] Convention on the Recognition and Enforcement of Foreign Arbitral Awards 330 UNTS 38 (opened for signature 10 June 1958, entered into force 7 June 1959).
[261] Elborough, above n 218, at 96-97.
[262] ICC Report, above n 86, at 16; and Vadi, above n 99, at 1351.
[263] Vadi, above n 99, at 1334.
[264] At 1332.

Verheyen and Cathrin Zengerling, who stated that, "[c]onfidential arbitration proceedings and arbitration awards are in our opinion not suitable to deal with public interests such as climate change."[265] Another concern is that arbitral awards can lack consistency, and therefore the predictability and certainty necessitated by the rule of law.[266]

There are, however, ways in which the tension between the public and private interests in investor-state mitigation arbitration can be addressed, specifically, through the source investment treaties. For example, by including specific exception clauses or "carve outs" that exclude climate change measures from the scope of the dispute settlement mechanism. This is an approach that the European Union has been advocating for since 2015,[267] and has been adopting in a number of its own treaties since much earlier.[268]

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265 Verheyen and Zengerling, above n 54, at 422.
266 Vadi, above n 99, at 1333.
267 European Parliament Resolution of 14 October 2014 on Towards a New International Climate Agreement in Paris (2015/2112 (INI)) [2017] OJ C349/67 at [81].
268 For example, Reciprocal Promotion and Protection of Investments Agreement, Barbados - BLEU (Belgium Luxembourg Economic Union) (29 May 2009) as sited in Vadi, above n 99, at 1344.

Chapter 5: Adaptation Disputes

I Chapter Introduction

In Chapter Four, I addressed one of my research sub-questions, specifically, what processes are currently used to address Mitigation Disputes, and how effective are these approaches to resolution. In this chapter, I address those questions in relation to Adaptation Disputes. More specifically, in Section II, I map Adaptation DR and in Section III, I assess it.

As defined in Chapter Three, Adaptation Disputes relate to adapting to the impacts of climate change. As such, they are about the consequences of climate change, whereas Mitigation Disputes are about the cause (that is, GHG emissions). This makes it more difficult to identify Adaptation Disputes, as they may not specifically mention climate change given they usually focus on specific impacts instead (such as floods, fires, or coastal erosion). This difficulty is exacerbated by the fact that many of them are routine and low-profile disputes, usually concerning localised decision-making processes, compared to Mitigation Disputes that are often strategic and involve national issues. Adaptation Disputes are distinct from Loss and Damage Disputes, which relate to climate change-related harms that have not been reduced or prevented through mitigation efforts or adaptation measures, and are addressed in the following chapter.

Most Adaptation Disputes to be found, occur in a national context between individuals and the state. As with Mitigation Disputes, however, this is evolving, and there has been a relatively recent shift away from parties seeking predominantly government accountability, towards corporate accountability as well. Consequently, this category now includes disputes between individuals or state actors and corporate entities. In an international context, Adaptation Disputes are likely to involve individuals, states, and investor parties. Adaptation Disputes include a range of issues. Those involving local authorities, individuals and/or developers often relate to planning or permitting for structural resources (such as stormwater systems) and for non-structural matters (such as building codes), where the impacts or predicted impacts of climate change are, or should be, taken into account.[1] Adaptation Disputes may also involve conflicts about protection from these impacts (for example, seawall construction), the avoidance of them (for example, land zoning decisions) or the retreat from them. Other

[1] Maxine Burkett "Litigating Climate Change Adaptation: Theory, Practice, and Corrective (Climate) Justice" (2012) 42 Env't LRep 11144 at 11153.

Adaptation Disputes may be about climate change impacts more generally, such as private law disinformation disputes about the risk of climate impacts and the requirements to disclose them.

II Mapping Adaptation DR

This section maps the current processes being used to address Adaptation Disputes by analysing the types of disputes that are using them, with reference to specific disputes as representative examples. As explained previously, this mapping provides an understanding of the scope and causes of disputes, as well as the current climate change DR system.[2] The processes that are currently being used to address Adaptation Disputes are negotiation, adjudication, arbitration, alternative processes, and Special Procedures. The majority of disputes are national. There are two distinct differences from Mitigation DR. First, there are fewer Adaptation Disputes to be found. Secondly, there is a different pattern of process use, with adjudication (as opposed to negotiation) being the most commonly used process, and a wider range of processes being employed. The reasons for these differences are discussed in the relevant subsections below.

A Negotiation

This section examines the types of Adaptation Disputes that are currently using the negotiations as a means of resolution.

1 UNFCCC Negotiation Process

Although mitigation and adaptation are theoretically of equal importance within the UN climate regime,[3] the primary focus for much of the regime's history was on mitigation as opposed to adaptation.[4] This was partly due to the different nature of these two issues from an international cooperation perspective, as climate change legal scholars, Daniel Bodansky, Jutta Brunnée and Lavanya Rajamani explain:[5]

> In contrast to mitigation, which requires collective action, adaptation can usually be undertaken by individual states. Moreover, states have an individual incentive

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2 See Chapter 1.III.

3 Daniel Bodansky, Jutta Brunnée and Lavanya Rajamani *International Climate Change Law* (Oxford University Press, Oxford, 2017) at 135.

4 Benoit Mayer "Climate Change Adaptation Law: Is There Such a Thing?" in Benoit Mayer and Alexander Zahar *Debating Climate Law* (Cambridge University Press, Cambridge, 2021) 310 at 310.

5 Bodansky, Brunnée and Rajamani, above n 3, at 14.

to act, since the benefits of adaptation measures generally flow to the state undertaking them, rather than to the international community as a whole.

As well as there being less focus on adaptation, it is more difficult to identify aspects of the international negotiations on adaptation as "disputes" because there is not the same evidence of core issues in dispute as there is with mitigation (as described in Chapter Four). However, there is an inherent level of conflict around adaptation given that the states that are least responsible for causing climate change are the most vulnerable to its impacts, and those who have contributed the most to the problem are less impacted by its consequences (both physically and financially).[6] This dynamic is most apparent between developing and developed states, and is particularly relevant to low-lying, small island states. It is therefore worth briefly considering how the UNFCCC Negotiation Process has addressed the issue of adaptation.[7]

Adaptation was included as a policy goal in the general provisions on principles and commitments in the UNFCCC.[8] There was a call for "enhanced action" on adaptation in the 2007 Bali Action Plan,[9] and the 2010 Cancun Agreement established an Adaptation Framework in order to achieve that, with organisational and financial structures in the form of the Adaptation Committee and the Green Climate Fund.[10] There was limited substantive progress, however, until the 2015 Paris Agreement, which established "the global goal on adaptation of enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change".[11] Climate scholars, Jacqueline Peel and Hari Osofsky, consider that this agreement formally put adaptation "on the same footing as mitigation".[12] The Agreement also included specific reference to the disparate nature of climate change impacts, recognising, "the urgent and immediate needs of those developing country Parties that are particularly vulnerable to the adverse effects of climate change."[13] Further reflecting the inherent conflict in international adaptation, climate law scholar, Benoit Mayer, states that the Paris adaptation provisions, "were agreed to at the request of developing states, as part of 'package deals'

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6 At 14.
7 Although not a dispute for the purposes of international law, this falls within the definition of dispute as defined in this thesis, Chapter 3.II.C.
8 Arts 4.1(b) and (e), 4.8 and 4.9.
9 Art 1(c).
10 Art 13, 20 and 102.
11 Art 7.1.
12 Jacqueline Peel and Hari Osofsky "Climate Change Litigation" (2020) 16 Annual Review of Law and Social Science 21 at 27 (citation omitted).
13 Art 7.2

providing for enhanced mitigation commitments applicable to developing states."[14] COP 26 in Glasgow showed that this issue remains ongoing, as climate-vulnerable states highlighted the failure of developed states to meet their adaptation commitment under the Paris Agreement to provide USD100 billion annually, and claimed that the provision of adequate adaptation funding had not been prioritised.[15]

2 Other Negotiations

As with Mitigation Disputes, there will be many negotiations relating to Adaptation Disputes taking place. For example, disputes between landowners and local authorities over permitting or land zoning decisions. As explained in the previous chapter, however, confidentiality and the routine nature of these disputes make negotiation difficult to identify. There is some evidence of negotiation taking place, though, for example, the adaptation-related negotiation teaching resources produced and used by the Harvard Programme on Negotiation.[16]

B Adjudication

This section examines the types of Adaptation Disputes that are currently using the process of adjudication as a means of resolution. The considerable majority of reported climate change adjudication (80 per cent) concerns Mitigation Disputes.[17] Although less common, adjudication is being used to address Adaptation Disputes,[18] and this has been identified as a growing area.[19] Peel and Jolene Lin predict this use of adjudication is especially likely to increase in Southeast Asia, given its exposure to climate impacts.[20] The current jurisdictional spread of adaptation adjudication, is similar to that for Mitigation Disputes, with the majority taking place in the United States. Of the 180 relevant cases identified by climate change

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14 Mayer, above n 4, at 311.

15 David Hunter, James Salzman and Durwood Zaelke *Glasgow Climate Summit: Cop26* (UCLA School of Law, Public Law Research Paper, No 22, December 2021) at 5.

16 Lara Sanpietro "Teach Your Students to Negotiate Climate Change" (16 September 2021) Program on Negotiation, Harvard law School <www.pon.harvard.edu>.

17 Jacqueline Peel and Jolene Lin "Climate Change Adaptation Litigation: A View from Southeast Asia" in Jolene Lin and Douglas Kysar *Climate Change Litigation in the Asia Pacific* (Cambridge University Press, Cambridge, 2020) 294 at 299.

18 Joana Setzer and Catherine Higham "Global Trends in Climate Change Litigation: 2021 Snapshot" (July 2021, London, Grantham Research Institute on Climate Change and the Environment and the Centre for Climate Change Economics and Policy, London School of Economics and Political Science) at 17.

19 Joana Setzer and Rebecca Byrnes "Global Trends in Climate Change Litigation: 2020 Snapshot" (July 2020, London, Grantham Research Institute on Climate Change and the Environment and the Centre for Climate Change Economics and Policy, London School of Economics and Political Science) at 5; Peel and Osofsky, above n 12, at 27; and UNEP *Global Climate Litigation Report: 2020 Status Review* (July 2020) at 13.

20 Peel and Lin, above n 17, at 302.

adjudication researchers, Joana Setzer and Catherine Higham, in 2021, 100 were from the United States.[21] Of the remainder, a large portion was from Australia,[22] and a handful from New Zealand.[23]

Generally speaking, Adaptation Disputes using adjudication are seeking to address failures to adapt to the impacts of climate change.[24] The remainder of this subsection examines the different types of these disputes in more detail. These differ somewhat from those applied to Mitigation Disputes in Chapter Four. Largely because the "strategic" and "routine" distinction used in that regard does not have the same relevance to adaptation adjudication. The main categories I use in this section relate to the parties involved, specifically: Public and Private, with reference to strategic disputes where relevant.

1 Public Disputes

Public disputes involve the state (at either a central or local level) as a party. For easier consideration, these disputes are divided into three subcategories relating to the relevant issues involved, namely: Planning; Managed Retreat; and Human Rights.

(a) Planning Disputes

Most Adaptation Disputes that use adjudication are challenges (either judicial or merits reviews) to administrative decisions made by local governments under planning or environment law dealing with the impacts of climate change on land use, environmental protection and development planning.[25] Most of these are routine rather than strategic disputes, and are occurring in different jurisdictions, including New Zealand,[26] but are most prevalent in Australia. This is arguably due to that country's high exposure to climate change impacts,[27] combined with the nature of the specialist environmental courts and tribunals that hear these disputes and are more amenable to them. More specifically, these specialist judicial bodies

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21 Setzer and Higham, above n 18, at 17.

22 Sixty one out of 80 non-American cases: Setzer and Higham above n 18, at 17.

23 The number of adaptation cases in New Zealand is not specifically included in Setzer's and Higham's report. However, they used Grantham Database as their main source of data (Setzer and Higham above n 18, at 8), which records four adaptation cases in New Zealand.

24 UNEP, above n 19, at 13.

25 Setzer and Higham, above n 18, at 17; and Jacqueline Peel, Hari Osofsky and Anita Foerster "'Next Generation' Climate Change Litigation in Australia" in Lin and Kysar (eds), above n 17, 175 at 181.

26 New Zealand examples include *Gallagher v Tasman District Council* [2014] NZEnvC 245; *Carter Holt Harvey HBU Ltd v Tasman District Council* [2013] NZEnvC 25; and *Coastal Ratepayers United Inc v Kapiti District Council* [2017] NZEnvC 100.

27 Peel and Osofsky, above n 12, at 27.

have more flexible rules about parties' standing and awards of costs, more regularly use expert evidence, and are more prepared to engage with adaptation issues.[28] As discussed above, most of these are routine disputes but some early cases were more strategic in nature. The case of *Walker*,[29] for example, was a successful judicial review application taken by a local resident (supported by an environmental NGO) over a decision by the New South Wales government to approve a plan for a large residential development on flood-prone coastal land, on the grounds that the decision-maker failed to take the impacts of climate change into account in making that decision. Although, like *Walker*, this type of dispute mostly relates to coastal climate change impacts, they are increasingly about other adaptation issues as well, including floods and bushfires.[30]

Other planning disputes relate to specific projects, and are more likely to be strategic. (As also seen with Mitigation Disputes.[31]) For example, South Africa's first notable climate change case, *Earthlife Africa*,[32] was a successful judicial review challenge taken by an environmental justice organisation over the government's failure to adequately consider climate change impacts in its approval of a coal-fired power station. The application in New Zealand by environmental NGO, Forest and Bird, for a judicial review of a local council's decision to grant a coal company exploratory access to a forestry block, is based on similar grounds.[33]

Other strategic planning disputes are attempts to try and force adaptation action. For example, after Superstorm Sandy in the United States, a coalition of NGOs and academic centres filed a petition with the New York Public Service Commission, requesting that it "require all utility companies within its jurisdiction to prepare and implement comprehensive natural hazard mitigation plans to address the anticipated effects of climate change."[34] Further, in *Global*

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28 Peel and Lin, above n 17, at 299-300 and 309.

29 *Minister for Planning v Walker* (2008) 161 LGERA [*Walker*].

30 For flooding, see for example, *Arora Construction Pty Ltd v Gold Coast City Council* [2012] QPEC 052. For bushfires, see for example, *Robertson v Mornington Peninsula* [2011] VCAT 1393; *Land Management Surveys v Strathbogie* [2012] VCAT 1676; and *Adamson v Yarra Ranges* [2013] VCAT 683.

31 4.II.B.1(a).

32 *Earthlife Africa Johannesburg v The Minister for Environmental Affairs and Others* [2017] 2 All SA 519 (GP) [*Earthlife Africa*].

33 Forest & Bird "Landmark Coal Case for Future Generations" (press release, 2 August 2021).

34 Sabin Center for Climate Change Law "Petition on Natural Hazard Planning" (12 December 2012), Columbia Law School <www.climate.law.columbia.edu>.

Legal Action on Climate Change v the Philippine Government[35] an NGO used adjudication to compel administrative action on adaptation in regard to water provision and flood control.

Not all planning Adaptation Disputes are promoting adaptation considerations or measures, however. Some arise when developers challenge government decisions to address climate change risks by refusing planning permission for developments.[36] Others come about when objections are raised (often by private property owners) to specific adaptation measures on the basis that they have harmful side effects.[37] For example, the American case of *Cangemi v Town of East Hampton*.[38] This involved private property owners taking a nuisance action against local government officials, alleging that two protective jetties had caused erosion that diminished their property values. Examples of this type of dispute can also be found in other jurisdictions, including India.[39]

(b) Managed Retreat Disputes

Managed (or planned) retreat is a particular adaptation strategy. More specifically, the purposeful, planned and coordinated relocation of people away from areas at risk of natural hazards.[40] Although this could be included as a planning dispute, it is specifically related to adaptation and is predicted to cause significant disputing,[41] so is considered separately. There is limited evidence to date of disputes about managed retreat, as this is not yet a commonly used adaptation approach. There are, however, some disputes about reactive retreat following an extreme climate event. This is different to managed retreat, which takes place *prior* to the risks eventuating, but it provides some insight into this type of dispute. For example, the dispute involving the New Zealand settlement of Matatā. In that case, local authorities determined that

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35 *Global Legal Action on Climate Change v the Philippine Government* filed in the Supreme Court in January 2010 [*Global Legal Action case*].

36 For example, *Argos Properties II LLC v City Council for Virginia Beach* Virginia Cir Ct CL18002289-00, 24 May 2019 in the United States; *Pridel Investments v Coffs Harbour City Council* [2017] NSWLEC 1042 in Australia; and *Castletown Estates Ltd v Welsh Ministers* [2013] EWHC 3293 in the United Kingdom.

37 UNEP, above n 19, at 25.

38 *Cangemi v Town of East Hampton* 374 F Supp 3d 227 (ED NY 2019).

39 For example, see *Hindustan Zinc Ltd v Rajasthan Electricity Regulatory Commission* SC Rajasthan CIV4417/2015 (13 May 2015). This was one of a number of cases taken by manufacturers challenging the Electricity Commission rules requiring them to purchase some of their power from renewable sources or pay a surcharge for failing to do so.

40 Miyuki Hino, Christopher Field and Katharine Mach "Managed Retreat as a Response to Natural Hazard Risk" (2017) 7 Nature Climate Change 364 at 364; and A Siders and Idowu Ajibade "Managed Retreat and Environmental Justice in a Changing Climate" (2021) 11 Journal of Environmental Studies and Sciences 287 at 287.

41 See for example, Mark Nevitt "Climate Adaptation Strategies: How do we 'Manage' Managed Retreat?" (August 2020) SSRN <www.ssrn.com> at 5.

a programme of retreat was the most effective measure to reduce the risk of damage to people and property following a storm and associated flooding event, which caused an estimated $20million worth of damage to homes, land and infrastructure. As a result, the authorities proposed changes to local planning laws that required residents of the affected area to vacate their homes, and prohibited future occupation of the area. A number of residents disputed these decisions through the Environment Court but were ultimately unsuccessful.[42] There is also a related case in Australia, in which a group of beach property owners sought a declaratory judgment and damages from the local government authority, in part, for its proposed policy of planned retreat from encroaching seas.[43]

(c) Human Rights Disputes

The next type of public Adaptation Dispute is those based on human rights claims. In 2014, the International Bar Association Task Force on Climate Change Justice and Human Rights noted, that "human rights law evolved before … climate change was recognised as a global concern, and its provisions do not apply easily to the specific harms attributable to climate change-related events."[44] Despite this inherent limitation on the applicability of human rights to Adaptation Disputes, there are some examples emerging in this area both nationally and internationally. One of the more well-known is the national dispute *Leghari v Pakistan.*[45] In that case, the Lahore High Court found that through delaying implementation of the country's climate change adaptation policy framework, the national government had violated its citizens' fundamental rights. This decision is seen as a recognition of human rights as a legitimate basis for holding government to account for climate change.[46] An international example can be found in the 2019 petition filed by a group of Torres Strait Islanders with the UNHRC referred to in Chapter Four.[47] This is also, in part, an Adaptation Dispute, as the petitioners allege that Australia's violations stem partly from inadequate adaptation measures, and are asking that

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42 *Awatarariki Residents Inc v Bay of Plenty Regional Council* [2020] NZEnvC 215.

43 *Ralph Lauren 57 Pty Ltd v Byron Shire Council* [2016] NSWSC 169.

44 International Bar Association Climate Change Justice and Human Rights Task Force *Achieving Justice and Human Rights in an Era of Climate Disruption* (September 2014) at 68.

45 *Leghari v Pakistan* High Court Lahore WP 25501/2015, 14 September 2015 [*Leghari*].

46 Peel, Osofsky and Foerster, above n 25, at 798.

47 Petition of Torres Strait Islanders to the UNHRC Alleging Violations Stemming from Australia's Inaction on Climate Change (13 May 2019) [*Torres Strait Islanders' Petition*].

this be rectified, including by the construction of seawalls, to enable them to continue living on their island homelands.[48]

2 Private Disputes

As defined in Chapter Four, private disputes involve corporations or other private actors. Those that relate to adapting to the impacts of climate change, for example, seeking to establish corporate liability and monetary damages to pay for adaptation infrastructure such as seawalls, are Adaptation Disputes. Those that relate to harm resulting from particular adverse climate impacts are Loss and Damage Disputes and are considered in Chapter Six. Compared to public Adaptation Disputes, those involving private parties are more likely to be strategic. They broadly fall into two categories – disputes involving the Carbon Majors, and disinformation disputes.

(a) Carbon Majors Disputes

The UN first identified the use of adjudication to address Adaptation Disputes involving Carbon Majors as a trend in 2017,[49] and that trend is continuing.[50] Parties taking these disputes are generally seeking to establish corporate liability for adaptation on the basis of the high emissions those corporations are responsible for. Richard Heede's research has led to advances in identifying specific GHG contributions of high emitters,[51] and attribution science is advancing towards being able to link particular emissions to particular impacts, both of which will, in turn, advance these disputes.[52] To date, however, no court has found the required causation for the purpose of establishing liability.[53]

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48 The petition itself is not available. This information comes from Sabin Database; and Jan McDonald and Phillipa McCormack "Rethinking the Role of Law in Adapting to Climate Change" (2021) 12(5) WIREs: Climate Change.

49 UNEP *The Status of Climate Change Litigation: A Global Review* (May 2017), at 20.

50 UNEP, above n 19, at 22.

51 Richard Heede "Tracing Anthropogenic Carbon Dioxide and Methane Emissions to Fossil Fuel and Cement Producers, 1854–2010" (2014) 122 Climatic Change 229 [*The Carbon Majors Study*].

52 Peel, Osofsky and Foerster, above n 25, at 188; Sophie Marjanac and Lindene Patton "Extreme Weather Event Attribution Science and Climate Change Litigation" (2018) 36 JERL 265; Geetanjali Ganguly, Joana Setzer and Veerle Heyvaert, "If at First You Don't Succeed: Suing Corporations for Climate Change" (2018) 38 OJLS 841 at 851; and Tayanah O'Donnell "Climate Change Adaptation Litigation" in Anna Lukasiewicz and Claudia Baldwin (eds) *Natural Hazards and Disaster Justice* (Springer Nature Singapore Pte Ltd, Singapore, 2020) 117 at 119.

53 UNEP, above n 19, at 20. This issue of liability is currently being considered in the *Lliuya* Appeal: *Lliuya v RWE AG* Essen Higher Regional Court 2O285/15, 15 December 2016. (This case is discussed further in Loss and Damage in Chapter Six).

Although this is still a developing area of both science and law, there are some examples of Adaptation Disputes against Carbon Majors using adjudication. One of the most significant to date is *Greenpeace Southeast Asia v Chevron*.[54] In 2015, a number of parties, including NGOs, typhoon survivors, and online supporters, filed a petition with the Philippine Commission of Human Rights against 47 Carbon Majors, alleging that they were responsible for breaches of Filipinos' human rights caused by the impacts of climate change. More specifically, calling for those corporations to account for breaches of the rights to life, food, water, sanitation, adequate housing, self-determination and development (particularly of climate-vulnerable groups),[55] on the basis that Heede's research showed that they were responsible for over 20 per cent of the GHGs emitted from 1751 to 2013.[56] The central legal question in dispute was whether or not the Carbon Majors named could be held accountable for the human rights implications of climate change impacts. In May 2022, the Commission released the final report from its multi-year inquiry, finding, among other things, that the Carbon Majors may be held accountable for failure to remediate human rights abuses arising from their business operations.[57]

There are Adaptation Disputes using adjudication to be found in other jurisdictions as well. In the United States, for example, there has been a spate of cases since 2017 being taken by municipalities or states against Carbon Majors seeking billions of dollars to pay for infrastructure to adapt to sea level rise and protect coastal property, such as seawalls.[58] Setzer and Higham identified at least six such cases that were filed in one year alone (2020-2021).[59] Private citizens are also using adjudication for these disputes. For example, the ongoing case *Conservation Law Foundation v ExxonMobil*,[60] which was first filed in 2016, alleging that ExxonMobil had failed to account for climate change impacts at a marine petroleum storage and distribution terminal in Everett, Massachusetts. The claimants alleged that the terminal was vulnerable to sea level rise, increased precipitation, and increased magnitude and frequency of

54 *Greenpeace Southeast Asia v Chevron* Philippines Commission on Human Rights CHR-NI-2016-0001 (9 December 2019) [*Greenpeace Southeast Asia*].

55 Peel and Lin, above n 17, at 311.

56 Heede, above n 51.

57 *National Inquiry on Climate Change Report* Commission on Human Rights of the Philippines (CHRP) (3 May 2022) at 110, 113-114. [CHRP Report].

58 Including *Rhode Island v Shell Oil Products Co* 35 F 4d 44 (1st Cir 2022); and *County of San Mateo v Chevron Corp* 294 F Supp 3d 934 (9th Cir 2018); as well as cases in San Francisco, Oakland and New York: Clyde and Co "Climate Change: Liability Risks Report" (March 2019) at 17.

59 Setzer and Higham, above n 18, at 28.

60 *Conservation Law Foundation Inc v Exxon Mobil Corp* 3 F 4d 61 (1st Cir 2021).

storm events, and that ExxonMobil had not addressed these vulnerabilities despite being well aware of them.

It is not just the Carbon Majors that are involved in these private Adaptation Disputes. Researchers have found that they are starting to be brought against corporations more generally.[61] For example, in New Zealand, Mike Smith's ongoing case against dairy company Fonterra and others (referred to in Chapter Four) includes claims relating to adaptation.[62] In other disputes, the impacts of climate change are more "peripheral." Specifically, where a party makes explicit reference to climate change, but relies on other legal grounds to seek climate-related behavioural change.[63] Examples of these disputes include cases about wildfires in the United States.[64]

(b) Disinformation Disputes

As defined in Chapter Four, disinformation disputes concern the provision of misleading information about climate-related issues.[65] Consistent with Mitigation Disputes, disinformation disputes are an emerging type of private Adaptation Dispute. They are usually claims that corporations (including those in the financial sector) are not being truthful about the potential impacts of climate change on their businesses or investments. Unlike Mitigation Disputes, these are not about misleading advertising. They are more likely to be financial and company law-based claims seeking to protect shareholders, consumers or investors from inadequate disclosure about the risks of climate impacts.[66] More specially, disclosures about the direct, physical impacts of climate change on a business's infrastructure, operations, and supply chains, or about the liability risks associated with those impacts.[67]

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61 Maryam Golnaraghi and others *Climate Change Litigation - Insights into the Evolving Global Landscape* (The Geneva Association, April 2021) at 23.

62 *Smith v Fonterra Co-operative Group Ltd* [2022] NZSC 35.

63 Golnaraghi and others, above n 61, at 22.

64 For example, *Vataj v Johnson* ND Cal 19-CV-06996-HSG, 25 October 2019.

65 Chapter 4.II.B.2(c).

66 Setzer and Higham, above n 18, at 29.

67 UNEP, above n 19 at 26; and Brian Preston "The Influence of the Paris Agreement on Climate Litigation: Legal Obligations and Norms (Part II)" (2021) 33(2) Journal of Environmental Law 227 at 243. By way of clarification, this type of dispute is included as an Adaptation Dispute and not a Loss and Damage Dispute, as it relates to *potential* impacts and harms, as opposed to actual harms that have occurred.

Adjudication of these disputes is a relatively recent phenomena but there are some examples to be found. The earliest are from Australia. In *Abrahams*,[68] shareholders of the Commonwealth Bank of Australia alleged that its 2016 annual report violated the Corporations Act 2001 as it failed to disclose climate change-related business risks. This was followed by the case of *McVeigh*,[69] a claim taken by a beneficiary of an industry pension fund against that fund for failing to provide adequate information about its exposure to climate-related risks. In the United States, the ongoing case of *Commonwealth of Massachusetts v Exxon Mobil Corporation*,[70] involves claims that Exxon committed deceptive practices against investors and consumers, including by failing to disclose climate change risks. There is also some evidence of this type of dispute expanding beyond the private sector to governments in their role as economic actors. For example, in *O'Donnell*, the Australian government "is facing a class-action lawsuit from investors who allege it has failed to disclose the material climate risks associated with its government bonds."[71] The *Greenpeace Southeast Asia* case involved a broader and more general disinformation issue, with the Philippines Human Rights Commission finding that the Carbon Majors had, directly or indirectly: [72]

> … singly and/or through concerted action, engaged in wilful obfuscation of climate science, which has prejudiced the right of the public to make informed decisions about their products, concealing that their products posed significant harms to the environment and the climate system.

The Commission further noted that acts to "obfuscate climate science and delay, derail, or obstruct" the transition to a carbon neutral economy may be a basis for liability.[73]

C Arbitration

This next subsection continues mapping Adaptation DR by examining the types of disputes that are currently using arbitration as a means of resolution. As stated in Chapter One,[74] arbitration is used to address climate change disputes much less frequently than adjudication.

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68 *Guy Abrahams v Commonwealth Bank of Australia* filed 8 August 2017 in FCA (VID879/2017), finalised 14 September 2017.

69 *McVeigh v Retail Employees Superannuation Pty Ltd* [2019] FCA 14.

70 *Commonwealth v Exxon Mobil Corp* 187 NE 3d 393 (Mass Supreme Ct 2022). This dispute was also included in the consideration of Mitigation Disputes in Chapter Four as it includes mitigation-related issues as well.

71 *O'Donnell v Australia* [2021] FCA 1223.

72 CHRP Report, above n 57, at 108-109.

73 At 115.

74 Chapter 1.II.C.2.

There is also less evidence of arbitration being used in Adaptation Disputes as compared to Mitigation Disputes. None of the identified climate change cases being arbitrated under Investor-State Dispute Settlement mechanisms relate to adaptation.[75] Further, although it has been claimed that arbitration is being used to address private Adaptation Disputes,[76] there are no published awards from specific examples to be found. Inter-state arbitration is the one specific area where there is some (though still limited) evidence of this process being used to address Adaptation Disputes. As explained in Chapter Four, there have been no disputes arbitrated (or even raised) under the UNFCCC's DR mechanism.[77] However, there are other international treaties that give rise to inter-state disputes involving adaptation issues that are addressed through arbitration. The UN Convention on the Law of the Sea is one such example.[78] Although not a direct adaptation dispute, in the *Bay of Bengal Maritime Boundary Arbitration*[79] the Permanent Court of Arbitration-administered tribunal "was required to consider what the future impact of sea level rise would be on the respective countries' coastlines, and the impact on their resulting maritime zones."[80] This highlights that these disputes are being arbitrated under non-climate specific regimes.

D Alternative Processes

This section examines the types of Adaptation Disputes that are currently using alternative processes as a means of resolution. As foreshadowed in Chapter One, there is a paucity of evidence in this area. This is not necessarily because it is not occurring, rather that it involves private, unreported and often confidential processes, making the disputes difficult to identify. Nonetheless, there is some evidence to be found that suggests the use of these processes. This is not of specific disputes, but of services available, which likely indicate at least some level of utilisation.

As discussed in relation to adjudication above, many Adaptation Disputes relate to planning and are dealt with by specialist environment courts or tribunals. It is not uncommon for

75 Sabin and Grantham Databases.
76 Mark Baker, Holly Stebbing and Cara Dowling "Acclimatising to Climate Change" (2018) GAR 18 at 20.
77 Chapter 4.II.C.2.
78 Convention on the Law of the Sea 1833 UNTS 3 (opened for signature 10 December 1982, entered into force 16 November 1994).
79 *The Bay of Bengal Maritime Boundary Arbitration (Bangladesh v India)* (*Award*) PCA 2010-16, 7 July 2014.
80 International Chamber of Commerce *Commission Report: Resolving Climate Change Related Disputes through Arbitration and ADR* (November 2019) at [60].

alternative DR processes to also be provided within these specialist regimes. In New Zealand, for example, the Environment Court "actively encourages ADR" and offers mediation conducted by its Commissioners, as well as other processes such as conciliation.[81] Other jurisdictions have similar schemes. In the United States, for example, the Environmental Protection Agency's Conflict Prevention and Resolution Centre offers mediation and facilitation for disputes related to permitting and disaster preparedness and recovery, which could fall within the definition of Adaptation Disputes.[82] In Australia, the New South Wales's Land and Environment Court offers a number of non-binding DR processes, including mediation and conciliation.[83]

There are also alternative processes available outside of statutory regimes. These often appear to be offered at the early stages of a dispute, or as a proactive preventative strategy. In the United States, for example, the Consensus Building Institute lists a number of different processes it uses, including facilitation and mediation, as well as a number of adaptation-related issues it is involved in, including cases of managed retreat.[84] There are other organisations doing similar work,[85] and one particular project (the New England Climate Adaptation Project) that used an alternative process in the context of managed retreat has been documented and analysed.[86] There is also evidence of this process being used in New Zealand to help coastal hapū make adaptation decisions about their marae assets.[87] There is similar evidence to suggest mediation is being used in relation to land use Adaptation Disputes as well.[88] Additionally, the international mediation organisation, Mediators Beyond Borders, have a climate change project that includes adaptation work, and although there is no detail on specific disputes that have been mediated, the organisation confirms such work has occurred.[89] Further evidence that

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81 New Zealand Environment Court *Practice Note* 2014, cls 5.1(a) and (b).

82 Conflict Prevention and Resolution Center "CPRC Services" United States Environmental Protection Agency <www.epa.gov>.

83 Land and Environment Court of New South Wales "Resolving Disputes" <www.lec.nsw.gov.au>.

84 Consensus Building Institute "Climate" <www.cbi.org>.

85 For example, Climigration "Our Work" <www.climigration.org>.

86 Lawrence Susskind and others *Managing Climate Risks in Coastal Communities: Readiness, Engagement and Adaptation* (Anthem Press, London and New York, 2015).

87 Jackie Colliar and Paual Blackett *Tangoio Climate Change Adaptation Decision Model* (Maungaharuru-Tangitū Trust and Deep South National Science Challenge, July 2018).

88 Land Use Law Center "Center Information" Pace University School of Law <www.lace.pace.edu>.

89 Mediators Beyond Borders "Climate Change Project" <www.mediatorsbeyondborders.org>; and email from Mediators Beyond Boarders to the author regarding climate change mediation (9 August 2022).

indicates these disputes are possibly being mediated is the number of private mediators who specifically state that they have climate change-related experience.[90]

E Special Procedures

There is another process to be considered in mapping Adjudication Disputes, namely the Special Procedures of the Human Rights Council.[91] These are "independent human rights experts with mandates to report and advise on human rights from a thematic or country-specific perspective."[92] One of the roles of the Special Procedures is to respond to specific allegations of human rights violations made to them, and report to the Human Rights Council on those activities.[93] This function includes investigating the allegations and advising what actions should be taken by the government/s or other parties concerned.[94] This mandates applies irrespective of whether a particular government is a party to any of the relevant human rights treaties.[95] Given parties can make allegations against others unilaterally, this is a non-consensual DR mechanism. It is also non-binding, as the Special Procedures outcomes are in the form of recommendations.

There is a recent example of this process being used in an Adaptation Dispute related to climate displacement. In 2020, the Alaska Institute for Justice submitted a complaint to the Special Procedures on behalf of five tribes in Alaska and Louisiana against the United States government.[96] The complaint alleges that the Tribes are faced with climate-forced displacement due to the government's failure to protect their human rights, including, by failing to introduce necessary adaptation measures to allow them to continue to inhabit their ancestral territory, and by failing to include them in the development of adaptation plans.[97] The Tribes

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[90] Seen for example, on the United States' National Roster of Environment Conflict Resolution Professionals <www.ecrroster.udall.gov> (29 listed); the International Mediation Institute's Directory of Certified Professionals <www.imimediation.org> (5 listed); and New Zealand's Resolution Institute Dispute Resolver Directory <www.resolutioninstitute> (6 listed).

[91] This term includes individuals designated as 'Special Rapporteur': Office of the UN High Commissioner for Human Rights *The Manual of Operations of the Special Procedures of the Human Rights Council* (August 2008) at 5 [*The Special Procedures Manual*].

[92] Office of the UN High Commissioner for Human Rights "Special Procedures of the Human Rights Council" <www.ohchr.org>.

[93] The Special Procedures Manual, above n 91, at 5.

[94] At 5.

[95] At 5.

[96] Specifically, this was submitted to the Special Rapporteurs on the Human Rights of Internally Displaced Persons, and the Rights of Indigenous Peoples and others.

[97] The Alaska Institute for Justice complaint *Rights of Indigenous People in Addressing Climate-Forced Displacement* submitted to UN Special Rapporteurs (15 January 2020), at 9, accessed through the Sabin Database.

have requested that the Special Rapporteurs make a number of recommendations to the United States government, including that sufficient funding be allocated to adaptation measures.[98]

III Assessing Adaptation DR

This next section assesses the effectiveness of the processes mapped above, by applying the measure set out in Chapter Three.[99] This assessment addresses my research question about the effectiveness of these approaches through a process of evaluation. The material that applies to climate change disputes generally (and not Mitigation, Adaptation or Loss and Damage specifically) has been included in Chapter Four and is not repeated here.[100] This evaluation shows that none of the DR processes currently being used to address Adaptation Disputes provide an ultimately effective way to resolve them.

A UNFCCC Negotiation Process

This section relates to the UNFCCC Negotiation Process' efforts to support adaptation, as there is not enough evidence to speculate on other instances of negotiation (as explained in II.A.2 above). This process is assessed by applying the following criteria, how well does it: support adaptation; resolve and prevent these disputes; and comply with the rule of law?

1 Supports Adaptation

Despite the fact that adaptation has been specifically provided for through negotiated international agreements on climate change, the relevant provisions "are framed only in broad terms, without a clear definition or metrics."[101] Mayer believes that these have had little substantive impact on adaptation efforts as they have not established specific obligations or led to widespread domestic adoption of adaptation-specific legislation.[102] Australian adaptation law scholars, Jan McDonald and Phillipa McCormack, have a different view, however. They draw connections between the Paris Agreement and states' actions on adaptation, pointing out that the vast majority of parties to the Agreement have adaptation content in their nationally determined contributions, including many with qualitative goals.[103] They further point to the

98 The Alaska Institute for Justice, above n 97, at 10-11.
99 3.IV
100 4.III.
101 McDonald and McCormack, above n 48, at 4 (citations omitted).
102 Mayer, above n 4, at 311.
103 McDonald and McCormack, above n 48, at 4-6. (Nationally determined contributions are the key mechanisms for addressing adaptation at the national level under the UNFCCC regime).

fact that many countries have introduced domestic adaptation laws, including about a quarter of Agreement parties, who have enacted framework climate laws that include adaptation.[104]

The issue of adaptation finance has also been progressed through the UNFCCC Negotiation Process. Significantly, the Glasgow Climate Pact included a specific section on adaptation finance and noted, "with concern" that the current adaptation finance is, "insufficient to respond to worsening climate change impacts in developing country Parties."[105] It also urged developed states to increase their adaptation support for developing states.[106] While these developments are not insignificant, they are not legally binding nor enough to help climate-vulnerable states adequately adapt.[107]

There are also more indirect ways in which the agreed outcomes from the UNFCCC Negotiation Process are impacting adaptation. This is an area explored in depth by environmental law academic and Chief Judge, Brian Preston. His work examines how the Paris Agreement's adaptation provisions are influencing adaptation adjudication, and finds that they are having an effect on the likely success of adaptation cases, including, generally (by raising awareness) and specifically (by providing accepted facts about the causation of certain impacts, such as severe weather events).[108] Preston also considered the effect of these provisions on non-parties, specifically in the area of corporate governance, and found that they have influenced the transformation of that area in relation to climate risks, despite the lack of specific obligations that Mayer laments.[109] In summary, it cannot be said that the UNFCCC Negotiation Process has been effective in achieving adaptation but, as this subsection shows, it has contributed to supporting it.

2 Resolution and Prevention

As discussed above, there have only been a few adaptation-specific agreements reached through the ongoing UNFCCC Negotiation Process, and adaptation still remains secondary in terms of international focus. That is changing, however, as the impacts of climate change become more apparent. How these will be dealt with, particularly international adaptation

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104 Framework legislation introduces whole-of-government approaches to climate change issues.
105 Art 10.
106 Art 11.
107 Mark Nevitt "Key Takeaways From the Glasgow Climate Pact" LawFare 17 November 2021.
108 Preston, above n 67, at 236.
109 At 247 and 241.

issues such as climate displacement, is still to be determined. As such, although progress has been made, a comprehensive resolution of how to deal with the impacts of climate change has not been achieved through the UNFCCC Negotiation Process. In relation to prevention, there is no specific evidence to show that the UNFCCC Negotiation Process has prevented any adaptation issues from escalating into disputes. As discussed in relation to Mitigation Disputes, however, it is not unreasonable to surmise that the forum for ongoing discussions that it provides the international community is a factor in the absence of any such escalated conflict.[110] The UNFCCC Negotiation Process's preventative effectiveness is likely to be more clearly tested in the coming years, as the impacts of climate change intensify.

3 Rule of Law

The rule of law concern about power imbalance in negotiation generally has particular relevance in the context of Adaptation Disputes. As explained in Chapter Four, there are significant differences in the influence and economic power that states hold in the UNFCCC Negotiation Process. Compounding this, are the significant imbalances in the extent to which states will suffer from the impacts of climate change – with those least responsible for it likely to suffer most severely.[111] This is especially true of low-lying, developing, climate-vulnerable states. In a further imbalance, these are the parties with the fewest resources to adapt to climate change. These dynamics challenge the UNFCCC Negotiation Process's rule of law compliance.

B Adjudication

This section assesses the effectiveness of adjudication as a means of resolving Adaptation Disputes by applying the following criteria: how well does it support adaptation; resolve and prevent disputes; and comply with the rule of law?

1 Supports Adaptation

The first criterion for measuring adjudication's effectiveness is whether it supports adaptation. The general challenges of measuring the effect of adjudication on the climate response are

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110 See Chapter 4.III.A.2.

111 Katharina Michaelowa and Axel Michaelowa "Negotiating Climate Change" (2012) 5 Climate Policy 527 at 528.

examined in Chapter Four. In this subsection, I consider both the direct and indirect impacts of adjudication that support adaptation (positive) and those that hinder it (negative).[112]

(a) Positive Direct Impacts

There are findings that show adaptation has been directly facilitated through the process of adjudication. This issue is especially well considered in Australia, where adaptation adjudication has been found to have led to changes in policy, including those which have improved the climate change resilience of low-lying coastal areas.[113] Additionally, adjudication has been shown to have brought about changes in the way environmental planning decisions are made, so they are now required to include adaptation considerations, such as the risks of sea level rise, floods and bushfires.[114] This has been said to have led to "a general improvement" in Australia's adaptation capacity.[115] The case of *Walker*, for example, was instrumental in establishing the requirement to consider adaptation in environmental planning matters and "set a benchmark for future adaptation litigation in Australia."[116] South Africa's *Earthlife* case had a similar impact, with the court finding that climate change impacts are a relevant consideration in environmental planning.[117] The effectiveness of adjudication was further demonstrated in this case when the government subsequently re-approved the disputed coal-fired power station, leading to a further challenge that ultimately prevented the project.[118]

The *Leghari* decision in Pakistan also provides evidence of adjudication's positive impact on adaptation. The judge in that case has been reported as explaining that he specifically devised a new type of legal order to address the government's failing to implement its own adaptation policies.[119] More specifically, he ordered that an independent Climate Change Commission be created to monitor and report on the government's progress, which he subsequently found to be satisfactory.[120] This is an example of an innovative adjudicative outcome giving real, practical effect to adaptation. The *Global Legal Action Case* in the Philippines is another example of adjudication being used to effectively facilitate adaptation – even in the absence of

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[112] In this context 'support' includes impacts that facilitate, promote, enable or mandate adaptation.
[113] Peel and Lin, above n 17, at 296
[114] Peel, Osofsky and Foerster above n 25, at 796; and Jacqueline Peel and Hari Osofsky "Sue To Adapt?" (2015) 99 Minn L Rev 2177 at 2244.
[115] Peel and Lin, above n 17, at 308.
[116] At 305 (footnotes omitted).
[117] *Earthlife Africa*, above n 32.
[118] Grantham Database.
[119] Lord Carnwath "Climate Change and the Rule of Law" (Luther Lecture, Hamburg, 22 March 2021) at 3.
[120] UNEP, above n 19, at 30.

a judicial outcome. In that case, the dispute was settled when the relevant government departments agreed to carry out the necessary adaptation work.[121] This is a similar outcome to that seen as a result of the petition filed by NGOs and academic centres with the New York Public Service Commission following Superstorm Sandy, which led to an order by the Commission approving a settlement with one of the United States' largest energy companies that included a multi-billion-dollar adaptation plan.[122]

There are specific examples of corporations correcting disinformation to disclose climate-related risks as a result of Adaptation Disputes using adjudication. For example, following the claim made in *Abrahams*,[123] the bank's 2017 annual report included climate-related risks. Similarly, the case of *McVeigh*[124] was settled with the pension fund agreeing to incorporate climate financial risks in its investments. This impact has also been seen in Canada, following Greenpeace making a complaint against the fossil fuel company, Kinder Morgan.[125] There is also evidence that adaptation adjudication is impacting positively on corporate governance, and is in part responsible for regulatory changes in corporate risk reporting.[126]

(b) Positive Indirect Impacts

Adjudication is also having indirect positive effects on adaptation. More broadly for example, it is raising awareness of the risks of climate change.[127] This awareness has been found to have specific impacts on adaptation, such as contributing to an "increased focus in planning instruments and cases applying those instruments, on environmental risks like bushfire hazard, which climate change exacerbates."[128] Human rights-based disputes have been found to be especially effective in promoting adaptation, as they make "abstract and distant concepts and evidence about climate change more locally relevant and personal".[129] For example, although the decision on the Torres Strait Islanders' Petition is still pending, this dispute has garnered significant public attention, as it was the first taken to a UN body by inhabitants of low-lying

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121 Sabin Database.

122 *New York Public Service Commission Final Order* Case 13-E-0030 (21 February 2014).

123 *Abrahams v Commonwealth Bank of Australia*, above n 68.

124 See for example, *McVeigh v Retail Employees Superannuation Pty Ltd*, above n 69.

125 Greenpeace's complaint against Kinder Morgan in Canada: Greenpeace Canada "Alberta Securities Commission Reviewing Greenpeace Complaint of Inadequate Disclosure of Climate Risk by Kinder Morgan" (press release, 9 April 2018).

126 Ganguly, Setzer and Heyvaert, above n 52, at 858-861; and Preston, above n 67, at 247.

127 Peel, Hari and Foerster, above n 25, at 176.

128 Peel and Lin, above n 17, at 308.

129 Joana Setzer and Lisa Vanhala "Climate Change Litigation: A Review of Research on Courts and Litigants in Climate Governance" (2019) 10(3) WIREs: Climate Change e580 at 11.

islands against a national government for failures to adapt. The same is true of the *Greenpeace South Asia* case. Although the Philippines Commission on Human Rights does not produce binding orders, its decision to accept an Adaptation Dispute and then to publicly implicate the Carbon Majors in climate change-related human rights breaches raised awareness internationally.[130]

There are ways in which the general subcategory of adaptation adjudication (as opposed to specific cases) has had indirect impact. In relation to risk and disclosure, general use of adjudication has been said to be a promising "means by which to drive systemic and potentially transformative adaptation by engaging politically and economically influential actors."[131] Additionally, the costs and reputational damages that can result from adaptation adjudication can have a positive effect, as bearing these costs, or simply facing the risk of them, can change corporate behaviour.[132] This effect of cost-aversion has also been raised in relation to more specific aspects of adaptation. The costs of cleaning up following a severe climate change event are much higher than the costs of preventing the damage from occurring, and therefore the risk of legal liability for clean-up is likely to influence governments and corporations to take preventative adaptation actions.[133]

(c) Negative Direct Impacts

There are also negative impacts of using adjudication, both direct and indirect, that reduce its effectiveness in supporting adaptation. As mentioned above, there are examples of disputes being adjudicated that directly challenge adaptation measures. According to the Sabin Database, as at May 2022, there were 23 cases in the United States that "challenge adaptation measures" compared to 34 cases "seeking adaptation measures."[134] This is particularly true where adaptation measures impact on private property rights.[135] Obviously, if successful, these outcomes directly hinder adaptation. On the other hand, however, the outcome from adjudication may actually prevent challenges to adaptation, such as in *Cangemi v Town of East*

[130] For example, Isabella Kaminski "Filipino inquiry finds big polluters 'morally and legally liable' for climate damage" *The Guardian* (online ed, London, 6 May 2022); and Center for International Environmental Law "Groundbreaking Inquiry in Philippines Links Carbon Majors to Human Rights Impacts of Climate Change, Calls for Greater Accountability" (9 December 2019) <www.ciel.org>.
[131] McDonald and McCormack, above n 48, at 14.
[132] Javier Solana "Climate Change Litigation as Financial Risk" (2020) 2 Green Finance 344 at 346.
[133] Burkett, above n 1, at 11152.
[134] The database does not categorise non-United States cases in the same way, so they cannot be included.
[135] *O'Donnell*, above n 71, at 128.

Hampton,[136] where the local authorities' adaptation efforts ultimately prevailed over private property owners.

(d) Negative Indirect Impacts

The possibility of anti-adaptation adjudication can also have a broader negative impact. In 2012, the Australian Productivity Commission identified fear of liability as one of the key obstacles to effective climate adaptation.[137] Private property-based challenges to adaptation measures in particular could have a wider chilling effect to "constrain the implementation adaptation measures that result in diminished access to or use of land."[138]

Even pro-adaptation cases can be of little positive effect. Despite the positive impacts outlined above, the nature of many adaptation disputes going to adjudication means that they are generally less impactful than Mitigation Disputes. As mapped above, most disputes relate to planning decisions, which are lower profile, smaller scale, local decisions with less national, let alone global, impact.[139] Progress on adaptation through adjudication in Australia has been described as achieving incremental as opposed to transformative impacts,[140] which for the "wicked" problem of climate change is neither significant enough or fast enough. These limits are not only evident in Australia. Adaptation adjudication has been described as currently playing a "modest" or "negligible" role in countries' adaptation responses in other parts of Southeast Asia and the Global South.[141] For example, although the *Greenpeace South Asia* case raised awareness, its significance in supporting the climate response must not be overstated. Given that there is no international body to adjudicate disputes against multinational corporations, the Commission's findings would have to be proven in national courts, and none of the 47 corporations included in the inquiry have headquarters in the Philippines.[142]

136 *Cangemi*, above n 38.
137 Australian Government Productivity Commission *Barriers to Effective Climate Change Adaptation* (19 September 2012).
138 McDonald and McCormack, above n 48, at 13 (citation omitted).
139 Peel and Osofsky, above n 114, at 2248.
140 Peel, Osofsky and Foerster, above n 25, at 176; and Peel and Lin, above n 17, at 308.
141 Peel and Lin, above n 17, at 327.
142 Chloé Farand "Philippines inquiry finds polluters liable for rights violations, urging litigation" (10 May 2022) Climate Change News <www.climatechangenews.com>.

2 Resolution and Prevention

This criterion for measuring effectiveness considers how well adjudication has resolved or prevented disputes. Compliance with, and enforcement of, outcomes are important aspects in this regard. Some of the Adaptation Disputes examined here show effective implementation of adjudication outcomes, for example, *Leghari*. Further, there is evidence of the positive effect of even non-enforceable outcomes, such as in *Greenpeace Southeast Asia*.

3 Rule of Law

There are some rule of law issues that are specific to adjudication in Adaptation Disputes. Adjudication is claimed as a means to tackle the inequalities resulting from climate change, for example, by empowering affected communities. As Maxine Burkett explains, it can empower climate-vulnerable parties "by allowing them, on equal footing, to address those that put them in harm's way."[143] However, this is not widely borne out by Adaptation Disputes so far. Peel and Lin make this point in relation to access to justice barriers in Southeast Asia and the global South: [144]

> When litigation is an expensive option that is not available to the majority of the population, and particularly out of reach for those vulnerable communities that are most likely to suffer the brunt of climate change impacts, it could well become a source of environmental injustice instead of a regulatory pathway towards greater climate change resilience.

The reality of this inequity is demonstrated by the fact that although the Pacific region is one of the most climate-vulnerable in the world, there is only one case (out of a total of 2,089) involving a Pacific Island country recorded for the entire region.[145]

The concern about the role of courts lacking the necessary expertise to decide highly technical disputes, as examined in Chapter Four, is also raised about adaptation adjudication, particularly

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[143] Burkett, above n 1, at 1151.
[144] Peel and Lin, above n 17, at 327.
[145] That is the Papua New Guinean case of *Saonu v Minister for Environment and Conservation and Climate Change* Court of Justice at Waigani OS (JR) 35 of 2021, 20 September 2021, recorded in the Grantham Database.

in relation to causation.[146] However, there is a counter perspective on this point. In a 2021 speech about climate change and the rule of law,[147] Lord Carnwath used the following quote:[148]

> Legal principles and rules help convert our knowledge of what needs to be done into binding rules that govern human behaviour. Law is the bridge between scientific knowledge and political action.

On the basis of Lord Carnwath's argument, it is the role of courts to deal with Adaptation Disputes, including those related to developing areas of science, such as attribution. Further, concerns about the limited technical ability of courts can be addressed by specialisation. Peel's and Osofsky's research found that the particular features of the specialist environmental courts and tribunals in Australia (discussed under Planning Disputes above) were a key factor in "promoting the greater quantity and impact of adaptation cases in Australia".[149]

C Arbitration

Due to the lack of specific disputes and limited literature on arbitration as a process for resolving Adaptation Disputes, a detailed assessment using the effectiveness criteria is not possible. The relevant scholarship that can be found, points to the negative effect arbitration can have on supporting adaptation. Particularly in investor-state disputes, where the dispute settlement system created under investment treaties can be used by investors to hinder states' adaptation efforts. This issue was raised by the UNEP in 2020, when it noted that these regimes "may offer strategic opportunities for anti-regulatory plaintiffs … with implications that extend beyond the outcome of an individual case."[150]

D Alternative Processes

An even greater paucity of specific disputes and associated literature makes any meaningful assessment of alternative processes' use in Adaptation Disputes unfeasible. The general considerations about the potential effectiveness of alternative processes is included in Chapter Eight.

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146 Peel and Osofsky, above n 12, at 29 (citations omitted).
147 Carnwath, above n 119, at 1.
148 Sultan Azlan Shah "The New Millennium: Challenges and Responsibilities" (Lecture at the National University of Malaysia, 23 August 1997).
149 Peel and Lin, above n 17, at 309 (footnote omitted).
150 UNEP, above n 19, at 32.

E Special Procedures

The Alaska Institute for Justice complaint to the Special Procedures is still ongoing.[151] It is, therefore, not possible to make a substantive assessment of the effectiveness of this process. There are, however, some general points that can be made about its potential effectiveness. Although they are non-binding, the Special Procedures' recommendations are likely to carry some weight,[152] and, therefore, have the potential to be effective in supporting adaptation. The international and public nature of the process, and the fact one of its specific aims is raising public awareness,[153] give it the potential to have broader indirect impacts or "ripple effects" for future complaints. These are also factors that enhance the likelihood of compliance. However, there is no resolution, or even outcome. Rather, the process involves "Communications" being sent to state parties, which may include views or recommendations, but have no binding power and there is no authority to enforce them.

The UN Human Rights Council's 2021 appointment of a Special Rapporteur on Human Rights and Climate Change suggests that the agency is paying greater attention to climate change issues, which may have a positive impact for the climate response.[154] This specialist role, currently held by someone with climate change expertise,[155] also allays the rule of law-related concern about DR bodies dealing with technical matters. In regard to other rule of law compliance, this process provides some level of public accountability given its public nature. However, access is limited to human rights-related disputes, and is not guaranteed, as it is up to the Special Rapporteurs to decide whether or not they will take action. Further, it can take considerable time, negatively impacting efficiency and access to justice.

151 The Alaska Institute for Justice, above n 97.

152 See, for example, Office of the UN High Commissioner for Human Rights (OHCHR) "Impact of the work of Special Procedures: Prevention and/or cessation of human rights violations" <www.ohchr.org>.

153 OHCHR, above n 152.

154 Human Rights Council *Mandate of the Special Rapporteur on the Promotion and Protection of Human Rights in the Context of Climate Change* HRC Res 48/14 (8 October 2021).

155 "Special Rapporteur Climate Change: Ian Fry" OHCHR, above n 152.

Chapter 6: Loss and Damage Disputes

I Chapter Introduction

In this chapter, I apply my research sub-questions, what processes are currently used and how effective are they, to the last subcategory of climate change disputes (CCDs), Loss and Damage Disputes. More specifically, in Section II, I map Loss and Damage DR and in Section III, I assess its effectiveness.

As defined in Chapter Three, Loss and Damage Disputes relate to losses and damages caused by climate change-related harms that have not been reduced or prevented through mitigation efforts or adaptation measures.[1] The most significant Loss and Damage Dispute is found in the international context between states. Others are between individuals and states. In a national context, Loss and Damage Disputes reflect the emerging trend seen in Mitigation and Adaptation Disputes and are focused on corporate accountability, resulting in disputes between individuals or state actors, and corporate entities.

Loss and Damage Disputes include a wide range of issues of "far-reaching scope and severity."[2] In an international context, they include disputes between developing and developed states about how climate-related harms should be addressed, including issues of liability, as well as, disputes between individuals and states related to climate-displacement. In a national context, they may be disputes between state actors or individuals and corporate entities, particularly Carbon Majors and fossil fuel companies, relating to liability and compensation for loss of land, or damage to buildings and infrastructure.

II Mapping Loss and Damage DR

This section examines the DR processes that are currently being used to address Loss and Damage Disputes by analysing the types of disputes that are using them, with reference to specific disputes as representative examples. As explained in previous chapters, this mapping provides an understanding of the scope and causes of disputes, as well as the current climate change DR system.[3] The processes that are currently being used to address Loss and Damage

1 Chapter 3.II.D.
2 Briony Bennett "Big Oil, Big Liability: Fossil Fuel Companies and Liability for Climate Change Harm" (2019) 23 NZJEL 153 at 156-157.
3 Chapter 1.III.

Disputes are the UNFCCC Negotiation Process and adjudication.[4] There are some distinct differences from Mitigation and Adaptation DR. First, as the "youngest" of the three subcategories,[5] there are fewer disputes to be found, and fewer processes being used. Secondly, they follow a similar pattern of process use to Mitigation Disputes, with negotiation as opposed to adjudication being the most commonly used process (this is the opposite of Adaptation Disputes). The reasons for these differences are discussed in the relevant subsections below.

A UNFCCC Negotiation Process

Arguably the most significant Loss and Damage Dispute is that between states as to the inclusion and method for addressing loss and damage within the international climate regime. As with the global dispute on emissions examined in Chapter Four, this longstanding and ongoing dispute is being addressed through the UNFCCC Negotiation Process. As previously noted, although this is not a legal dispute from an international law perspective, and can be categorised as formal treaty-making negotiations as opposed to a process of DR, it is a dispute as defined in this thesis.[6] Under that definition, there is a clear dispute about loss and damage that was apparent during the initial negotiations for the UNFCCC and continues to this day. Indeed, loss and damage has been described as, not only one of the most contentious issues within the UNFCCC Negotiation Process,[7] but also the most conflicted: "[p]erhaps nowhere in the climate regime run opinions more divided than on the question of how to address loss and damage."[8]

Empirical research on the UNFCCC Negotiation Process on loss and damage found that there were a number of different yet intertwined issues in dispute.[9] These can be categorised into two general areas: the legitimacy and meaning of loss and damage; and how it should be addressed. The two opposing sides on these issue have generally fallen along the developed and developing states line, with the latter including the climate-vulnerable, such as low-lying

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4 The Alaska Institute for Justice complaint *Rights of Indigenous People in Addressing Climate-Forced Displacement* submitted to UN Special Rapporteurs (15 January 2020), which is examined in Chapter 5.II.E, includes claims relating to loss and damage, namely, the loss of culture and cultural heritage, but this process is not included here separately.

5 That is, it has only more recently developed as an internationally recognised issue. See subsection II.A below for further explanation.

6 See Chapter 3.II.C.

7 Elisa Calliari, Olivia Serdeczny and Lisa Vanhala "Making Sense of the Politics in the Climate Change Loss and Damage Debate" (2020) 64 Global Environmental Change art 102133 at 8.

8 Patrick Toussaint "Loss and Damage and Climate Litigation" (2021) 30 RECIEL 16 at 16.

9 Calliari, Serdeczny and Vanhala, above n 7, at 1.

and small island states. As discussed in previous chapters, this division of international parties is apparent in other CCDs, but becomes more starkly apparent in Loss and Damage Disputes.

The first issue about legitimacy and meaning was, more specifically, whether loss and damage should even be included as an agenda item in the UNFCCC Negotiation Process, and if so, how it should be defined.[10] The concept of loss and damage is inherently complex, involving issues of fairness, equity and historic responsibility,[11] but a central conflict in the definition issue is how loss and damage is (or is not) different from adaptation.[12] On one side, vulnerable states, who are well aware of the need to address climate impacts that have not been limited by adaptation, have been advocating for the recognition of loss and damage as a distinct type of response to climate change since the start of the regime.[13] On the other hand, many developed states have been reluctant to treat the issue as separate, and have instead sought to frame loss and damage as a subset of adaptation.[14]

These opposing positions on definition have had significant practical and political implications for the governance of loss and damage under the UNFCCC regime, and are closely interlinked with the second central issue in dispute, that is, how it should be addressed. As Sarah Mead and Margaretha Wewerinke-Singh have summarised it, the result of the opposing positions, "is a dichotomous framing: one which encompasses compensation and liability vis-à-vis one which is limited to risk and insurance."[15] On the one hand, climate-vulnerable states have advocated for loss and damage to be addressed by finance from developed states to allow them to deal with the harms of insufficiently mitigated climate change. Their basis for this position is that developed states are historically responsible for climate change, and that including loss and damage as a part of adaptation would imply that "international funding would come from existing rather than new and additional sources, cutting into already limited adaptation finance."[16] This position has continually met with strong resistance by developed countries,

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10 Sarah Mead and Margaretha Wewerinke-Singh "Recent Developments in International Climate Change Law: Pacific Island Countries' Contributions" (2021) 23 Int CL Rev 294 at 304; and Toussaint, above n 8, at 19.

11 Grantham Research Institute on Climate Change and the Environment "What is Climate Change 'Loss and Damage'?" (13 January 2013) London School of Economics <www.lse.ac.uk>.

12 Benoit Mayer "Climate Change Adaptation Law: Is There Such a Thing?" in Benoit Mayer and Alexander Zahar (eds) *Debating Climate Law* (Cambridge University Press, Cambridge, 2021) 310 at 327.

13 Toussaint, above n 8, at 16.

14 Grantham Research Institute, above n 11.

15 Mead and Wewerinke-Singh, above n 10, at 304-306 (footnotes omitted).

16 Toussaint, above n 8, at 18-19.

seemingly due to fears of the claims for compensation they could face as a result. They have instead advocated for risk management and insurance mechanisms as the principal means to address loss and damage.[17]

A brief (and necessarily simplified, given its complexity) overview of the history of loss and damage within the UNFCCC Negotiation Process, highlighting the areas of dispute, makes these conflicts more apparent and reinforces the basis for framing this process as a form of DR (in the non-legal sense).

The issue of loss and damage was present from the very beginning of the climate regime. In the negotiations for the UNFCCC in 1991, the Alliance of Small Island States (AOSIS)[18] submitted a proposal to address "loss and damage" resulting from sea level rise by way of an insurance pool to compensate the most vulnerable small island and low-lying coastal developing states for their losses.[19] No such provision was included in the UNFCCC, however, which largely focused on efforts to mitigate climate change. Indeed, it took 15 years for loss and damage to be recognised as an official negotiation item, which occurred through the 2007 Bali Action Plan,[20] and subsequently led to a dedicated work programme on loss and damage being established under the Cancun Agreement in 2010.[21] Progressing the issue of loss and damage to this point, has been attributed to the efforts of groups of developing countries, coalitions of vulnerable states, such as AOSIS, and NGO advocacy, as well as the growing awareness that the global mitigation and adaptation efforts would not be enough to prevent significant loss and damage around the world.[22]

Over the following years, however, loss and damage was largely side-lined as an issue, due to the continuing predominant focus on mitigation, and the reluctance of developed states to

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17 At 19.

18 AOSIS is an intergovernmental organisation that was formed in 1990 and represents the interests of small island and low-lying coastal developing states in international climate change negotiations and processes: <www.aosis.org>.

19 Elisa Calliari, Swenja Surminski and Jaroslav Mysiak "The Politics of (and Behind) the UNFCCC's Loss and Damage Mechanism" in Reinhard Mechler and others (eds) *Loss and Damage from Climate Change: Concepts, Methods and Policy Options* (Springer, Cham, 2019) 155 at 158; and Florentina Simlinger and Benoit Mayer "Legal Responses to Climate Change Induced Loss and Damage" in Mechler and others (eds) 179 at 193.

20 Art 1(c)(iii).

21 Art 26.

22 Toussaint, above n 8, at 16.

engage on the issue.[23] Despite these challenges, loss and damage was finally institutionalised within the UN climate regime in 2013 with the establishment of the Warsaw International Mechanism on Loss and Damage (WIM).[24] The WIM is a technical sub-process under the UNFCCC that was tasked with promoting the implementation of approaches to address loss and damage, including through information gathering, coordination, communication, and enhancing action and support.[25] In other words, WIM focuses on research and dialogue rather than liability or compensation.

At the 2015 COP, loss and damage was one of the most contentious and "hard-fought" issues negotiated.[26] Ultimately, the parties agreed to the first ever inclusion of a dedicated article on loss and damage in an international climate treaty, by way of Article 8 of the Paris Agreement. This recognises "the importance of averting, minimizing and addressing loss and damage" and establishes WIM as a permanent institution.[27] However, the inclusion is said to have "entailed compromises on the part of vulnerable states … [r]eflecting developed countries' key concern",[28] and in its decision on the adoption of the Paris Agreement, the COP stated that, "Article 8 of the Agreement does not involve or provide a basis for any liability or compensation."[29] As a result, several climate-vulnerable states submitted declarations when ratifying the Agreement, stating that such ratification did not constitute a renunciation of any of their rights under international law, particularly relating to state responsibility for the adverse impacts of climate change, and reaffirming their entitlement to take legal action seeking compensation for loss and damage outside of the UNFCCC process.[30]

Post-Paris, there has been some further agreement relating to loss and damage. In 2018, references to it were included in the Paris Agreement "Rulebook", meaning that states can report on loss and damage as part of the transparency framework under the Agreement, which can be used in the global stocktake process.[31] There has been, however, no consensus on the

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23 Simlinger and Mayer, above n 19, at 195.
24 UNFCCC *Report of the COP* FCCC/CP/2013/10/Add.1 (31 January 2014), Decision 2/CP.19, art 1.
25 Art 5.
26 Calliari, Serdeczny and Vanhala, above n 7, at 8; and Simlinger and Mayer, above n 19, at 196.
27 Art 8.1 and Art 8.2.
28 Mead and Wewerinke-Singh, above n 10, at 304-306 (footnotes omitted).
29 UNFCCC *Report of the COP* FCCC/CP/2015/10/Add.1 (29 January 2016), Decision 1/CP.21, art 51.
30 See for example, the Declarations of Federated States of Micronesia, Niue, Tuvalu, Vanuatu, Marshall Islands, and Cook Islands at UN "Treaty Depository" <treaties.un.org>.
31 Mead and Wewerinke-Singh, above n 10, at 306.

issue of liability and compensation, with tensions on this matter continuing.[32] This was seen most recently at COP 26, where the highest priority for many climate-vulnerable states was to make progress on securing concrete, financial commitments from developed states through a fund or "facility" to provide compensation.[33] There were, however, no such substantively new or additional commitments made, further illustrating developed states' resistance to anything that may be perceived as reparations.[34]

B Adjudication

This subsection examines the types of Loss and Damage Disputes that are currently using the process of adjudication as a means of resolution. As explained when defining Loss and Damage Disputes in Chapter Three, there are challenges in providing a definitive definition of this term, particularly in contrast to adaptation.[35] Additionally, as with all CCDs, it can be difficult to identify them if they do not explicitly refer to climate change.[36] Further, as explained in relation to the UNFCCC Negotiation Process above, although the issue of loss and damage has been under discussion for decades, it is still in its "infancy." Moreover, the challenge in proving causation is a hurdle for parties attempting to use adjudication to address Loss and Damage Disputes.[37] As UNEP explains, "defining the precise causal relationship between a particular source of emissions and individualized climate change harms remains a challenge for litigants."[38] Given these challenges, there is less evidence of disputes being adjudicated within this subcategory, and much of the literature about it refers to potential disputes, as opposed to those actually taking place.

Despite this, Loss and Damage Disputes are being adjudicated. As of May 2022, the Grantham Database had 20 cases outside of the United States identified as loss and damage,[39] and although Sabin does not use a separate label, it categorised 34 American adaptation cases as "actions seeking money damages for losses."[40] There is also evidence that the number of Loss

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32 Toussaint, above n 8, at 19.
33 David Hunter, James Salzman and Durwood Zaelke *Glasgow Climate Summit: Cop26* (UCLA School of Law, Public Law Research Paper, December 2021) at 4.
34 Mark Nevitt "Key Takeaways From the Glasgow Climate Pact" LawFare 17 November 2021.
35 Chapter 3.II.F.
36 Joana Setzer and Lisa Vanhala "Climate Change Litigation: A Review of Research on Courts and Litigants in Climate Governance" (2019) 10(3) WIREs: Climate Change e580 at 3.
37 Simlinger and Mayer, above n 19, at 182.
38 UNEP *Global Climate Litigation Report: 2020 Status Review* (July 2020) at 22.
39 Grantham Database.
40 Sabin Database.

and Damage Disputes using adjudication is growing,[41] and an increased use of adjudication has been forecast for this subcategory of CCDs.[42] This growth is influenced by a number of factors. First, the developments in the UNFCCC regime.[43] Secondly, the continuing improvements in climate science, which is becoming more capable of evidencing attribution,[44] will impact legal issues of liability, and "could over time provide a sufficiently robust basis for successful climate litigation."[45] Thirdly, the predicted increase in the frequency and intensity of climate impacts leading to harm will increase the number of disputes, as more parties seek to recover losses.[46]

The evidence of disputes to date, examined below, identifies some key features of the type of Loss and Damage Disputes that are currently using adjudication. As with climate change adjudication generally, the majority is taking place in the global North, largely the United States.[47] The claimants in that country are predominantly cities and counties, whereas they are more likely to be private individuals in European countries.[48] The respondents are mostly corporations, meaning that, unlike Mitigation and Adaptation Disputes using adjudication, the majority are private law disputes. Lastly, most are taking place in a national context, but there is some activity in the international arena. Given these features, I examine Loss and Damage Disputes using adjudication under the following three headings: Private; Public; and International.

1 Private

The majority of Loss and Damage Disputes using adjudication are being taken against corporations (largely the Carbon Majors and other fossil fuel companies), with parties seeking to establish corporate liability for the harms suffered as a result of climate change caused by the corporations' GHG emissions. In these disputes, the claimant's objective is "primarily concerned with remedying harm rather than preventing it through increased mitigation or

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41 Setzer and Vanhala, above n 36, at 3. Further, the Grantham Database had 12 loss and damage cases recorded in November 2021, meaning these almost doubled in six months.

42 Jacqueline Peel and Hari Osofsky "Climate Change Litigation" (2020) 16 Annual Review of Law and Social Science 21 at 27.

43 Sophie Marjanac and Lindene Patton "Extreme Weather Event Attribution Science and Climate Change Litigation" (2018) 36 JERL 265.

44 Reinhard Mechler and others "Loss and Damage and Limits to Adaptation" (2020) 15 Sustainability Science 1245 at 1250.

45 Toussaint, above n 8, at 20.

46 At 21.

47 Grantham and Sabin Databases.

48 Toussaint, above n 8, at 22.

funding adaptation efforts."[49] Targeting corporations in this way is seen as more pragmatic because it is seeking "cash penalties", which as well as remedying the specific harm in question, could also be used for adaptation or mitigation efforts.[50]

There are advances being made in scientific research, namely: identifying specific GHG contributions of high emitters;[51] and attributing (or linking) emissions to the harms caused by particular climate impacts.[52] As referenced above, however, there are barriers to the adjudication of Loss and Damage Disputes, including the causes of action available for private law disputes. To date, most have been unsuccessful,[53] and no court has found causation for the purpose of establishing legal liability.[54] Almost all of the disputes have been dismissed by the courts on the basis that the claimant lacked legal standing or that the issue was a non-justiciable, political question.[55] Despite this lack of success, Loss and Damage Disputes are still being taken to adjudication. As with CCDs generally, the majority are found in the United States.[56]

There are a number of such cases against both the Carbon Majors and other fossil fuel producers,[57] many of which involve claims of liability "for nuisance, compensation for infrastructure damage and adaptation costs, as well as punitive damages for fraud."[58] One of the most prominent cases is *Kivalina*,[59] which provides an example of an early tort claim of public nuisance being brought against fossil fuel producers by private individuals, and an attempt to seek redress for harm resulting from a slow-onset process. In 2009, residents of Kivalina, a native Inupiat village in Alaska, took a claim against large energy corporations for their contributions to climate change and the resulting harms. The residents had been forced to

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49 Toussaint, above n 8, at 21.

50 Giuliana Viglione "Climate Lawsuits are Breaking New Legal Ground to Protect the Planet" 2020 579 Nature 184 at 185.

51 Richard Heede "Tracing Anthropogenic Carbon Dioxide and Methane Emissions to Fossil Fuel and Cement Producers, 1854–2010" (2014) 122 Climatic Change 229 [*The Carbon Majors Study*].

52 Jacqueline Peel, Hari Osofsky and Anita Foerster "'Next Generation' Climate Change Litigation in Australia" in Jolene Lin and Douglas Kysar (eds) *Climate Change Litigation in the Asia Pacific* (Cambridge University Press, Cambridge, 2020) 175, at 187-189; and Geetanjali Ganguly, Joana Setzer and Veerle Heyvaert, "If at First You Don't Succeed: Suing Corporations for Climate Change" (2018) 38 OJLS 841 at 851.

53 Simlinger and Mayer, above n 19, at 182.

54 UNEP, above n 38, at 20. This issue of liability is currently being considered in the appeal of *Lliuya v RWE AG* Essen Regional Court 2O285/15, 15 December 2016. (This case is discussed further below).

55 Bennett, above n 2, at 178-179. The legal standing doctrine requires plaintiffs to demonstrate that they have suffered particular, traceable and redressable harms.

56 Grantham and Sabin Databases.

57 UNEP, above n 38, at 22.

58 Toussaint, above n 8, at 22.

59 *Native Village of Kivalina v Exxonmobil Corp* 696 F 3d 849 (9th Cir 2012). [*Kivalina*].

abandon their coastal village and relocate their community as a result of rising sea levels and the melting of arctic ice that had previously protected them from winter storms. They were seeking damages for the loss of their land and compensation for relocation. Illustrating the type of legal challenges these disputes face, the District Court dismissed the claim, finding that it was non-justiciable and that the plaintiffs lacked the required standing, as they could not prove causation.[60]

Another notable example shows food producers taking a Loss and Damage Dispute against the fossil fuel industry in relation to the impacts of a slow-onset process on food sources. In 2018, a commercial fishing industry body filed a case against a number of fossil fuel companies seeking to hold them liable for warming-related impacts on the oceans that had caused prolonged closures of crab fisheries.[61] The case is ongoing. There have also been cases taken in the United States following extreme climate events, such as those seeking compensation for damages caused by Hurricane Katrina in 2015,[62] and more recently, following wildfires. For example, in 2019, residents of Malibu, California filed a claim seeking damages from a local utility company following a wildfire that was ignited near one of its sites, on the basis that the corporation had failed to maintain and operate its equipment and property appropriately given the known increased, climate-related risks of wildfire.[63]

As well as Loss and Damage Disputes being taken by private individuals and entities against corporations, more recently, there have been a significant number of them being raised by American states and municipalities seeking compensation for climate damages from groups of fossil fuel companies. These are mostly on the basis of tortious claims, such as public nuisance and trespass, or public trust.[64] As mentioned above, and illustrated by *Kivalina*, one of the significant hurdles to these types of disputes progressing to trial, is the court dismissing them on the basis of the plaintiffs' lack of legal standing. State plaintiffs, however, have legal standing under the principle of *parens patriae*, which gives them a generalised right to protect

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60 Sabin Database.

61 *Pacific Coast Federation of Fishermen's Assoc Inc v Chevron Corp* filed 12 December 2018 in District Court ND Cal (3:18-CV-07477-VC).

62 For example, *Comer v Murphy Oil USA Inc* 585 F Supp 3d 855 (5th Cir 2009).

63 Sabin Database.

64 For example, *Rhode Island v Shell Oil Products Co* 35 F 4d 44 (1st Cir 2022); *City of Oakland v BP Plc* 325 F Supp 3d 1017 (ND Cal 2018); *County of San Mateo v Chevron Corp* 294 F Supp 3d 934 (9th Cir 2018); *Mayor and City Council of Baltimore v BP Plc* 952 F 3d 452 (4th Cir 2020); and *City of New York v BP Plc* 993 F 3d 81 (2nd Cir 2021).

their citizens' well-being and safety.[65] The ongoing case of *Rhode Island v Shell Oil Products Co*,[66] is an example of this type of dispute. It was the first to be taken by a state and "may overcome the precedent that has been set with regard to legal standing."[67] In this case, the State is seeking to hold fossil fuel companies liable for knowingly contributing to climate change, the impacts of which will damage State-owned and operated facilities, services, property, and other assets that are essential to community health, safety, and well-being.[68]

Although the majority of Loss and Damage Disputes using adjudication are found in the United States, they are starting to be seen in other jurisdictions as well. The most prominent of these is the ongoing case of *Lliuya* taking place in the German courts.[69] In 2015, a Peruvian citizen filed a claim (similar to private nuisance[70]) against Germany's largest electricity producer, RWE, alleging that its GHG emissions are partially responsible for the glacial melt caused by increased temperatures that is expanding the lake above his village, and posing a risk of flood, substantial loss of life and damage to property. Lliuya is seeking compensation for the preventative flood measures he has had to take, proportionate to RWE's contribution to the cause of the damage.[71] In contrast to *Kivalina* in the United States, the courts have allowed Lliuya's complaint to proceed to trial. Although the case was initially dismissed by the District Court of Essen (partly due to the Court's view that it was impossible to establish a chain of causation), in 2017, an appellate court accepted the case as admissible, and permitted it to move forward to the evidentiary stage.[72] This decision is particularly significant, as under German procedural law it means that the legal arguments have been conclusively argued, and therefore, provided that the claim can be evidentially substantiated, the legal argument accepted.[73] This makes it the "first case in which a court found that a private company could potentially be held liable for climate damages from its emissions".[74]

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[65] Ganguly, Setzer and Heyvaert, above n 52, at 847.

[66] *Rhode Island v Shell Oil Products Co*, above n 64.

[67] Bennett, above n 2, at 178-179.

[68] Sabin Database.

[69] *Lliuya v RWE,* above n 54, currently on appeal before the Higher Regional Court of Hamm – Grantham Database.

[70] Jack Hodder "Climate Change Litigation: Who's Afraid of Creative Judges?" (paper presented at the Local Government New Zealand Rural and Provincial Sector Meeting, Wellington, 7 March 2019) at 7-8.

[71] Specifically, 0.47 per cent of the costs of flood-protection measures for his town, equal to RWE's proportion of global GHG emissions from 1751 to 2010.

[72] Sabin Database.

[73] Brian Preston "The Influence of the Paris Agreement on Climate Litigation: Causation, Corporate Governance and Catalyst (Part II)" (2021) 33(2) JEL 227 at 237-238.

[74] Toussaint, above n 8, at 22.

Alongside the Carbon Majors, corporations in the financial sector are also being involved in Loss and Damage Disputes. This is particularly true of insurance companies, which are facing disputes relating to damage claims caused by climate change on insured property. Many of these disputes will not specifically reference climate change, however, and most are routine as opposed to strategic – making them difficult to identify. One example that can be found is a case from the United States concerned an energy company's claim that its insurance policy obligated the insurer to defend or indemnify it against a climate loss and damage lawsuit.[75] This is another area of predicted growth for the use of adjudication, as climate loss and damage will increase and issues of insurance cover are sure to be disputed.[76] Signalling this issue, for example, in 2018, the Chief Executive of the New Zealand Insurance Council, stated that it is "not possible to insure what is certain and expected. It is, therefore, critical to understand that insurance will not cover sea level rise."[77]

2 Public

The second main type of Loss and Damages Dispute are those being taken under public law against state entities. Unlike Mitigation and Adaptation Disputes, there are fewer of these occurring. This reflects the predominant focus on states' obligations to mitigate, or more latterly, adapt.[78] It is also an area where the separation between Loss and Damage Disputes and Adaptation Disputes becomes less clear. For example, cases may involve claims for damages caused by adaptation measures (as opposed to caused directly by climate impacts), such as the Australian case of *Ralph Lauren 57 Pty Ltd v Byron Shire Council*.[79]

There is some evidence of Loss and Damage Disputes against state authorities being taken in national courts. For example, the 2016 Canadian case of *Burgess*,[80] which involved a class action taken by property owners against the Ontario Minister of Natural Resources and Forestry

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75 *Steadfast Insurance Co v The AES Corp* 725 SE 2d 532 (Vir SC 2012).The loss and damage lawsuit in question is the *Kivalina* case, considered above, which concerned an allegation that AES Corporation's GHG emissions led to the destruction of an Alaskan village. In the *Steadfast* case, the Virginia Supreme Court rejected the claim on the basis that the policies only provided coverage against claims for damages caused by an accident or occurrence, and release of GHGs did not qualify as either.

76 Javier Solana "Climate Litigation in Financial Markets: A Typology" (2020) 9 TEL 103 at 125.

77 Tim Grafton "Climate Change and the Island States of the South Pacific: An Insurance Perspective on Hazards, Risk and Responses" in Alberto Costi and James Renwick (eds) *In the Eye of the Storm* (SPREP, Victoria University of Wellington and NZACL, Wellington, 2020) 155 at 160.

78 Simlinger and Mayer, above n 19, at 181.

79 *Ralph Lauren 57 Pty Ltd v Byron Shire Council* [2016] NSWSC 169 - included at Chapter 5.II.B.1(b).

80 *Burgess v Ontario Minister of Natural Resources and Forestry* filed in Ontario Superior Court of Justice 14 September 2016, Court File 16-1325CP.

seeking approximately CAD900 million compensation in damages for a lake flooding event caused by increased snow melt and precipitation. The dispute was not ultimately resolved through adjudication, however, as the case was discontinued in 2018.[81]

3 International

The third type of Loss and Damages Dispute utilising adjudication are those occurring in the international context. The possibility of using the International Court of Justice in this regard has been contemplated, but not yet eventuated.[82] As it is not currently being used, it is not included here, but the potential effectiveness of this process is considered in Chapter Eight.[83] Most of the actual disputes in the international arena relate to climate displacement. As defined in Chapter Three, climate displacement refers to climate-induced population displacement and resettlement.[84] This may occur nationally, within state boundaries, or internationally, across state boundaries. UNEP identified climate displacement disputes as an "emerging trend" in 2017,[85] and it continues to be seen as a growing area.[86]

One of the most significant examples of this type of dispute was a complaint taken to the UNHRC that involved New Zealand as a party.[87] In 2013, Ioane Teitiota, a citizen of the Pacific Island nation of Kiribati, sought asylum in New Zealand on climate change-related grounds, claiming that his life was at risk in Kiribati, as rising sea levels and other destructive effects of climate change had made his homeland uninhabitable. New Zealand denied his asylum application, and following unsuccessful challenges to that decision through New Zealand's Immigration and Protection Tribunal, High Court and Supreme Court, Teitiota was deported back to Kiribati. In 2015, he lodged a complaint against New Zealand with the UNHRC. In that complaint, Teitiota claimed that he had been forced to migrate to New Zealand due to the impacts of climate change (in other words, climate displaced) and argued that his right to life had been violated by being returned to Kiribati. The UNHRC ultimately determined that Teitiota's right to life had not been violated, as Kiribati had put sufficient protection measures in place that meant he was not at imminent risk. However, the

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81 Sabin Database. No reason was provided for the discontinuance.

82 Roda Verheyen and Cathrin Zengerling "International Dispute Settlement" in Kevin Gray, Richard Tarasofsky and Cinnamon Carlarne (eds) *The Oxford Handbook of International Climate Change Law* (Oxford University Press, Oxford, 2016) 418 at 427.

83 Chapter 8.IV.A

84 Chapter 3.II.F.

85 UNEP, above n 38, at 25.

86 At 29.

87 *Teitiota v New Zealand (Views)* UNHRC CCPR/C/127/D/2728/2016, 24 October 2019.

UNHRC found that states would be in violation of international human rights if they deported climate displaced people back to countries where climate change posed an immediate threat.[88]

III Assessing Loss and Damage DR

This section makes an assessment of the effectiveness of the two DR processes currently being used to address Loss and Damage Disputes by evaluating them against the applicable criteria established in Chapter Three, namely, how well do they: address loss and damage; resolve and prevent these disputes; and comply with the rule of law? As previously noted, the assessment that applies to CCDs generally (and not any subcategory specifically) has been included in Chapter Four. Where a particular assessment criterion is not addressed below, it is because there is nothing specific to Loss and Damage Disputes to assess. This evaluation shows that neither the UNFCCC Negotiation Process or adjudication are completely effective ways to resolve Loss and Damage Disputes.

A UNFCCC Negotiation Process

1 Addresses Loss and Damage

The first criterion used to measure the effectiveness of the UNFCCC Negotiation Process is how well it addresses loss and damage, whether that be through risk management, liability and compensation, insurance or some other mechanism.[89] As the overview of the global negotiations on loss and damage above demonstrates, there has been progress made on this issue over time. Namely, it is now recognised "as a core element alongside mitigation and adaptation in the international response to climate change"[90] or, as some refer to it, the "third pillar" of the climate regime.[91] This outcome is said to have involved developed states making some "ambiguous concessions" to climate-vulnerable states.[92] Although this has progressed the issue, most research finds that the UNFCCC Negotiation Process has been ineffective in actually addressing loss and damage.

88 *Teitiota v New Zealand (Views)*, above n 87, at [9.11]

89 As discussed above, there is considerable debate about how loss and damage should be addressed. It is outside the scope of this thesis to engage in this debate in depth. Therefore, all of these mechanisms are included.

90 Toussaint, above n 8, at 17.

91 Morten Broberg "Interpreting the UNFCCC's Provisions on 'Mitigation' and 'Adaptation' in Light of the Paris Agreement's Provision on 'Loss and Damage'" (2020) 20 Climate Policy 527 at 532.

92 Simlinger and Mayer above n 19, at 196.

A number of scholars highlight the lack of any substantive action on loss and damage as a result of the UNFCCC Negotiation Process, specifically, in relation to providing adequate support to the climate-vulnerable. Patrick Toussaint, for example, stated that it has so far provided, "little to nothing in terms of action and support to protect people in harm's way."[93] Mead and Wewerinke-Singh share a similar view, saying that the perceived "wins" in fact "obscure a lack of tangible progress in terms of loss and damage more generally."[94] Others refer to the outcomes so far as simply "rhetoric,"[95] or lacking "concrete steps"[96] and highlight that this state of "stagnation" continues.[97] Additionally, aspects of the outcome from the UNFCCC Negotiation Process specifically limit the ability to address loss and damage, particularly the 2015 decision of COP that the Paris Agreement's provision on loss and damage, "does not involve or provide a basis for any liability or compensation."[98] Following a continued lack of progress at COP 26, several climate-vulnerable island states announced that they were going to take a more litigious approach in the future.[99] The failure of the UNFCCC Negotiation Process to effectively address loss and damage is compounded by the time it has taken. As Reinhard Mechler and others state, "it took more than two decades and increasingly robust evidence on climate change impacts and risks, … for [loss and damage] to be recognised institutionally by the UNFCCC."[100]

The view that the UNFCCC Negotiation Process has failed to address loss and damage is not only academic. It is evidenced by what is actually occurring, especially in the climate-vulnerable states. In 2015, AOSIS stated that, "[l]oss and damage is an existential issue for AOSIS member states. Several islands in the Pacific have already been inundated, lives have been lost."[101] In 2019, the Solomon Islands made the same point:[102]

> For 24 years, parties have been gathering at these COPs to negotiate and discuss climate change. In that same period, five islands in my country have disappeared,

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93 Toussaint above n 8, at 17.
94 Mead and Wewerinke-Singh above n 10, at 306.
95 Veera Pekkarinen, Patrick Toussaint and Harro van Asselt "Loss and Damage after Paris" (2019) 13 CCLR 31 at 31-32.
96 Simlinger and Mayer, above n 19, at 196.
97 Margaretha Wewerinke-Singh and Diana Hinge Salili "Between Negotiations and Litigation: Vanuatu's Perspective on Loss and Damage From Climate Change" (2020) 20 Climate Policy 681 at 685.
98 UNFCCC, above n 29, art, 51.
99 Hunter, Salzman and Zaelke, above n 33, at 11.
100 Mechler and others, above n 44, at 1246 (footnote omitted).
101 AOSIS "Closing Statement" (Statement at COP 25, Spain, 12 December 2015).
102 Melchior Mataki, Minister of Environment, Solomon Islands "Climate Change, Disaster Management and Meteorology" (statement at COP 24, Katowice, 12 December 2019).

> communities have been internally displaced and we are in constant mode of recovery from extreme weather events.

Dispute resolution processes can have indirect impacts on other processes that either enhance or detract from their effectiveness. For example, the UNFCCC Negotiation Process can provide useful guidance to assist other DR processes considering Loss and Damage Disputes, especially adjudication. As Toussaint illustrates, however, in reality, this positive impact is lacking. None of the 28 loss and damage-related cases he analysed contained any reference to the UNFCCC's work on this issue, and he found there to be a "fundamental disconnect" between the negotiations and adjudication.[103]

In summary, the UNFCCC Negotiation Process has had some impact in addressing loss and damage. More specifically, as it has led to the issue being recognised as one of three central pillars of the climate response, which has contributed to it emerging as a key area of climate policy over the last decade.[104] However, the facts that this recognition took almost 25 years, that there has been a lack of any real substantive action, and that significant limitations have been placed on achieving that action, mean that this process has had limited effectiveness in addressing loss and damage.

2 Resolution and Prevention

The next criterion used to measure the UNFCCC Negotiation Process's effectiveness, is whether it has resolved the parties' dispute. As outlined above, this is not the case with loss and damage through this process. As set out in the previous section, although loss and damage has become more prominent as an issue overtime, and agreement was ultimately reached on including it as a standalone provision,[105] no agreement has been reached on how to effectively address loss and damage, particularly in relation to the fundamental questions of liability and sources of finance.[106] Therefore, to date "loss and damage remains unresolved and subject to significant controversy and highly politicised debate."[107]

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103 Toussaint, above n 8, at 23.
104 Elisa Calliari and Lisa Vanhala "The 'National Turn' in Climate Change Loss and Damage Governance Research: Constructing the L&D Policy Landscape in Tuvalu." (2022) 22 Climate Policy 184 at 184.
105 Paris Agreement, art 8.
106 Simlinger and Mayer, above n 19, at 196; and Mayer, above n 12, at 327.
107 Pekkarinen, Toussaint and van Asselt, above n 95, at 31.

As explained in Chapter Three, however, resolution is not only about reaching an outcome.[108] It also captures a process's broader effects, such as preventing further disputes, including by providing a mechanism for continuing talks and removing tension to prevent escalation. This has been partially achieved by the UNFCCC Negotiation Process in the Loss and Damage Dispute. The tensions have not been addressed, but, as with the other CCDs, the UNFCCC framework has provided a mechanism for ongoing discussion, so far without escalation. Unlike other CCDs, however, escalation seems increasing likely with Loss and Damage Disputes. Several climate-vulnerable island states, frustrated by the lack of progress on loss and damage through the UNFCCC Negotiation Process announced, following COP 26, that they are going to take a more litigious approach to this dispute.[109] In a clearer signal of this escalation, Tuvalu and Antigua and Barbuda signed a multilateral agreement open to all members of AOSIS, which established the Commission of Small Island States on Climate Change and International Law and specifically authorised it to request advisory opinions from the International Tribunal for the Law of the Sea.[110]

3 Rule of Law

The next criterion for measuring a DR process's effectiveness is how well it complies with the rule of law.[111] There are a number of issues raised about the UNFCCC Negotiation Process on loss and damage in this regard. One of the central concerns is the process's inability to provide access to justice for the climate-vulnerable states and to protect them from power imbalances. Florentina Simlinger and Mayer have articulated this concern:[112]

> More powerful states have naturally a greater say in the negotiations. Diplomatic and financial pressure is often exercised on weaker states. This political determination of the international climate law regime has significantly hindered efforts of vulnerable nations to bring up the question of [loss and damage]

On the other hand, some writers note that the process has provided some balance of power, as the vulnerable states have made progress and achieved "at least a partial victory in terms of the WIM and Art 8 of the Paris Agreement."[113] Mead and Wewerinke-Singh credit the Pacific

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108 See Chapter 3.III.B.

109 Hunter, Salzman and Zaelke, above n 33, at 11.

110 Agreement for the Establishment of the Commission of Small Island States on Climate Change and International Law Registration 56940 (31 October 2021), art 2(2).

111 As set out in Chapter 3.III.C

112 Simlinger and Mayer, above n 19, at 193.

113 Calliari, Surminski and Mysiak, above n 19, at 165.

Island countries in particular with much of the progress on loss and damage, and say this "can be seen in the context of a 'paradigm shift' in regional diplomacy towards a heightened Pacific voice in global affairs."[114] Power balancing was also assisted by mechanisms available through the UNFCCC Negotiation Process, including, coalition building (through groups such as AOSIS and the Pacific Islands Development Forum),[115] as well as resource and capability support provided by NGOs.[116]

On balance, however, these factors do not fully mitigate the concerns. There is a view that the process has led to a manifestly unjust outcome, largely due to the power imbalance, thereby undermining the rule of law. A number of authors claim that some developed states are using their positions of power to prevent "fair" outcomes by deliberately blocking and hampering further progress on loss and damage finance.[117] New Zealand author, Briony Bennett, states that the negotiated outcomes have created a "substantial justice gap" by failing to provide a basis for liability or compensation for loss and damage and leaving the victims to bear the costs themselves.[118] A further aspect of the access to justice requirement is efficiency. The fact that the negotiations on loss and damage have been going on for 30 years, and that it took almost 25 years for the issue to be officially recognised, demonstrates the failing in this regard.

B Adjudication

This section assesses the effectiveness of adjudication as a means of resolving Loss and Damage Disputes, by applying the following, relevant criteria: how well does it address loss and damage; and comply with the rule of law? As the above mapping of adjudication and the following assessment of its effectiveness to address loss and damage makes apparent, this process has not resolved or prevented these disputes, and so this criterion is not included.

1 Addresses Loss and Damage

The general challenges of measuring the effect of adjudication on climate change are examined in Chapter Four.[119] Specific challenges for loss and damage are that it is in its infancy as an

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[114] Mead and Wewerinke-Singh, above n 10, at 296 and 304 (footnote omitted).
[115] Carola Klöck "Multiple Coalition Memberships" (2020) 25 International Negotiation 279 at 291.
[116] Calliari, Surminski and Mysiak, above n 19, at 173.
[117] Wewerinke-Singh and Hinge Salili, above n 97, at 685; and Mead and Wewerinke-Singh, above n 10, at 304-306.
[118] Bennett, above n 2, at 153 and 159.
[119] Chapter 4.III.B.1.

area of adjudication, and to date there have been no successful cases. As a result, there is less specific data to measure, particularly in terms of adjudication's direct impact on loss and damage. Therefore, in order to provide a meaningful assessment, the following analysis is of indirect impacts, and includes some consideration of the predicted benefits and limitations of loss and damage adjudication. There are indications that the adjudication of Loss and Damage Disputes is indirectly addressing loss and damage, in both positive and negative ways. As examined in previous chapters, "unsuccessful" cases can have indirect impacts on the climate response. In this context, unsuccessful means cases where the decision-maker did not find in favour of a party seeking to address loss and damage.

(a) Positive Impacts

The positive impact of adjudication in these disputes is demonstrated in a number of ways. First, unsuccessful cases are a part of the process of developing an appropriate legal response to novel harms. Parallels in this regard have been drawn between loss and damage and other harms, such as tobacco.[120] More specifically, unsuccessful cases can contain important findings or statements that will support future Loss and Damage Disputes and progress the legal response to them. For example, in his decision to dismiss the case of *City of Oakland v BP Plc*, the judge stated that "[t]he issue is not over science. All parties agree that fossil fuels have led to global warming and ocean rise and will continue to do so."[121] This judicial acceptance of climate science is seen as setting an important precedent for future cases.[122] The case of *Teitiota*, provides a further example, and was described by UNHRC member, Yuval Shany, as a ruling that "sets forth new standards that could facilitate the success of future climate change-related asylum claims."[123]

Secondly, unsuccessful decisions allow future parties to amend their strategic legal approaches. For example, in the United States, "earlier cases established precedent that plaintiffs cannot pursue common law actions under federal law; as a consequence, plaintiffs have brought claims under state laws in numerous jurisdictions."[124] Thirdly, such cases, especially significant or high-profile ones, can increase public awareness of the issue at local, national, and global

[120] Toussaint, above n 8, at 29; and Bennett, above n 2, at 184.
[121] *City of Oakland v BP Plc* 325 F Supp 3d 1017 (ND Cal 2018) at 1022.
[122] Bennett, above n 2, at 183.
[123] Office of the UN High Commissioner for Human Rights "Historic UN Human Rights case opens door to climate change asylum claims" (press release, 21 January 2020).
[124] UNEP, above n 38, at 22.

levels. This may have a number of positive impacts, including: putting pressure on corporations to change their behaviour; creating political momentum for national climate policies; and drawing attention to the limitations of international and national regulation, stimulating lobbying for reform.[125]

Lastly, these cases are creating a growing awareness amongst investors, fossil fuel companies, the Carbon Majors, the insurance industry and others of the potential risks and costs of future loss and damage adjudication.[126] This litigation risk may impact their behaviour. For example, Mead and Wewerinke-Singh consider that this risk could lead to industry lobbying for a financial regime to address loss and damage under the UNFCCC framework, in order to reduce their potential liability.[127] As other authors note, however, the impact of lobbying on the UNFCCC Negotiation Process is difficult to ascertain and little understood.[128] So, conversely, this lobbying power may be used in attempts to negatively impact the advancement of loss and damage in national and international political settings.

As noted in the introduction to this subsection, the assessment of adjudication's effectiveness in addressing loss and damage necessarily includes consideration of potential or predicted future impacts. One such impact is the part adjudicated Loss and Damage Disputes can play in relation to other DR processes, particularly the UNFCCC Negotiation Process. More specifically, adjudication may fill the gap left by that process, which, as outlined above, has failed to resolve the issue of loss and damage responsibility. As Toussaint describes it, "the UNFCCC COP has outsourced the question of liability and compensation to international, regional and domestic courts."[129] Wewerinke-Singh and Hinge Salili point to Vanuatu's 2018 announcement of its intention to explore legal action against the fossil fuel industry and states that sponsor it as an example of this potential impact.[130] Bennett explains specifically how adjudication would be beneficial in this regard, saying it could: [131]

> generate funds and assign responsibility for some of the losses and damages related to climate change. This may not fully bridge the justice gap left by the Paris

[125] Pekkarinen, Toussaint and van Asselt, above n 95, at 39; Simlinger and Mayer, above n 19, at 180; and Bennett, above n 2, at 183-184.
[126] Pekkarinen, Toussaint and van Asselt, above n 95 at 39.
[127] Mead and Wewerinke-Singh, above n 10, at 295.
[128] Pekkarinen, Toussaint and van Asselt, above n 95, at 39.
[129] Toussaint, above n 8, at 19.
[130] Wewerinke-Singh and Hinge Salili, above n 97, at 681-682 and 685.
[131] Bennett, above n 2, at 161.

> Agreement, but would improve on the status quo whereby no funding mechanism exists to compensate victims.

These scholars further believe that as well as filling a gap, adjudication may positively advance the negotiations themselves,[132] specifically, by giving a "voice" to the climate-vulnerable, and exposing the more recalcitrant states' behaviour to public view.[133] Further, once cases start to succeed, this would: provide climate-vulnerable parties with arguments to use in their negotiation strategies,[134] which may improve their position in the negotiation;[135] clarify states' legal rights and obligations;[136] and add impetus to the debate, which "could spur greater ambition"[137] and "may even result in more ambitious action".[138]

(b) Negative Impacts

There are also potential negative impacts from loss and damage adjudication that need to be considered. Litigation risks are relevant for all parties in dispute, and could also have a negative impact on addressing loss and damage. As Wewerinke-Singh and Hinge Salili emphasise, "legal action comes with potentially significant risks and costs, such as the risk of creating an adverse precedent or facing reprisals from powerful corporate or government defendants."[139] One of the predicted impacts of insurance disputes, for example, is that the industry will react to liability risk by narrowing the coverage of its policies, thereby reducing the means for parties to address Loss and Damage Disputes.[140]

One of the significant negative impacts on adjudication's ability to address loss and damage are the constraints of the process. As explained in relation to Mitigation Disputes, using adjudication means that a dispute has to be framed within existing legal claims and causes of action.[141] The existing causes of action and remedies available are particularly unsuitable for Loss and Damage Disputes. First, Loss and Damage Disputes do not clearly fit within the

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[132] Toussaint, above n 8, at 17.
[133] Wewerinke-Singh and Hinge Salili, above n 97, at 688.
[134] Toussaint, above n 8, at 29.
[135] Christoph Schwarte and Ruth Byrne *International Climate Change Litigation and the Negotiation Process* (Foundation for International Environmental Law and Development, Working Paper, October 2011).
[136] Lavanya Rajamani "Addressing Loss and Damage from Climate Change Impacts" (2015) 30 Economics and Political Weekly 17.
[137] Toussaint, above n 8, at 29.
[138] Wewerinke-Singh and Hinge Salili, above n 97, at 688.
[139] At 688-689.
[140] Solana, above n 76, at 125.
[141] Chapter 4.III.B.1(d).

existing causes of action or claims available. Parties face a number of legal challenges that prevent them from getting the substantive dispute resolved in adjudication. These include establishing standing;[142] proving causality;[143] managing territorial limits of jurisdiction;[144] and facing findings of non-justiciability.[145] As outlined above, these challenges have meant that, with the exception of *Lliuya*,[146] all Loss and Damage Disputes filed to date have been dismissed by the courts. Similar arguments that the effectiveness of adjudication is restricted by the limits of the law have been made in relation to human rights-based disputes. Even though there are various human rights that are affected by loss and damage, human rights law has generally been of little help in addressing loss and damage,[147] and it is does not hold much future promise either: "… the prospects for international litigation addressing loss and damage are somewhat bleak."[148]

Secondly, the remedies that adjudication can provide do not effectively address loss and damage. Simlinger and Mayer considered the different areas of relevant law (including national public and private laws, regional and international human rights law, and customary international law) and concluded that they were all lacking in some regard when it came to providing potential remedies to address loss and damage.[149] Although compensation is often sought as a remedy in relation to loss and damage, it is recognised as a limited remedy.[150] Specifically, it may be insufficient to cover the extent and types of the loss.[151] Particularly irreversible and non-economic losses, including the loss of culture and indigenous knowledge, resulting from sea level rise and climate displacement.[152] Further, given the scale of the issue, compensation may not be affordable for those found liable, and therefore a "hollow victory", especially on a longer-term basis, as corporations who are found liable "may not be able to cover the full costs as these multiply."[153] Further, high damage awards in Loss and Damage

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142 Meinhard Doelle and Sara Seck "Loss and Damage from Climate Change?" (2020) 20 Climate Policy 669 at 670.
143 Rachel James and others "Attribution: How is it Relevant for Loss and Damage Policy and Practice?" in Mechler and others, above n 44, 113 at 140.
144 Toussaint, above n 8, at 20.
145 Simlinger and Mayer, above n 19, at 182.
146 *Lliuya*, above n 54.
147 Simlinger and Mayer, above n 19, at 183-184.
148 Pekkarinen, Toussaint and van Asselt, above n 95, at 40.
149 Simlinger and Mayer, above n 19, at 180 -193, and 198.
150 Pekkarinen, Toussaint and van Asselt, above n 95, at 39.
151 Ben Batros "Climate Liability Suits as a Forward-Looking Strategy for Change" (30 September 2020) SSRN <www.ssrn.com> at 8.
152 Toussaint, above n 8, at 22.
153 Bennett, above n 2, at 184 (footnote omitted).

Disputes may negatively impact on climate change more broadly, as they could "divert limited governmental and corporate resources from investments in technologies and other measures that may limit emissions."[154] Further, adjudication produces piecemeal, and possibly inconsistent decisions, as opposed to a comprehensive outcome on the issue, such as could be provided by a multilateral agreement through the UNFCCC Negotiation Process.[155]

Although these concerns do limit the effectiveness of adjudication, they do not render it entirely unsuitable for Loss and Damage Disputes. As outlined above, the law is developing (as evidenced by the case of *Lliuya* proceeding to trial[156]), and so are parties' strategies to overcome its limits (for example, American states' using the *parens patriae* doctrine to establish standing). Additionally, there may be alternative, more appropriate remedies that could be sought, such as injunctive relief to prevent the harms, as opposed to damages to remedy them *ex post*.[157] Further, although damages alone will not be an effective remedy, they can provide "an anchor that will help make climate change litigation justiciable."[158] Additionally, adjudication provides a forum through which the individuals and communities directly impacted by loss and damage have the opportunity to "be heard, accuse and explain."[159] In summary, while the legal response to loss and damage is currently wanting, it is developing and will likely continue to do so over time, making adjudication a more effective process for resolving these disputes.

2 Rule of Law

There are a number of points to be made about adjudication of Loss and Damage Disputes in relation to rule of law compliance. One aspect of the rule of law in a national setting is that it creates law under the doctrine of *stare decisis*. As outlined in the preceding subsection, this is happening through adjudication in relation to loss and damage, and is a particular benefit for this issue at its current, early stage of legal development. A further requirement of the rule of law is that DR take place in a public forum. Again as outlined above, this is occurring through the adjudication of Loss and Damage Disputes, and has particular advantages for this issue, including providing a forum for public debate "over difficult and controversial questions that

154 Kent Roach "Judicial Remedies for Climate Change" (2021) 17 JLE 105 at 131 (footnote omitted).
155 Wewerinke-Singh and Hinge Salili, above n 97, at 688-689.
156 *Lliuya*, above n 54.
157 Toussaint, above n 8, at 22.
158 Roach, above n 154, at 131 (footnote omitted).
159 Wewerinke-Singh and Hinge Salili, above n 97, at 688.

are otherwise too easily swept under the carpet",[160] which could influence public and political opinion and eventually lead to legislative reform. A further rule of law benefit of loss and damage adjudication is that it provides a public good benefit in terms of education. Specifically, "[i]t helps separate facts from fiction and disseminate information regarding climate change to the public and political leaders."[161]

As previously established, the rule of law also requires access to justice. There are some criticisms about the adjudication of Loss and Damage Disputes in this regard. First, not all parties that suffer loss and damage as a result of climate change will be able to access adjudication. They may lack the necessary resources, including "time, money and legal knowledge, and this may prevent them from pursuing a claim in court."[162] Secondly, and interrelated to the requirement of equality before the law, there is an imbalance in terms of the parties that are able access adjudication. As outlined in the mapping of adjudication above, the majority of claimants in Loss and Damage Disputes are from the global North, and more specifically, are cities and counties in the United States. These are not the parties that are suffering the most in terms of loss and damage, that is, the climate-vulnerable. Although there has been a rise in adjudication in the global South involving climate-vulnerable parties, there are still barriers to access to justice, as they are "…often faced with structural hurdles, such as a lack of financial resources and specialist expertise to make their claims heard."[163] On the other hand, one of the key policy insights from scholars looking at the interplay between adjudication and the UNFCCC Negotiation Process in relation to loss and damage was that it *can* help redress power imbalances: "[l]egal action – including cases against foreign states or fossil fuel companies – could bolster the position of climate-vulnerable states in multilateral negotiations on loss and damage finance."[164]

The general rule of law concerns about the role of courts in deciding CCDs are also raised in relation to the adjudication of Loss and Damage Disputes.[165] First, that it fails to provide an impartial and certain process (required to ensure equality before the law) due to the reluctance of judges to make decisions that they see as "political." Simlinger and Mayer identify the

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160 Wewerinke-Singh and Hinge Salili, above n 97, at 681.
161 Bennett, above n 2 at 183-184 (footnotes omitted).
162 At 184 (footnote omitted).
163 Toussaint, above n 8, at 22 (footnotes omitted).
164 Wewerinke-Singh and Hinge Salili, above n 97, at 688.
165 These concerned are examined in Chapters 4.III.B.3 and 5.III.B.2.

courts' deference to other branches of government as one of the main hurdles to the success of loss and damage cases.[166] This is evidenced in the United States, where judges have dismissed cases (in part) on the basis that they raised non-justiciable political questions.[167] This is related to a concern that the judiciary making decisions about such questions is a breach of the separation of powers. However, there is less weight to the argument that loss and damage is a political issue compared to other aspects of climate change. Loss and Damage Disputes are about addressing the harms caused by climate change, which has been caused by GHG emissions. Cases therefore involve legal questions of liability and scientific questions of causation, not political questions about regulating those emissions (mitigation) or preventing the harms (adaptation). As Bennett highlights, addressing the questions loss and damage raises is the role of the courts: "dealing with the plight of victims who have been harmed by the actions of others is the domain of corrective justice and tort litigation."[168] This is especially true where there are justice gaps or injustices, as exist in relation to loss and damage.[169]

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166 Simlinger and Mayer, above n 19, at 182.
167 For example, *City of New York v BP Plc*, above n 64.
168 Bennett, above n 2, at 178-179.
169 See section III.A.3 above for detail on these issues.

Chapter 7: Current Climate Change DR System

I Chapter Introduction

A Research Problems, Questions and Thesis

As identified in Chapter One, a current gap in the research on climate change disputes (CCDs) is the lack of an overarching definition and understanding of them, which means that there is no thorough comprehension of their scope and causes. This lack of clarity is particularly problematic from a DR perspective, as understanding a dispute is critical to being able to resolve, and possibly even prevent, it most effectively. Further research gaps include the lack of a comprehensive map of all current DR processes,[1] and any mechanism for assessing the effectiveness of those processes.

In an attempt to fill these gaps, I have asked a series of research questions. The first of these – what are CCDs? – I have addressed through a taxonomical definition of CCDs consisting of three subcategories as set out in Chapter Three, and further expanded on in Chapters Four to Six. The subsequent question – what processes are currently used to address CCDs and how effective are they? – has been addressed in relation to those three subcategories (Mitigation, Adaptation, and Loss and Damage Disputes) in Chapters Four to Six respectively. In this final chapter of Part B, I bring all of this work together in order to provide an answer to those questions in relation to CCDs in their entirety.[2] Consistent with what has been demonstrated about the three subcategories, this chapter provides further support for my thesis that there is not one, best way to resolve CCDs, rather, different types of CCDs will be most effectively resolved using different processes from across the DR spectrum.

B Chapter Outline

In order to address the research questions above, this chapter is broken down into two main sections. The first summarises the types of CCDs and DR processes that make up the existing climate change DR (CCDR) system. The second, summarises the effectiveness of the various processes being used within this system. In this way, the chapter brings together the full range

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1 As outlined in Chapter 1.II.C and 1.III.A, there is research concerning the use of particular DR processes, (especially adjudication) but none considering the full range of processes as a comprehensive system.

2 As previously explained, I included and considered the subcategories separately first in order to provide the necessary depth of analysis of CCDs more generally. Without the previous three chapters, the overall picture provided in this chapter would be reductionist and superficial.

of processes across all CCDs, providing a picture of the overall structure and effectiveness of the CCDR system.

II Current Climate Change DR System

This section amalgamates the work from previous chapters in order to provide an overall description and understanding of the current CCDs and the ways they are being addressed, thereby, determining the current CCDR system.

A Current Disputes

This subsection provides a high-level summary of the CCDs currently occurring.[3] My thesis so far has shown that disputes related to the causes, impacts and harms of climate change are not only occurring but are also increasing, and are predicted to continue doing so.[4] The majority of current CCDs are related to the causes of climate change (Mitigation Disputes) but those about its impacts (Adaptation Disputes) and harms (Loss and Damage Disputes) are also growing in number. This pattern of trajectory reflects the successive stages of the broader, global climate change response, which had a primary focus on mitigating the causes, then broadened its attention to the need to adapt to the impacts, before increasing its focus on addressing the loss and damage caused by those impacts. As examined in detail through Chapters Four to Six, CCDs have a wide and varied range of features.[5] They are raised in different ways, by a range of parties, for a variety of reasons. There are some general summations, however, that can be made about common features, as follows.

The largest CCD is the global climate governance dispute, which is a longstanding, multi-party, multi-issue, international dispute between the world's states, with particular tensions between developed and developing (climate-vulnerable) states.[6] Of the remaining CCDs, there are very

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[3] It is a high-level summary as the detail is included in previous chapters. I do not repeat all of the specific sources here as they are included in those chapters.

[4] See Chapter 8.II.C for further discussion on this increase. This increase is further demonstrated by the fact that in the early stages of this thesis (May 2020) there were 1,554 climate change litigation cases recorded across 35 different countries, and as at May 2022 there were 3,378 cases across 46 countries: Sabin and Grantham Databases.

[5] When using the term 'features' of a dispute, I am referring to a number of factors, including: the parties involved; their interests and desired outcomes; the issues in dispute; and the jurisdiction it occurs in.

[6] As noted in previous chapters, the definition of a dispute as used in this thesis is much broader than that used in international law, and does not only include legal disputes. As also noted previously, it includes the UNFCCC Negotiation Process due to its ongoing nature and the parties' inability to reach agreement on the various issues (as opposed to considering it general international negotiation).

few occurring internationally. Rather, the majority are taking place nationally in the global North, although the number of disputes in the global South is now growing.[7] Most of these disputes are strategic in nature, in that the parties raising them are seeking: widespread, systemic change; to establish liability; or to create unique rules. Strategic CCDs are increasing dramatically,[8] and dominate Mitigation and Loss and Damage Disputes. Whereas, Adaptation Disputes, are, due to their nature, mostly routine, lower level, local decisions with less national, let alone global, impact.

The predominant parties involved in CCDs are governments (both national and local) and individuals[9] or NGOs. There is, however, an emerging trend of CCDs focusing on corporate accountability, resulting in an increase in disputes being raised by individuals, NGOs or state parties against, not only the Carbon Majors, but also an increasing variety of private sector and financial actors.

CCDs include a vastly broad and diverse range of issues (even within the separate subcategories), many of which involve complex technical and scientific matters. Issues include, for example: emission reduction targets; offsetting mechanisms; international investments in renewable energy or fossil fuels; financial risk and disclosure; climate-washing; environmental planning; construction of climate defences; land zoning; damages to property, infrastructure, cultural heritage, or food production following storms, flooding, or fires; and relocation of homes and communities. These issues touch on many areas of law, including: national public and private laws; regional and international human rights law; and customary international law.[10]

The parties to CCDs are seeking many different outcomes (both strategic and routine), including: creation of new legal obligations; enforcement of existing obligations; changes in government policy; public accountability; financial compensation; avoiding financial loss; and protection of homes, communities, and culture.

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7 Joana Setzer and Catherine Higham *Global Trends in Climate Change Litigation: 2021 Snapshot* (July 2021, London, Grantham Research Institute on Climate Change and the Environment and the Centre for Climate Change Economics and Policy, London School of Economics and Political Science) at 5.

8 Joana Setzer and others "Climate Change Litigation and Central Banks" (European Central Bank, Legal Working Paper Series 2021/12, December 2021) at 10.

9 Including individual citizens, communities, activists, shareholders, investors.

10 Although not all CCDs are legal disputes, considering the areas of law that they involve gives an indication of their scope.

In short, CCDs are growing and diversifying – spreading to an increasing numbers of parties, issues, claims and jurisdictions. This pattern of growth reflects "the increasing urgency with which the climate crisis is viewed by the general public around the world and the growing understanding of the role that different actors … will need to play" in the climate response.[11]

B Current Resolution

This subsection summarises the DR processes currently being used to address the many and varied CCDs. The UNFCCC Negotiation Process and adjudication are currently the most commonly used DR processes. These negotiations are the primary DR process for Mitigation and Loss and Damage Disputes, whereas adjudication has played that role for Adaptation Disputes. There is some use of arbitration, especially for international contract-based and investor-state Mitigation Disputes, and this use is increasing but it is not yet widespread. Although the use of other DR processes is more difficult to quantify (due to confidentiality and the lack of any integrated reporting), what I have found has confirmed my initial assumption that there is currently limited use of these processes.[12] The other processes that can definitively be said to be in use currently are mediation, facilitation, and Special Procedures. At this stage, these are being used to address Adaptation Disputes.[13]

C Current CCDR System

As this amalgamation of my research on the separate subcategories shows, CCDs are numerous, complex, varied, and increasing. To date, the DR processes used are limited to mostly negotiation and adjudication, and some arbitration, and very little utilisation of other processes. This combined picture of the CDDs occurring and the processes being used to resolve them provides a comprehensive picture of the current CCDR system. The next part of this chapter analyses the effectiveness of that system.

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[11] Setzer and others, above n 8, at 22.

[12] This assumption is outlined in Chapter 1.II.C. The confirmation is detailed through my work in the previous three chapters.

[13] See Chapter 5.II.D and E.

III Effectiveness Overview

As referred to in the introduction to this chapter (and detailed in Chapter One[14]), there is a lack of research examining and assessing the full scope of CCDR. Indeed, there is no comprehensive consideration of what "effective" resolution means in relation to CCDs, nor a clear and specific mechanism for assessing it. This is problematic as it means that there is no substantiated basis on which CCDs can be most effectively identified, understood, resolved, or prevented. This section summarises the effectiveness of the DR processes currently being used,[15] in order to provide an overall evaluation of CCDR, and thereby address the research question, how effective are these current approaches to resolution? It does this by analysing and then summarising the effectiveness of the currently used processes under each of the three criteria set out in Chapter Three: the climate response; resolution and prevention; and rule of law.[16]

As previously established, the more limited use of arbitration (compared to negotiation and adjudication) and consequent paucity of data, limits the ability to assess its effectiveness. Therefore the analysis of arbitration is less extensive. This lack of data is even more pronounced for the other processes identified, such as mediation and facilitation. For this reason, these are considered in Chapter Eight in terms of potential effectiveness.

A Support the Climate Response

1 Introduction

As described in Chapter Three, this thesis accepts that climate change is a common concern of humankind, and adopts a naturalist approach to posit that to be effective, a DR process should support the climate response.[17] More specifically, a DR process will effectively contribute to the climate response if it supports mitigation or adaptation, or addresses loss and damage.

2 UNFCCC Negotiation Process

As the preceding three chapters show, the UNFCCC Negotiation Process has achieved some level of support for the climate response across all three subcategories of CCDs.[18] It has resulted in multiple state parties, with varying, and often conflicting interests, resolving

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[14] Chapter 1.II.A.
[15] As analysed in detail in Chapters Four to Six.
[16] Chapter 3.III.
[17] I use this term in the broadest sense, not to refer specifically to the international regime.
[18] See Chapters 4.III.A.1; 5.III.A.1; and 6.III.A.1 for the base material that is summarised here.

challenging and complex issues of dispute to reach global agreements on the establishment of general climate change response frameworks, including the 'three pillars'. Thus, achieving elements of the global climate response in a comprehensive, as opposed to piecemeal, way.

The level of tangible impact on the climate response beyond the establishment of this framework varies across the three subcategories. This variation reflects the successive climate priorities. Therefore, it is most apparent that the negotiation process has resulted in tangible impacts in Mitigation Disputes, as some GHG emissions have been curtailed as a result.[19] It is less apparent in relation to Adaptation Disputes, as there have only been a few adaptation-specific agreements reached as a result of the negotiation process, and the issue still remains of secondary international focus. There is evidence to show that the process has had a direct impact in supporting adaptation to some extent, however, such as by influencing state behaviour in adopting relevant domestic legislation and including adaptation as part of their international commitments.[20] The tangible impact of the UNFCCC Negotiation Process is least apparent in relation to Loss and Damage Disputes. Although it has led to the issue being recognised as a core element of the climate response, it has not resulted in tangible action in regard to addressing loss and damage, as there is still no agreement on the mechanism for financial redress.

Furthering the effectiveness of the UNFCCC Negotiation Process – it is responsible for broader, indirect impacts on the climate change response, such as: raising public awareness of the issues; providing agreed information on them; influencing domestic legislation; and changing approaches to corporate governance, for example, with financial risk and disclosure reporting. However, it is no longer leading the climate response: "[w]hereas in its early years the UNFCCC process was ahead of public consciousness, it now lags behind, a phenomenon that we regret."[21] In particular, it is lacking in urgency. This is partly due to the functioning of the process. Although the UNFCCC Negotiation Process has maintained a level of flexibility and informality,[22] overall, it is a highly bureaucratic process, "which, in its formal work and

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19 Chapter 4.III.A.

20 Chapter 5.III.A.1.

21 Richard Kinley and others "Beyond Good Intentions, to Urgent Action" (2021) 21 Climate Policy 593 at 600.

22 Daniel Bodansky, Jutta Brunnée and Lavanya Rajamani *International Climate Change Law* (Oxford University Press, Oxford, 2017) at 233.

agendas, has become unwieldy and routinized, heavy in its carbon footprint, and out of step with the scale of urgency."[23]

In summary, the UNFCCC Negotiation Process has achieved some significant support for the climate response in terms of establishing frameworks for engagement, however, given the nature of the problem, it has not been enough, and it has not been happening quickly enough. This can be seen especially starkly in regard to mitigation. Over the course of the UNFCCC negotiations, GHG emissions have increased more than in any other time period.[24]

3 Adjudication

The general challenges of measuring the effectiveness of adjudication in supporting the climate response are examined in Chapter Four.[25] There is evidence to show that adjudication has had a direct impact in supporting the climate response. A 2021 quantitative review of adjudicated outcomes found that the majority are "favourable" to the climate response.[26] This positive impact is especially apparent for mitigation, where adjudication has directly resulted in GHG reductions.[27] To a lesser degree, it can also be seen with adaptation, particularly in Australia, where it has resulted in improvements to planning policy making and implementation, and is said to have contributed to a general improvement in the country's adaptation capacity.[28] It has not yet been seen in relation to loss and damage, however. In part, because this area of adjudication is still in its "infancy" and to date there have been no climate-successful cases.[29]

One of the significant benefits of adjudication as a means of advancing the climate response is that it can, "involve and incentivise a wide range of actors, including sub-national governments, businesses and civil society actors."[30] Adjudication allows for the involvement of parties other than states that are necessary for the climate response, specifically, corporate emitters, as well

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23 Kinley and others, above n 21, at 600.

24 Bodansky, Brunnée and Rajamani, above n 22, at 358; and discussed in more detail at Chapter 4.III.A.1.

25 See Chapters 4.III.B.1; 5.III.B.1; and 6.III.B.1 for the base material that is summarised in this subsection.

26 More specifically, 58 per cent of cases analysed (215) had 'favourable' outcomes, 32 per cent (118) had unfavourable outcomes, and 10 per cent (36) had no discernible likely impact: Setzer and Higham, above n 7, at 19.

27 For example, as a result of *Netherlands v Urgenda Foundation* [2019] Netherlands Supreme Court 19/00135, as discussed at Chapter 4.III.B.2(a).

28 Chapter 5.III.B.1(a). To a lesser degree, as these changes have only been incremental rather than transformative, see 5.III.B.1(d).

29 Chapter 6.III.B.1.

30 Jacqueline Peel and Hari Osofsky "Litigation as a Climate Regulatory Tool" in Christina Voigt (ed) *International Judicial Practice on the Environment* Cambridge University Press, Cambridge, 2019) 311 at 312 (footnote omitted).

as a process through which to hold them accountable.[31] Adjudication is also affecting corporate accountability beyond the direct emitters. It is influencing the financial sector, which is crucial for the climate response.[32] It is also having a broader effect across the entire corporate sector, in relation to climate risk and disclosure. Further, it provides the opportunity for young people to raise and force engagement on CCDs with governments, which they would not otherwise have the standing to influence given they are unable to vote.[33] In these ways, adjudication is having a wide range of positive impacts on the climate response.

The use of adjudication in resolving CCDs is also having broader, indirect impacts that are supporting the climate response, regardless of whether or not it results in a climate-successful outcome. These indirect effects include: raising awareness, which can motivate corporations to change their behaviour; creating political momentum for national climate policies; stimulating lobbying for reform; and spurring others to take climate action. The risks to corporations posed by adjudication, including reputational damage, unfavourable outcomes, and costs, are another indirect way that the process impacts on corporate behaviour. A further indirect benefit comes from the creation of precedent in national cases, or the influence of international decisions. The impact of these effects in supporting the climate response can be significant, for example, by clarifying the international human rights of climate displaced people.[34] A further point to note on the effectiveness of the adjudication process is that it has been found to have positive effects on the UNFCCC Negotiation Process,[35] and is seen as a way to fill some of the gaps left by that process, for example, in relation to loss and damage.[36]

Not all impacts flowing from adjudication are positive, however, and it can undermine the climate response. Although there is less evidence of this, it is occurring in both direct and indirect ways. For example, directly through SLAPP suits[37] and challenges to adaptation measures, and indirectly, through the "chilling effects" caused by the fear of liability, costs, or backlash that discourage actors from attempting to take climate action. Relatedly, the fear of adjudication costs and/or awards can dissuade parties from taking climate positive disputes to

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31 For example, as in *Milieudefensie v Royal Dutch Shell* Hague DC C/09/571932/HAZA19–379, 26 May 2021 [*Milieudefensie*], which is discussed in further detail at Chapter 4.II.B.2(a).

32 Javier Solana "Climate Litigation in Financial Markets: A Typology" (2020) 9 TEL 103, at 103.

33 See for example, Nicole Rogers "Victim, Litigant, Activist, Messiah: The Child in a Time of Climate Change" (2020) 11 JHRE 103 at 110.

34 *Teitiota v New Zealand (Views)* UNHRC CCPR/C/127/D/2728/2016, 24 October 2019.

35 Chapter 4.III.B.1(b) and 6.III.B.1.

36 Chapter 6.III.B.1.

37 Strategic lawsuit against public participation: see Chapter 4.III.B.1(c) for further discussion.

adjudication. Further, precedent can have a negative impact, as courts will be bound to follow decisions that limit the climate response (unless cases can be distinguished). This has been seen to date with loss and damage.[38]

4 Arbitration

Most of the available evidence on arbitration's impact on the climate response is negative.[39] This is partly due to the nature of the regime it is predominantly being used in, that is, the investor-state dispute settlement system. Many investor-state CCDs are inherently problematic, as they bring the climate and financial interests into direct competition. There are, however, also aspects of the process itself that can negatively impact the climate response, including: its ad-hoc nature; limited mandate; and the inconsistent, or sometimes even hostile, approach to considering the climate. Arbitration is, however, also being used to support the climate response, for example, where investors in climate-positive businesses use arbitration to challenge regulatory changes that negatively affect those investments. Further, like adjudication, public arbitral awards can indirectly impact the climate response in a broader sense. For example, by influencing government decisions, corporate investment or divestment, public awareness and discourse. Given the majority of these awards do not support the climate response, however, this broader impact may operate against it, for example by creating "regulatory chill."

5 Summary

As this analysis shows, there is no one, ultimately superior process for supporting the climate response. Rather, both negotiation and adjudication are effective in different and important ways. More specifically, the UNFCCC Negotiation Process is the most effective process for supporting the climate response at an international level, as it has established global engagement resulting in agreements on critical issues and obligations. This could arguably be seen as making it the most effective process. Adjudication, however, is necessary for creating and enforcing those obligations legally, in other words, realising them. It also fills a vitally important gap the UNFCCC Negotiation Process does not cover, specifically, it broadens the scope of CCDs to include the corporate parties who are either directly responsible for the causes of climate change (the GHG emitters) or for enabling those emitters (for example, the financial

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38 Chapter 6.III.B.1(b).

39 See Chapter 4.III.C.1 for the base material that is summarised in this subsection.

sector). Neither process is effective enough in terms of supporting the climate response to the required level. Even in combination they are insufficient. Between them, however, they are achieving necessary aspects that support the climate response.

B Resolution and Prevention

1 Introduction

The next criterion for measuring the effectiveness of a DR process, is how well it resolves the parties' dispute and prevents future disputes. As explained in Chapter Three, resolution is not only about reaching an outcome. It also captures the broader effects a process has, including, how well it prevents future disputes between the parties, and in even broader terms, new disputes between unrelated parties. Prevention is particularly important in relation to CCDR as preventing future disputes is likely to mean better climate change outcomes.[40]

2 UNFCCC Negotiation Process

In relation to resolution, there have been a number of agreements reached through the UNFCCC Negotiation Process across all subcategories of CCDs.[41] This includes the Paris Agreement, which was the first truly global agreement on climate change. It was particularly progressive in terms of resolving mitigation issues, although there is still important detail to be agreed.[42] Research shows that these negotiated outcomes have a higher chance of compliance, particularly as they involve a high degree of party autonomy.[43] The same level of resolution has not been achieved for adaptation, however. Further, although the process has resolved a preliminary aspect of the Loss and Damage Dispute, by recognising it as a standalone issue,[44] no agreement has been reached on how to address this issue, leaving that significant concern unresolved. Therefore, on balance, the UNFCCC Negotiation Process has progressed the resolution of CCDs, but has, by no means, comprehensively resolved them.

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40 See Chapter 3.III.C.2.

41 See Chapter 4.III.A.2; and 5.III.A.2 for the base material that is summarised in this subsection.

42 It is progressive as it resulted in 195 parties (as of May 2021, 194 states and the European Union had signed the Agreement, and 190 states and the EU had ratified or acceded to the Agreement. UNFCCC "Paris Agreement - Status of Ratification" <www.unfccc.int>) including developing states, committing to reduce GHG emissions and hold global warming "to well below 2°C" Paris Agreement, art 2.1(a). Although exactly *how* this will occur is still being worked through.

43 Chapter 4.III.A.2.

44 Paris Agreement, art 8.

In relation to prevention, this is one of the particular strengths of this process. The UNFCCC Negotiation Process has established a mechanism for ongoing discussions on climate change that, despite a considerable length of time and many challenges, has persisted. Given that there has been no escalation of the global CCDs to date (that is, no inter-state "dispute" at international law, let alone adjudication or other conflict), the UNFCCC Negotiation Process has been successful as a preventative process. Due to the escalating nature of climate change impacts, however, escalation may still be to come, especially in relation to adaptation, and as specifically raised by climate-vulnerable states over loss and damage.[45]

3 Adjudication

In relation to resolution, adjudication has provided definite outcomes in CCDs via judicial decisions in specific cases.[46] This may bring an end to the specific dispute but does not resolve the broader issue, for example, of mitigation. The resolution provided by adjudication is piecemeal when considering largescale, global issues such as climate change. As discussed above, however, adjudication has allowed for corporate parties, such as emitters and financial institutions, to be included in CCDs, and non-state party accountability is vital to resolving climate change issues.

Although adjudication generally produces binding and enforceable outcomes, that does not guarantee compliance, and there have been some challenges in this regard for CCDs.[47] However, there is also evidence to show effective implementation of outcomes from adjudication,[48] even where these are non-enforceable.[49] In relation to prevention, individual cases can have indirect impacts beyond the immediate CCD. Specifically, adjudication can assist in facilitating negotiations, promoting legislative changes, and influencing corporate behaviour, all of which could prevent new, future disputes between different parties.

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45 Chapter 6.II.B.3.

46 See Chapters 4.III.B.2 and 5.III.B.2 for the base material summarised in this subsection.

47 For example, *Penã v Ministry of the Environment* Supreme Court of Colombia 11001220300020180031901, 5 April 2018 [*Future Generations case*]; and see 4.III.B.1(b)(iii).

48 For example, *Leghari v Pakistan* High Court Lahore WP25501/2015, 14 September 2015.

49 For example, *Greenpeace Southeast Asia v Chevron* Philippines Commission on Human Rights CHR-NI-2016-0001 (3 May 2022).

4 Arbitration

In regard to arbitration's effectiveness for resolving CCDs, the same applies as outlined above for adjudication.[50] In relation to prevention, given the confidentiality of most arbitrations, they lack the broader preventative effectiveness of the other two processes. The awards that are published, however, can provide guidance in other cases, something which may prevent future disputes.

5 Summary

No single DR process has been as successful as needed for resolving CCDs.[51] Although complete resolution of the many and complex disputed climate change issues is a naive and unrealistic expectation, more rapid progress is required. In this context, the UNFCCC Negotiation Process has been the most effective process overall for resolving and preventing CCDs. The efficacy of this process in terms of resolving disputes, is enhanced by adjudication, and it is the combination of the two processes that provides the most effective resolution. Adjudication also has some preventative effects, followed, in terms of ranking, by arbitration.

C Rule of Law

1 Introduction

The next criterion for measuring the effectiveness of a DR process is how well it complies with the rule of law.[52] The elements of the rule of law that apply to a DR system, include it providing: public good benefits (including public interest, public accountability, and broader social certainty and order); access to justice (including efficiency of time and cost); equality before the law (including by addressing power imbalances); and fair process.

2 UNFCCC Negotiation Process

This section summarises the effectiveness of UNFCCC Negotiation Process in complying with the rule of law.[53] Generally, the process of negotiation is said to provide access to justice but not the other rule of law aspects, particularly due to the often confidential or private nature of the process and its outcomes. This latter criticism does not apply to the UNFCCC Negotiation Process, however, as it is largely public in nature. The main rule of law issues raised about the

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[50] See Chapter 4.III.C.2 for the base material summarised here.
[51] As evidenced at Chapters 4.III.B.2 and 5.III.B.2.
[52] As set out in Chapter 3.III.C.
[53] See Chapter 4.III.A.3; 5.III.A.3; and 6.III.A.3 for the base material that is summarised here.

UNFCCC Negotiation Process specifically, are that it fails to provide access to justice for the climate-vulnerable states, and to protect them from power imbalances.

In relation to access to justice, the general claim that negotiation provides good access to justice by virtue of it being an informal, quick, and cost-effective form of DR is not true for the UNFCCC Negotiation Process given the length of time and high transactional costs involved. The specific criticism about access to justice for climate-vulnerable states is illustrated by the fact that it took these parties 25 years to get loss and damage, a key issue for them, even recognised as a negotiation agenda item. Efficiency failings have also been noted by the UNFCCC regime leaders themselves, who stated that, "[t]he UNFCCC process should address its unwieldiness and act in line with the urgency of the issue."[54]

In relation to power imbalances, the UNFCCC Negotiation Process is said to suffer in several ways. First, the general differences in influence and economic power between states impact the process. Secondly, the climate change-specific differences in states' responsibility for producing emissions and the extent to which they will suffer from its impacts, are apparent. These power imbalances are seen most clearly between developed and developing states, with the poor, developing countries who have fewest resources and are most at risk from climate change, including low-lying and small island states, in a particularly vulnerable negotiating position. These dynamics pose particular challenges to the UNFCCC Negotiation Process's rule of law compliance.

There is some evidence, however, that the UNFCCC Negotiation Process can achieve a balance of power. For example, in the Loss and Damage Dispute, climate-vulnerable states have made some progress. Further, there are mechanisms available through the process that attempt to address power imbalances, such as, the formation of coalitions and NGO support. The positive impact of these mechanisms can be seen in relation to loss and damage. On the other hand, however, it can be argued that the process has led to a manifestly unjust outcome on this issue, largely due to the power imbalance, thereby undermining the rule of law. Despite this, the process has made some progress addressing the power imbalance facing indigenous peoples, such as, through the establishment of the Local Communities and Indigenous Peoples Platform

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54 Kinley and others, above n 21, at 593.

under the Paris Agreement.[55] However, "inequities of power and resources persist, and basic financial and technical constraints continue to hinder efforts to access and navigate the UNFCCC process."[56]

3 Adjudication

As the central DR process in a rule of law system, adjudication is generally considered to satisfy its requirements.[57] Adjudication's provision of a number of these requirements, particularly public interests and accountability, provides significant benefit for the climate response. There are, however, concerns raised about adjudication's compliance with other aspects of the rule of law in addressing CCDs.

First, it is posited that adjudication fails to provide access to justice for climate-vulnerable parties, and to protect them from power imbalances, thereby failing the rule of law requirement that DR be available to all parties. This is not the case for CCDs, as some parties are facing barriers to justice. They may lack the necessary resources, including money, time, and legal knowledge, necessary for them to take a CCD to court. Adjudication is claimed to be particularly effective in providing a process that balances power, however, that is not always borne out in reality, particularly for the climate-vulnerable. Although there has been a rise in adjudication involving these parties in the global South, they are still restricted by barriers to justice. A further barrier, specific to international adjudication, is the use of international pressure by more powerful states to prevent vulnerable states taking their disputes to adjudication.

Secondly, there is an argument that adjudication does not provide an impartial and certain process (required by the rule of law to ensure equality before the law), specifically, due to some judges' reluctance to decide on matters they view as "political". Thirdly, there is a related concern that the judiciary making decisions about CCDs, especially regarding mitigation, is a breach of the separation of powers, given these are political decisions that should be made by the legislature. Lastly, there is a view that the courts are not the appropriate forum for deciding highly technical climate issues, including causation.

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[55] Art 135.

[56] Ella Belfer and others "Pursuing an Indigenous Platform" (2019) 19 GEP 12 at 14 (citations omitted).

[57] See Chapter 4.III.B.3; 5.III.B.3 and 6.III.B.2 for the base material summarised in this subsection.

There is, however, a strong argument to counter these last three concerns about the role of courts. Some CCDs contain political aspects, but they are not purely political disputes. Next, the separation of powers requires checks and balances between the branches of government, and the judiciary is upholding this doctrine by addressing these cases. Further, it is a part of the judiciary's role to remedy legislative failures or fill legislative gaps, and to apply the law to facts, including technical material. The access to justice issues, however, are not as easily addressed, and present a real challenge to adjudication's rule of law compliance.

4 Arbitration

This section summarises the effectiveness of arbitration in complying with the rule of law.[58] On the positive side, there are claims that arbitration provides access to justice for CCDs as it is easier and faster to access than adjudication. However, the expense of arbitration (which is more than adjudication, as it is a private form of DR), acts as a barrier to access to justice. The other main rule of law concern is that the private and confidential nature of most arbitration, including outcomes, is inconsistent with the public accountability rule of law requirement. This is a factor that is especially important given the inherent public interest element of CCDs. A further concern is that arbitral awards can lack consistency, and therefore the predictability and certainty necessitated by the rule of law.

5 Summary

This analysis shows that no DR process is completely rule of law compliant. In relation to CCDs, the public interests and accountability aspects of the rule of law are particularly important for supporting the climate response. Adjudication provides this, and, as a public from of negotiation, so does the UNFCCC Negotiation Process. Both of these processes fail to provide comprehensive access to justice, however. Adjudication is more limited in this regard, given that climate-vulnerable states are at least involved as parties to the UNFCCC Negotiation Process. The rule of law limitations of private arbitration are particularly problematic.

[58] See Chapter 4.III.C.3 for the base material summarised here.

IV Part B Conclusion

The culmination of my research to this point, in mapping and assessing the full scope of the existing CCDR system in an evidence-based way, provides substantiated answers to my research question, what processes are currently being used to address CCDs and how effective are they? In doing so, it addresses a number of the research gaps identified in Chapter One and demonstrates my thesis that there is not one, best way to resolve CCDs. This work illustrates that DR processes are complementary, and different types of CCDs will be most effectively resolved using different processes from across the DR spectrum. I argue, therefore, that the most effective way to resolve CCDs is through a comprehensive CCDR system that incorporates a number of DR processes.[59] Further, my effectiveness assessment has identified specific deficiencies in the current CCDR system. This provides the necessary evidential basis to address the final part of my research question, namely, are there other DR approaches that would more effectively resolve CCDs? This is addressed in the following and final Part of my thesis: The Enhanced CCDR System.

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[59] As set out in Chapter 1.III.C.

Part C: Enhanced Climate Change DR System

Chapter 8: Proposed Improvements to the Current System

I Chapter Introduction

This chapter begins to address the final part of my research question – are there other DR processes that would more effectively resolve climate change disputes (CCDs)? More specifically, I recommend specific improvements to the existing climate change DR (CCDR) system to address the deficiencies identified by the assessment in Part B and to enhance its efficacy. I also examine how to make most effective use of that system through a consideration of the appropriateness of the various DR processes.

Throughout, I argue for a more systematic approach to CCDR. Such an approach will allow us to respond most effectively to current CCDs, as well as anticipate future disputes, therefore ensuring that the CCDR system is adequately future-proofed. I conclude that the existing CCDR system can, and should, be enhanced by: broader use of some existing processes; additional use of some other processes; and more appropriate use of all processes. The following and final chapter further advances this conclusion by detailing my proposal for an enhanced, comprehensive CCDR system that will most effectively address CCDs.

In order to address my research question above, this chapter is broken down into five main sections. Following on from this introduction, Section II establishes why improvements to the existing CCDR system are needed. Section III identifies specific improvements that could be made to the three most commonly used DR processes (UNFCCC Negotiation Process, adjudication and arbitration). Section IV examines the possibilities for broader use of all existing DR processes, with a particular focus on the potential effectiveness of consensual processes, facilitation and mediation. Section V identifies and assesses additional DR processes that could be included in the CCDR system in order to enhance its effectiveness. Finally, Section VI provides guidance on optimising the effectiveness of the CCDR system by identifying the features of a CCD that can be used to indicate whether one particular DR process may be more effective than others.

II Need for Improvements

A Introduction

There are three main issues with the current CCDR system that establish the need for improvements. First, the efficacy assessment of the currently used DR processes shows that along with a number of strengths, each also has limitations in terms of effective resolution of CCDs.[1] These limitations have been thoroughly examined in previous chapters, and are not repeated here. Secondly, there are gaps within the system, or in other words, missing processes. Thirdly, the current CCDR system is not future-proofed. These second two issues are considered in the following subsections.

B Gaps Within the System

It is not just weaknesses within the most commonly used processes that necessitate improvements to the CCDR system. The existing system, which is primarily made up of these three processes, does not provide all of the necessary DR processes for addressing CCDs. The minimal use of some processes, particularly facilitation and mediation, and the absence of others mean that there are missed opportunities for effective resolution.

In their 2017 research, Elizabeth Fisher, Eloise Scotford and Emily Barritt found climate change to be "legally disruptive", meaning that it is not a discrete problem that can be legally calculated, managed or solved in the usual way, rather, it challenges the system of law.[2] As Fisher, Scotford and Barritt argue, existing legal frameworks cannot easily manage such problems.[3] This is true of the traditional DR system too. It is not providing all of the necessary DR processes for CCDs. It is also missing the necessary cohesiveness to manage this "hot" problem, an issue that is addressed in Chapter Nine.

As well as being challenging to address through traditional processes, CCDs are often not specifically contemplated and provided for, leaving parties trying to shoehorn disputes into existing processes that fail to best address them. One specific example of this, examined by

[1] As detailed in Chapters Four to Six; and summarised in Chapter 7.III.
[2] Elizabeth Fisher, Eloise Scotford and Emily Barritt "The Legally Disruptive Nature of Climate Change" (2017) 80 MLR 173 at 177-178.
[3] At 177-178.

Freya Baetens, is the Kyoto Protocol's green development mechanism.[4] This mechanism was intended to mitigate climate change by bringing private actors (mostly foreign investors) into an international investment treaty. This was a unique approach but despite this, and other dispute-prone factors (including establishing new relationships between parties), the agreement did not provide a specific DR mechanism for potential disputes. Instead, resulting investor-state disputes either have to use adjudication through domestic courts, where "international agreements would at best be seen as part of the background of a dispute but not as the applicable law" or before investor-state arbitration bodies "whose jurisdiction would be based on international investment agreements, with little manoeuvring room for environment-based argumentation."[5] The limitations of these two DR processes for effectively addressing investor-state CCDs, highlighted by Baetens, are being borne out, as evidenced in Part B.[6] This lack of provision of a suitable DR approach was not a deliberate choice. There is no evidence of any consideration even being given to it.[7]

Maxine Burkett's "justice paradox" reinforces that the existing, traditional DR system does not adequately cater for CCDs, especially for the climate-vulnerable. Burkett argues that the current system does not provide appropriate avenues of resolution, as it "forecloses any reasonable attempts at a just remedy for the victims of climate change who are the most vulnerable and the least responsible."[8] These gaps demonstrate the need for other DR processes to be used (as examined in Section V below). As climate change law academic, Daniel Bodansky, stated in relation to CCDR, "[g]iven the magnitude of the challenge, and the uncertainties about what will work, we need to be exploring *all* of the possible approaches that could contribute to a solution".[9]

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[4] Freya Baetens "Combating Climate Change Through the Promotion of Green Investment" in Kate Miles (ed) *Research Handbook on Environment and Investment Law* (Edward Elgar Publishing Ltd, Gloucestershire, 2019) 107 at 107.

[5] At 107.

[6] See Chapter 4.III.C and 7.III.A.4 in relation to arbitration.

[7] Baetens, above n 4, at 110-111.

[8] Maxine Burkett "A Justice Paradox: Climate Change, Small Island Developing States, and the Absence of International Legal Remedy" in Shawkat Alam and others (eds) *International Environmental Law and the Global South* (Cambridge University Press, Cambridge, 2015) 435 at 435.

[9] Daniel Bodansky "The Role of the International Court of Justice in Addressing Climate Change" (2017) 49 Ariz St LJ 689 at 712 (emphasis added).

C Future Proofing

The weaknesses of the current DR processes and the lack of other necessary processes are not the only reasons to improve the existing CCDR system. Its lack of capacity to provide for future CCDs is also a significant issue. CCDs are increasing, and the DR system needs to be able to provide for that. This increase is twofold. First, the number of CCDs across the three existing subcategories is increasing, and second, new subcategories of CCDs are emerging. To be effective, the CCDR system needs clear, established, and preventative DR options to manage these pending increases. An overwhelmed or inadequate DR system poses significant practical, financial, and rule of law problems.[10] Special regard must be given to future proofing the CCDR system due to the unique nature and serious consequences of CCDs as explained through this thesis.[11] A more detailed illustration of the two increases to CCDs follows.

1 Increase in Volume

As established through Part B, the existing subcategories of CCDs are increasing and are predicted to continue doing so.[12] These subcategory-specific increases are summarised below, and are supported by the general data in the following table. The figures provided in the table are taken from the two main climate change litigation databases and demonstrate a rapidly growing increase in CCDs over the last 30 years.[13] Qualitative research in 2021 found that, "[g]lobally, the cumulative number of climate change-related cases has more than doubled since 2015."[14] Although these figures are specific to adjudication, Part B has demonstrated that this can be taken as an indicator of CCDs increasing more generally.

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10 In regard to rule of law problems, see Grant Morris and Annabel Shaw *Mediation in New Zealand* (Thomson Reuters, New Zealand, 2018) at 64-65.

11 As established in Chapter One, CCDs involve imminent threat to human survival, highly vulnerable parties and fundamental power imbalances, and are burgeoning in complexity and volume.

12 Summarised in Chapter 7.II.A.

13 Grantham and Sabin Databases.

14 Joana Setzer and Catherine Higham *Global Trends in Climate Change Litigation: 2021 Snapshot* (July 2021, London, Grantham Research Institute and London School of Economics and Political Science) at 4.

Decade	Mitigation Disputes	Adaptation Disputes	Loss & Damage Disputes[15]	Total CCDs
1990s	4	5	1	10
2000s	106	118	5	229
2010s	271	247	12	530
2020s 26 months to Feb 2022	147	258	12	417

(a) Mitigation Disputes

As detailed in Chapter Four, there are a number of specific ways in which Mitigation Disputes are increasing. These include, a growing focus on corporate parties, both in terms of accountability for emissions, for example, *Milieudefensie*,[16] as well as the role played by the financial sector, for example, *McVeigh*.[17] Additionally, there are developing causes of action leading to a broader basis for disputes, such as those based on human rights, for example, *Urgenda*,[18] and planning or permitting, for example, the *Heathrow case*.[19] Further, an increase in climate change regulation is likely to lead to more Mitigation Disputes both generally,[20] and in relation to investor-state disputes more specifically.[21] New and developing mitigation tools are also likely to lead to increasing disputes, particularly those involving emerging and potentially disruptive technology, such as geoengineering.[22]

15 The Grantham Database (that only records cases outside of the United States) uses a "loss and damage" category. The Sabin Database (that includes the United States) does not use this categorisation. I have included the cases it records as "actions seeking money damages for losses" that come within my definition of Loss and Damage Disputes in Chapter Three.

16 *Milieudefensie v Royal Dutch Shell* Hague DC C/09/571932/HAZA19–379, 26 May 2021 [*Milieudefensie*].

17 *McVeigh v Retail Employees Superannuation Pty Ltd* [2019] FCA 14.

18 *Netherlands v Urgenda Foundation* [2019] Netherlands Supreme Court 19/00135 [*Urgenda*].

19 *R (Friends of the Earth Ltd) v Heathrow Airport Ltd* [2020] EWCA 214 (Civ).

20 See for example, Elisabeth Gilmore and Halvard Buhaug "Climate Mitigation Policies and the Potential Pathways to Conflict" (2021) 12 WIREs: Climate Change e722.

21 Chapter 4.II.C.3.

22 See for example, Frank Biermann and others "Solar Geoengineering" (2022) 13 WIREs: Climate Change e754; Gabriel Weil "Global Climate Governance in 3D: Mainstreaming Geoengineering within a Unified Framework" (2021) 13 Climate Change Law and Policy eJournal; and Eloise Gibson and Olivia Wannan "From pseudo-volcanoes to carbon-sucking rocks. Can technology fix the climate?" *Stuff* (online ed, Wellington, 25 April 2022).

(b) Adaptation Disputes

Adaptation Disputes are identified as a growing subcategory given climate change impacts are becoming more clearly identifiable, as well as increasing in number and severity.[23] As examined in Chapter Five, specific increases in Adaptation Disputes are occurring in administrative disputes, including planning and managed retreat. By way of illustration, the Matatā dispute involved a few dozen properties,[24] whereas it has been estimated that more than 40,000 coastal properties in New Zealand are at risk from sea level rise, with significant future increases expected.[25] As with Mitigation Disputes, there is also an increasing focus on corporate accountability, with disputes involving Carbon Majors identified by UNEP as a growing trend.[26] There may be a particular increase in these types of disputes if legal liability is established by a court, which a number of scholars predict will occur.[27] Financial sector disputes are also increasing, and emerging climate change risk and disclosure reporting requirements (such as, New Zealand's Financial Sector (Climate-Related Disclosures and Other Matters) Amendment Act 2021), have been identified as a further source of increasing Adaptation Disputes.[28]

(c) Loss and Damage Disputes

As a "younger" category of disputes, there is not the same scale of growth as there is for Mitigation and Adaptation Disputes. However, as the figures in the table above show, an increase in these disputes is still apparent, and they are predicted to see the largest future growth.[29] This is not only because climate change impacts and harms are going to increase,[30] but also because the issue of legal liability will progress. The finding of such liability would likely lead to a considerable increase in disputes, as evidenced by other landmark cases mapped

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23 See Chapter 5.II.B.

24 *Awatarariki Residents Inc v Bay of Plenty Regional Council* [2020] NZEnvC 215.

25 Ministry for the Environment *National Climate Change Risk Assessment for New Zealand: Main Report* (August 2020) at 83.

26 UNEP *Global Climate Litigation Report: 2020 Status Review* (July 2020) at 22.

27 See for example, Sophie Marjanac and Lindene Patton "Extreme Weather Event Attribution Science and Climate Change Litigation" (2018) 36 JERL 265; Jacqueline Peel, Hari Osofsky and Anita Foerster "'Next Generation' Climate Change Litigation in Australia" in Jolene Lin and Douglas Kysar (eds) *Climate Change Litigation in the Asia Pacific* (Cambridge University Press, Cambridge, 2020) 175 at 187-189; and Geetanjali Ganguly, Joana Setzer and Veerle Heyvaert, "If at First You Don't Succeed: Suing Corporations for Climate Change" (2018) 38 OJLS 841 at 851.

28 See Chapter 5.II.B.2.

29 See Chapter 6.II.B.

30 For example, in 2020, the New Zealand government found that the climate change-related risks to buildings due to extreme weather events, drought, increased fire weather and ongoing sea level rise were "extreme": Ministry for the Environment *National Climate Change Risk Assessment for New Zealand - Snapshot* (August 2020) at 5. Also, Veera Pekkarinen, Patrick Toussaint and Harro van Asselt "Loss and Damage After Paris" (2019) 13 CCLR 31 at 39.

in Part B, such as *Urgenda*.[31] Tellingly, the figures above show that there were as many Loss and Damage Disputes adjudicated in the first 26 months of the 2020s as there were in the entire previous decade. Additionally, climate displacement is increasing, and the associated impacts, including social upheaval and pressure on land, water and food resources, are likely to give rise to numerous disputes.[32] Further increase may also come about following the specific loss of cultural heritage.[33]

2 New Subcategories of Dispute

An increase in the three existing subcategories is not the only source of growth for CCDs. As a complex, pervasive and dynamic problem, new types of climate change-related disputes are bound to emerge. Some of these, such as Transition Disputes, are already becoming apparent, but other, less predictable subcategories may also arise. The emerging subcategory of Transition Disputes provides an example of a new and impending source of CCDs, further demonstrating the need for a CCDR system that can handle high volumes and varied disputes, and so is considered here.

(a) Transition Disputes

Transition is a more difficult term to define than mitigation, adaptation and loss and damage. There is less reference made to the topic and even less research about it. This is largely due to the fact that the "three pillars" have been the main focus in a linear sense. Transition is a subsequent step in this chronology and, as such, is only starting to appear as a consideration and, therefore, topic of scholarship. Additionally, transition is a more nebulous subject, which makes it more challenging to define. For the purposes of this thesis, I use transition to refer to the shift in societies and economies to a low-emissions way of life or, in other words, decarbonisation.[34]

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31 *Urgenda*, above n 18.

32 It is predicted that by 2050, the number of climate migrants could range from 25 million to 1 billion: Valéria Horváth "The Right to Seek Asylum of 'Climate Refugees'" (2021) 9 Acta Humana 119 at 119-120. Also see, Jane McAdam "Current Developments - Protecting People Displaced by the Impacts of Climate Change" (2020) 114 AJIL 708 at 711-712; and UNEP, above n 26, at 23.

33 Elena Sesana and others "Climate Change Impacts on Cultural Heritage" (2021) 12 WIREs: Climate Change e710 at [1].

34 See for example, Ministry for the Environment "Climate Change Programme" (15 September 2020) <www.mfe.govt.nz>; and Ministry of Business, Innovation and Employment "Economic Development: Just Transition" (10 August 2020) <www.mbie.govt.nz>. "Just transition" is a related term that has been more widely used and refers to the need to make the shift to a low-emissions future in a way that is fair to all of society. It is often used in relation to employment (for example, in the UNFCCC: Preamble at 2) but I am not using the term transition in this narrower way.

The impacts of this transition will be rapid and far-reaching across many sectors, including energy, industry, land, housing, transport, employment, and economy, thereby affecting all parts of society, including individuals, households, businesses, industries, cities, regions and states.[35] It will be "a long journey … through very uncertain terrain."[36] It will also likely involve innovation and new, disruptive technology. There will also be particular negative impacts on vulnerable groups.[37] Although we are not yet in this phase of the climate response, the scale, scope and uncertainty of this change make it clear that there will be Transition Disputes.[38]

Indeed, there is evidence of these disputes already emerging. Joana Setzer and Catherine Higham identified transition cases as a "potential new wave" in their 2021 overview of climate change adjudication.[39] The Sabin Database has started identifying them as well, and, as at May 2022, recorded two such cases.[40] These provide a helpful illustration of the types of disputes that are likely to arise in this subcategory. One is a Chilean case raised by union workers against the Ministry of Energy, claiming that the government's energy decarbonisation plan, which included a phase-out of coal-fired power plants, failed to include the workers' participation and violated their constitutional human rights under a just transition. The Chilean Supreme Court ultimately ruled in the workers' favour and required the government to plan for their redeployment.[41] As well as providing an example of a Transition Dispute, this case also highlights the tension between transition and mitigation (as the government was seeking to reduce emissions through the phase-out) as a cause of disputes, which further reinforces the complex and complicated nature of CCDs.[42] An earlier American case of *Lynn v Peabody Energy Corporation*[43] highlights how Transition Disputes could involve the financial sector. In that case, a representative employee in the Corporation's pension plan took a class action against the company alleging, in part, that it was in breach of its fiduciary duty by continuing

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35 IPCC "Summary for Policy Makers" in *Special Report: Global Warming of 1.5℃* (October 2018) at 15; and New Zealand Productivity Commission *Low-Emissions Economy* (August 2018).

36 New Zealand Productivity Commission, above 36, at 10.

37 Benjamin Sovacool "Who Are the Victims of Low-Carbon Transitions?" (2021) 73 ERSS 101916.

38 See, Maryam Golnaraghi and others *Climate Change Litigation - Insights into the Evolving Global Landscape* (The Geneva Association, April 2021); Mark Clarke and Tallat Hussain "Climate change litigation: A new class of action" White and Case (2018) at 6; and Brian Preston "The Influence of the Paris Agreement on Climate Litigation: Causation, Corporate Governance and Catalyst (Part II)" (2021) 33(2) JEL 227 at 239-240.

39 Setzer and Higham, above n 14, at 5.

40 Sabin Database.

41 *Company Workers Union of Maritima v Ministry of Energy* Supreme Court 25530-2021, 9 August 2021.

42 Setzer and Higham, above n 14, at 30.

43 *Lynn v Peabody Energy Corp* 250 F Supp 3d 372 (ED Miss 2017).

to invest in its own stock (coal) when it was clear that such investment was imprudent due to the "sea-change" in the coal industry. Although the court dismissed the case,[44] it is an example of a CCD concerning the financial sector's failure to transition investment strategies in response to climate change. Given the scope, scale, and impacts of shifting to a low-emissions way of life, Transition Disputes are likely to be numerous, complex and sizable, forming a significant subcategory of future disputes coming into the CCDR system.

D Summary on Need for Improvements

Due to the efficacy limitations of the commonly used DR processes, gaps within the system between those processes, and the need for future-proofing, improvements to the existing CCDR system are required. In the next three sections, I detail the necessary changes to address these issues. In Section III, I identify improvements that can be made to the commonly used processes. In Section IV, I propose increased use of existing processes, particularly the less commonly used consensual processes. Lastly, in Section V, I suggest and assess the potential efficacy of additional processes that are currently not being used. There is further improvement to be made to the CCDR system by ensuring that the most appropriate process is being used in any dispute – this is examined in Section VI.

III Improvements to Common Processes

This section identifies changes that could be made to the three most commonly used DR processes (UNFCCC Negotiation Process, adjudication and arbitration) in order to address the efficacy limitations identified in Part B and thereby improve their effectiveness. These changes are not analysed in depth, as such consideration is outside the scope of this thesis. Rather, they are included here to indicate that process improvements are possible.

A UNFCCC Negotiation Process

The following suggestions are about the UNFCCC negotiations from a procedural, DR perspective. As previously explained, that is the point of view taken for the purposes of this thesis. In other words, it is not considered from the international law perspective as a general

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44 On the basis that the plaintiffs failed to meet the requirements for proving such a breach, including by failing to describe an alternative investment that a prudent fiduciary in the same circumstances would not have viewed as doing the fund more harm than good: *Lynn v Peabody Energy* Corp, above n 43, at 16-18.

international negotiation, and I recognise that it is not a "dispute" settlement mechanism in that sense. As detailed in Part B, the main challenges to the effectiveness of the UNFCCC Negotiation Process are efficiency and power imbalances. There is a considerable body of research on these issues, especially the former. Much of it came about following the "failure" of COP 15 in 2009, and is, therefore, somewhat dated. As the process itself has remained largely consistent over time, however, there is some older scholarship that retains relevancy and is included here.

There are a number of suggested procedural changes to streamline the UNFCCC Negotiation Process and improve its efficiency, including: more effective use of the agenda-setting phase of the process;[45] continued and increased use of smaller, sub-group negotiations;[46] negotiation skills training;[47] and shifting the style of the negotiations from predominantly positional and competitive to an interest-based style with an increased focus on problem solving,[48] including brainstorming.[49] A more substantial suggestion is to introduce an independent third party or process expert to assist with facilitating the UNFCCC negotiations, sometimes referred to as supported negotiation or strategic facilitation.[50] This would be a particularly impactful change, as effective management of the negotiation process increases the probability of multilateral agreements being reached.[51] Other research suggests incorporating an additional DR process, specifically mediation, into the existing one.[52] This is a persistent idea, having first been made

[45] Daniel Druckman and Lynn Wagner "The Role of Issues in Negotiation" (2021) 37 Negotiation Journal 249; and Antto Vihma and Kati Kulovesi "Can Attention to the Process Improve the Efficiency of the UNFCCC Negotiations?" (2013) 7(4) CCLR 242 at 247.

[46] Rory Smead and others "A Bargaining Game Analysis of International Climate Negotiations" (2014) 4 Nature Climate Change 442 at 444.

[47] Wytze van der Gaast *International Climate Negotiation Factors: Design, Process, Tactics* (Springer International Publishing, Switzerland, 2017) at 9; and Kenneth Cloke "Conflict, Climate Change, and Environmental Catastrophe" in Alexia Georgakopoulos (ed) *The Mediation Handbook: Research, Theory, and Practice* (Taylor & Francis Group, New York, 2017) 253 at at 261.

[48] See for example, Vihma and Kulovesi, above n 45, at 251; Daniel Bodansky, Jutta Brunnée and Lavanya Rajamani *International Climate Change Law* (Oxford University Press, Oxford, 2017) at 115; and Tania Sourdin *Alternative Dispute Resolution* (6th ed, Thomson Reuters, Sydney, 2020) at 72.

[49] Lawrence Susskind and Saleem Ali *Environmental Diplomacy: Negotiating More Effective Global Agreements* (2nd ed, Oxford University Press, Oxford, 2015) at 149. See Chapter 2.IV.J for discussion on Interest Based Negotiation.

[50] Gunnar Sjöstedt and Ariel Macaspac Penetrante *Climate Change Negotiations: A Guide to Resolving Disputes and Facilitating Multilateral Cooperation* (Routledge, Abingdon, 2013) at 4.

[51] Kai Monheim "The 'Power of Process:' How Negotiation Management Influences Multilateral Cooperation" (2016) International Negotiation 21 345 at 355 and 376-377.

[52] Thomas Fiutak "Mediators as Advocates in Climate Negotiations" in Georgakopoulos (ed), above n 47, at 266; Peng Ding and others "An Application of Automated Mediation to International Climate Treaty Negotiation" (2015) 24 Group Decision and Negotiation 885; and Susskind and Ali, above n 49, at 161.

in relation to international negotiations generally, prior to the existence of the UNFCCC,[53] and being raised periodically since, including specifically for the UNFCCC process.[54]

The use of a process expert would also address concerns that this currently relies on the facilitation skills of the Secretariat.[55] An independent facilitator or mediator can help break impasses, as well as address power imbalance concerns, including those that the process can be heavily dominated and influenced by individual personalities. Part of their role is to allow equal participation, helping to balance power for climate-vulnerable parties. Further use of coalitions and support groups, such as NGOs, may also help address power imbalances facing vulnerable groups.[56] Coalitions in particular have been found to provide these groups with "strengthened influence as well as increased participation and diplomacy."[57] Further, reducing administrative overheads for climate-vulnerable parties would make it easier for them to participate in the process. This could be achieved by making existing financial and technical support easier to access by simplifying funding applications, and increasing the use of bilateral aid, which requires less administration as it only involves one external partner.[58] Enhancing capacity building around participation, by way of pre-negotiation preparation support and technical assistance, may also enhance the process's efficacy.[59] As would enhancing the involvement of certain non-state actors, especially indigenous peoples, which, as well as improving access and power imbalances, has also been found to have the potential to lead to more effective outcomes for the climate-vulnerable. [60] There is also research to suggest that the enhanced involvement of young people may have the same effect.[61]

53 Lars-Göran Stenelo *Mediation in International Negotiation* (Studentlitteratur, Lund, 1972) in Ding and others, above n 52, at 886.

54 Kornelis Blok and others *Towards a Post-2012 Climate Change Regime* (European Commission, June 2005) at 11; and Cloke, above n 47, at 261-262.

55 Van der Gaast, above n 47, at 9.

56 Carola Klöck "Multiple Coalition Memberships?" (2020) 25 International Negotiation 279 at 292; and Adrian Macey "The 2020 Climate Change Regime – Fit for Purpose for the Pacific?" in Alberto Costi and James Renwick (eds) *In the Eye of the Storm* (SPREP, Victoria University of Wellington and NZACL, Wellington, 2020) 97 at 105.

57 Brianna Craft *Increasing the Influence of LDC Climate Diplomacy* (International Institute for Environment and Development, Discussion Paper, December 2016), at 4.

58 Macey, above n 56, at 105.

59 Susskind and Ali, above n 49, at 147-148.

60 Macey Halgren "Power and Equity in the UNFCCC" (Master of Arts Thesis, Indiana University, 2021) at 11; and Ella Belfer and others "Pursuing an Indigenous Platform" (2019) 19 GEP 12.

61 Harriet Thew, Lucie Middlemass and Jouni Paavola "Does Youth Participation Increase the Democratic Legitimacy of UNFCCC Orchestrated Global Climate Change Governance?" (2021) 30 Environmental Politics 87.

There are challenges in making any changes to the UNFCCC process. First, there is a tension between the two main issues to address, that is, efficiency and power imbalance. Procedural rules in negotiation are a way to protect against power imbalance. However, they can also become cumbersome and slow the process down, so a balance needs to be found between them.[62] Secondly, there are operational challenges. As well as the inherent challenges in reforming any complex and bureaucratic process, there are also specific political difficulties in making changes to international processes. The fact it is not easy, however, does not mean it should not and cannot be done.

B Adjudication

As detailed Part B, the main challenges to the effectiveness of adjudication are access to justice and the piecemeal resolution it provides. Accessibility could be improved by increasing the availability of dedicated legal advocacy services. The impact of these services has been demonstrated by organisations such as ClientEarth, Greenpeace, Friends of the Earth and New Zealand's Lawyers for Climate Action.[63] Indeed, two of the most impactful CCDs were taken to court in the Netherlands on behalf of citizens by such groups.[64] However, these organisations are generally working in developed states, where there are the resources to fund them. There are limited services on this scale available elsewhere, including for some of the most climate-vulnerable parties, such as those in the Pacific Islands. Although there are groups in this region advocating for the adjudication of CCDs (for example, the students supporting Vanuatu's efforts to seek an advisory opinion from the ICJ[65]), they lack the resources of large, dedicated advocacy organisations. Specifically providing these resources for climate-vulnerable parties to take CCDs to adjudication would improve access to justice. Such improvement, however, should not be the responsibility of NGOs alone. Developed states could directly fund an advocacy organisation for climate-vulnerable parties or could establish an international fund to allow them to more easily bring CCDs to adjudication. Governments putting similar funds in place at a national level (a form of climate change legal aid) would improve access to domestic adjudication for CCDs.

62 Vihma and Kulovesi, above n 45, at 245.
63 The cases taken by these organisations are detailed in Part B.
64 *Urgenda*, above n 18; and *Milieudefensie*, above n 16.
65 Pacific Island Students Fighting Climate Change "Alliance for a Climate Justice Advisory Opinion <www.pisfcc.org>.

Access to justice was one of the founding motivations and objectives behind the development of modern "alternative" processes, such as mediation, in response to perceived failings of the traditional adjudication system, specifically, the failure to provide access to justice brought about due to inherently high costs and long waits for hearings.[66] Writers claim that alternative processes address these issues of cost and delay, which enhances the efficiency of, and access to, justice and thereby the rule of law.[67] A further way, therefore, to improve adjudication's effectiveness to address CCDs would be with the increased use of alternative processes, as is posited in relation to facilitation, mediation, Māori DR and restorative practices below. The second issue limiting adjudication's effectiveness, that is, piecemeal resolution, is addressed more generally in Chapter Nine.

C Arbitration

As established in Part B, the main limitations to arbitration's effectiveness in addressing CCDs are access to justice, public accountability and public interest, particularly when it is confidential. There has been a growing focus over recent years on the need for increased transparency when arbitrating disputes, such as CCDs, that concern broader policy issues.[68] A 2019 report by the International Chamber of Commerce on the arbitration of CCDs specifically noted this need in order to enhance arbitration's legitimacy for addressing them.[69] The Report suggested that the necessary transparency could be achieved by "opening the proceedings to the public, including in the publication of submissions, procedural decisions and hearings; and … publication (or even redacted publication) of awards."[70] Further, public interests could be taken into account through third party participation. Either by way of the joinder of additional parties (for example, a climate change NGO) or non-party participation, such as, through an *amicus curiae*. Implementing these improvements through the applicable rules, contracts and treaties in a way that does not leave it up to parties' discretion, would increase public accountability and allow the necessary consideration of public interests, thereby, improving

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66 Annabel Shaw "ADR and the Rule of Law Under a Modern Justice System" (LLM Thesis, Victoria University of Wellington, 2016), at 26.

67 Carrie Menkel-Meadow "Whose Dispute is it Anyway?: A Philosophical and Democratic Defense of Settlement (in Some Cases)" (1995) 83 Geo L J 2663 at 2669-2670; Richard Reuben "ADR and the Rule of Law Making the Connection" (2010) 16 Disp Resol Mag 4 at 4; and Robert Grey "Promoting the Rule of Law by Facilitating Alternative Dispute Resolution" (2009) 16 Disp Resol Mag 29.

68 Stephan Wilske and Zelda Bank "Is There an (Emerging) Ethical Rule in International Arbitration to Strive for More Climate Friendly Proceedings?" (2021) 14 Contemporary Asia Arbitration Journal 155 at 160.

69 International Chamber of Commerce [*ICC*] *Commission Report: Resolving Climate Change Related Disputes through Arbitration and ADR* (November 2019) at [5.69].

70 At [5.70].

arbitration's effectiveness for addressing CCDs. As discussed in Part B, the other way to address the tension between the public and private interests in CCD arbitration is through the relevant source agreements.[71] In investor-state disputes, for example, a specific exception clause or "carve out" that excludes climate change measures from the scope of the dispute settlement mechanism would achieve this.[72] Although this is not about the process of arbitration, it is a way of improving its effectiveness in relation to both the climate response and rule of law.

IV Increased and Broader Use

This section proposes that increased and broader use of the current DR processes, particularly the less commonly used consensual processes, would fill gaps within the CCDR system and thereby improve its effectiveness. In order to substantiate this, the suggested processes are assessed against my effectiveness criteria.

A Adjudication

This section identifies how broader use of adjudication, specifically international adjudication, could be used to effectively address CCDs. There are many practical and political constraints to taking CCDs to international adjudication,[73] and to date, none have been brought before the main tribunals. An increasing body of scholarship in this area, however, suggests that doing so is becoming an increasingly favourable option as time progresses, particularly in relation to Loss and Damage Disputes.[74] The most commonly suggested tribunals are the International Court of Justice (ICJ) and, to a more limited extent, the International Criminal Court. Other scholars have suggested increased use of the World Trade Organisation's Dispute Settlement Body (for example, for Mitigation Disputes between trading states)[75] or possible use of the International Tribunal for the Law of the Sea (ITLOS) in regard to maritime zones and loss of

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71 See Chapter 4.III.C.3

72 Kyla Tienhaara "Regulatory Chill in a Warming World: The Threat to Climate Policy Posed by Investor-State Dispute Settlement" (2018) 7 TEL 229 at 250.

73 These constraints are not considered in detail given scope limitations but are noted where relevant in the effectiveness assessment below.

74 See for example, Philippe Sands "Climate Change and the Rule of Law: Adjudicating the Future in International Law" (2016) 28 JEL 19 at 19. Also, see Chapter 6 II.B.3.

75 Sands, above n 74, at 24; Harro van Asselt "Trade and Climate Disputes before the WTO" in Ivano Alogna, Christine Bakker and Jean-Pierre Gauci (eds) *Climate Change Litigation: Global Perspectives* (Brill, Leiden, 2021) 433; and Roda Verheyen and Cathrin Zengerling "International Dispute Settlement" in Kevin Gray, Richard Tarasofsky and Cinnamon Carlarne (eds) *The Oxford Handbook of International Climate Change Law* (Oxford University Press, Oxford, 2016) 418 at 435. Also, see Chapter 4.II.B.3.

territory.[76] This latter process has become more relevant following Tuvalu and Antigua and Barbuda establishing the Commission of Small Island States on Climate Change and International Law, which is specifically authorised to request advisory opinions from ITLOS.[77] Although these latter two processes are not considered separately given scope limitations, much of the effectiveness assessment of adjudication generally, and the ICJ specifically, will apply to those processes as well.

1 International Court of Justice

The ICJ is the principal judicial organ of the UN.[78] Its role is to settle legal disputes between states (contentious cases) and to give advisory opinions on legal questions referred to it by authorised UN organs and specialised agencies (advisory proceedings).[79] The judgment in a contentious case is final and binding on the parties to a case and without appeal.[80] Advisory opinions are not binding on the requesting bodies. Both of these processes are examined here under "adjudication" for ease of consideration.[81]

As noted previously, the ICJ is the final step under the UNFCCC dispute settlement mechanism for state parties that have accepted its jurisdiction.[82] A limited number have done so to date, and this provision has not yet been used.[83] A number of scholars, however, have examined the potential of this process for addressing CCDs. They posit that it could be used for all three subcategories, but most effectively for Loss and Damage Disputes, as it could address state responsibility rules under climate treaty-based arguments, or the customary international law principle of transboundary harm.[84] Although there is some track record of the use of

76 James Harrison "Litigation Under the United Nations Convention on the Law of the Sea" in Alonga, Bakker and Gauci (eds), above n 75, 415; and Verheyen and Zengerling, above n 75, at 429.

77 Agreement for the Establishment of the Commission of Small Island States on Climate Change and International Law Registration 56940 (31 October 2021), art 2(2).

78 Charter of the UN, art 92.

79 Art 96.

80 Annex 1: Statute of the International Court of Justice [*ICJ Statute*], arts 59 and 94.

81 Due to the non-binding nature of advisory proceedings they would not usually be defined as such.

82 Art 14(2). Also, see Chapter 4.II.B.1(b).

83 Only the Netherlands, the Solomon islands, and Tuvalu have accepted the ICJ's jurisdiction under the UNFCCC through an article 14.2 declaration: UNFCCC "Declarations by Parties - United Nations Framework Convention on Climate Change" <www.unfccc.int> .

84 Margaretha Wewerinke-Singh and Diana Hinge Salili "Between Negotiations and Litigation: Vanuatu's Perspective on Loss and Damage from Climate Change" (2020) 20 Climate Policy 681 at 686-687; Verheyen and Zengerling, above n 75, at 427-42; and Margaretha Wewerinke-Singh, Julian Aguon and Julie Hunter "Bringing Climate Change Before the International Court of Justice" in Alogna, Bakker and Gauci (eds), above n 75, 393 at 394.

contentious cases in environmental-related disputes,[85] use of the ICJ's advisory proceedings is generally viewed as the more potentially effective process for CCDs.[86] This has been contemplated a number of times over the last two decades,[87] especially by the climate-vulnerable Pacific Island states, including Tuvalu,[88] Palau,[89] and Vanuatu,[90] and is reportedly again under consideration by Vanuatu.[91]

The following subsections assesses the potential effectiveness of the ICJ for resolving CCDs using the previously established criteria, namely, how well would it: support the climate response; resolve and prevent CCDs; and comply with the rule of law. Only the factors that are specifically relevant to the ICJ process are considered here, but aspects of the general assessment of adjudication made in Part B will also apply. Further, as mentioned above, aspects of this assessment can be generalised to other forms of international adjudication, including ITLOS. As noted generally in regard to my thesis, this assessment of the ICJ relates to its potential effectiveness as a DR process, and does not include analysis of the legal basis or potential of a case.

(a) Climate Response

An outcome from the international community's principal judicial organ has markedly significant potential for the climate response given the international nature of many CCDs. The ICJ is said to have contributed positively to the broader environmental response, meaning it could potentially do the same for the climate.[92] As well as having a direct impact in the specific dispute, a climate-positive outcome from the ICJ (by way of judgment or opinion), would have

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85 The majority of cases that Asia Pacific states have been applicants or respondents in (16 cases) in the ICJ have concerned, either directly or indirectly environmental or natural resource management issues: Tim Stephens "Environmental Litigation by Asia Pacific States at the International Court of Justice" (2021) 21 MJIL 653 at 658-659.

86 Wewerinke-Singh, Aguon and Hunter, above n 84, at 395.

87 Verheyen and Zengerling, above n 75, at 427.

88 Rebecca Elizabeth Jacobs "Treading Deep Waters: Substantive Law Issues in Tuvalu's Threat to Sue the United States In the International Court of Justice" (2005) 14 Pacific Rim Law and Policy Journal 103.

89 Johnson Toribiong, President of the Republic of Palau "Statement to the 66th Regular Session of The UN General Assembly" (New York, 22 September 2011).

90 Greenpeace International "Peoples' Declaration for Climate Justice" (8 June 2015) <www.greenpeace.org>; and Sarah Mead and Margaretha Wewerinke-Singh "Recent Developments in International Climate Change Law: Pacific Island Countries' Contributions" (2021) 23 Int C L Rev 294 at 295-6.

91 "Vanuatu launches campaign to take climate change to the International Court for Justice" *Radio New Zealand News* (online, New Zealand, 25 September 2021).

92 As evidenced by the 1996 Advisory Opinion on nuclear weapons (*Legality of the Threat or Use of Nuclear Weapons (Advisory Opinion)* [1996] ICJ Rep 226) and the 2014 judgment in the whaling case (*Whaling in the Antarctic (Australia v Japan: New Zealand intervening) (Judgment)* [2104] ICJ Rep 226). Also see Sands, above n 74, at 26; and Stephens, above n 85, at 654 and 665.

a significant wider impact. Despite the facts that the ICJ's role is to settle the dispute in question and that its outcomes do not create legal precedent in the same way domestic adjudication does,[93] it is still claimed that these indirect effects could be considerable. Specifically, at an international level, an outcome from the ICJ could advance a states' broader foreign policy objectives on climate change,[94] "forge legitimacy,"[95] influence the UNFCCC negotiations,[96] contribute to the development of international law,[97] and support future international litigation.[98] At a national level, an outcome from the ICJ could regulate state behaviour,[99] as well as influence legislation,[100] and judgments of domestic courts.[101] An ICJ outcome could also have public education benefits, for example, by endorsing the scientific consensus on climate change, as well as important awareness-raising impacts,[102] which could, in turn, lead to necessary climate action by other actors.[103]

Not all research points to potentially positive benefits of ICJ adjudication on the climate response, however. There is, of course, the possibility of a climate-negative outcome, and some scholars are pessimistic about the international environmental track record.[104] Others see it as, "unlikely to provide effective relief, either in reducing emissions or compensating victims."[105] The fact that nuclear states continue to develop weapons and Japan still hunts whales despite ICJ outcomes on these matters, demonstrates the limits of this forum.[106]

93 *ICJ Statute*, above n 80, art 59.
94 Stephens, above n 85, at 669.
95 Sands, above n 74, at 26.
96 Bodansky, above n 9, at 709.
97 Wewerinke-Singh, Aguon and Hunter, above n 84, at 404.
98 Bodansky, above n 9, at 692 and 707; and Wewerinke-Singh, Aguon and Hunter, above n 84, at 414.
99 Wewerinke-Singh, Aguon and Hunter, above n 84, at 413.
100 Bodansky, above n 9, at 692 and 707.
101 André Nollkaemper "Conversations Among Courts" in Cesare Romano, Karen Alter and Yuval Shany (eds) *The Oxford Handbook of International Adjudication* (Oxford University Press, Oxford, 2013) 538.
102 Wewerinke-Singh, Aguon and Hunter, above n 84, at 404 and 413; Bodansky, above n 9, at 692; and Sands, above n 74, at 24.
103 Luke Elborough "International Climate Change Litigation: Limitations and Possibilities for International Adjudication and Arbitration in Addressing the Challenge of Climate Change" (2017) 21 NZJ ENVTL L 89 at 96 at 100.
104 See for example, Cait Storr "Islands and the South: Framing the Relationship between International Law and Environmental Crisis" (2016) 27 EJIL 519 at 538.
105 Bodansky, Brunnée and Rajamani, above n 48, at 289.
106 *Legality of the Threat or Use of Nuclear Weapons*, above n 92; and *Whaling in the Antarctic*, above n 92.

(b) Resolution and Prevention

In principle, the ICJ has broad jurisdiction to remedy disputes (if a plausible case is made).[107] In relation to CCDs, these could include provisional measures, declarations of a breach, restitution, damages, performance, cessation, and guarantees of non-repetition. The ICJ can also retain jurisdiction and require governments to publicly report on their remedial efforts.[108] This broad remedial discretion may be more effective for resolving some CCDs, particularly Loss and Damage Disputes, compared to national adjudication.[109] However, although the ICJ is said to have gradually become more assertive in articulating state parties' obligations, it still displays caution in respect to their discretion.[110] Furthermore, its ability to remedy any dispute relies on parties consenting to its jurisdiction in the first place.

An ICJ judgment or opinion could facilitate resolution even if it did not provide a definitive resolution,[111] as seen in other environmental-related cases.[112] Further, the broader impact of an ICJ outcome (as explained above in relation to the climate response) could encourage resolution in other existing disputes or prevent future disputes. Even a binding ICJ judgment, however, may not result in actual resolution given the general challenges of international law enforcement.[113] The more likely advisory opinion would not result in a binding outcome at all. There would, however, be international pressure to comply with any judgment, and any ICJ opinion would carry significant legal and moral weight and authority.[114] Although, as demonstrated by the nuclear and whale hunting examples above, in reality, ICJ outcomes do not always result in compliance and resolve the matter.

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107 *ICJ Statute*, above n 80, art 36(2)(d).

108 Kent Roach "Judicial Remedies for Climate Change" (2021) 17 JLE 105 at 150.

109 See Chapter 6.III.B.

110 Christine Gray "Remedies" in Romano, Alter and Shany (eds), above n 101, 871 at 896.

111 Stephens, above n 85, at 675.

112 *Certain Phosphate Lands in Nauru (Nauru v Australia) (Preliminary Objection*s) [1992] ICJ Rep 240; *Nuclear Tests (Australia v France)* (*Judgment*) [1974] ICJ Rep 253; *Nuclear Tests (New Zealand v France)* (*Judgment*) [1974] ICJ Rep 457; and *Request for an Examination of the Situation in Accordance with Paragraph 63 of the Court's Judgment of 20 December 1974 in the Nuclear Tests (New Zealand v France)* (*Order*) [1995] ICJ Rep 288.

113 Verheyen and Zengerling, above n 75, at 427-428.

114 As noted by the ICJ itself: "the Court's advisory opinions are associated with its authority and prestige, and a decision by the organ or agency concerned to endorses an opinion is as it were sanctioned by international law." International Court of Justice "How the Court Works: Advisory Opinions" <www.icj-cij.org>.

(c) Rule of Law

In addition to the general rule of law strengths of adjudication,[115] the ICJ has some specific benefits. First, as a high profile court its public accountability function is particularly strong. Its hearings are generally public[116] and webcasted, and case documents and outcomes are published. Secondly, there are mechanisms available to allow for the direct involvement of the public interest via non-state parties. For example, the ICJ has accepted *amici curiae* submissions of NGOs in some advisory proceedings.[117]

Conversely, there are some rule of law concerns specific to the ICJ. Most significantly, the considerable barriers to access, including: it is limited to inter-state disputes; it relies on an acceptance of jurisdiction; and it is challenging to get an authorised agency or organ to request an advisory opinion. As there is no such body specifically tasked with environmental protection, states wanting an ICJ opinion are faced with the significant hurdle of persuading the majority of members to support a General Assembly resolution making a request. The reality of this challenge has already been seen in relation to CCDs, through Palau's unsuccessful proposal to the General Assembly in 2011.[118] Further access issues include the considerable time, expense and effort required.[119] Additionally, there are power imbalance issues due to the financial and capacity limitations that some states face, especially the climate-vulnerable. A further barrier to access to justice specific to international adjudication, is the use of international pressure by more powerful states to prevent vulnerable states raising disputes. For example, Palau's stated intention to pursue an ICJ advisory opinion in 2012 was reportedly brought to an end by international pressure, including "threats of reprisal by the US with which Palau has close ties".[120] There is a view, however, that if these states do reach the ICJ, it can be effective in balancing power.[121] A further rule of law concern raised about the ICJ is its ability to deal with the technical subject matter of CCDs, given it is a generalist court and has been said to have limited capacity to address expert scientific evidence.[122] This concern

115 As detailed through Chapters Four to Six and summarised in Chapter 7.III.
116 *ICJ Statute*, above n 80, art 46.
117 Verheyen and Zengerling, above n 75, at 427.
118 Bodansky, Brunnée and Rajamani, above n 48, at 47.
119 Stephens, above n 85, at 669.
120 Wewerinke-Singh and Hinge Salili, above n 84, at 687 (citations omitted). Also see Bodansky, Brunnée and Rajamani, above n 48, at 47, where there is a connection drawn between international 'concern' and Palau's decision not to pursue an ICJ advisory opinion.
121 Wewerinke-Singh, Aguon and Hunter, above n 84, at 414.
122 See for example, Caroline Foster *Science and the Precautionary Principle in International Courts and Tribunals* (Cambridge University Press, Cambridge, 2011); Lucas Carlos Lima "The Evidential Weight of

can be allayed somewhat by the fact that the ICJ has already addressed a range of environmental disputes, and its capability to deal with complex scientific evidence is considered to be increasing.[123]

(d) Summary

It is seen as increasingly likely that a CCD will come before the ICJ (most probably by way of an advisory opinion) and, overall, this is considered a potentially effectively process for addressing such a dispute.[124] As with all CCDR processes, however, it is not a panacea, and will not be *the* most effective way to resolve all CCDs. Rather, as Bodansky explains, "it deserves consideration as part of a portfolio of approaches to the climate change problem."[125]

2 International Criminal Court

There is an increasing scholarly focus on the possibility of CCDs involving criminal liability.[126] Some of the recent research has explored the possible use of international criminal adjudication through the International Criminal Court (ICC) to address CCDs. Specifically, to hold those in charge of GHG emitters to account.[127] Nema Milaninia and Jelena Aparac believe that theoretically an individual could be held liable for climate change contributions (made either on their own account, or while acting on behalf of a legal entity) that, under specific circumstances, could be classified as war crimes, crimes against humanity or as acts of genocide.[128] As they note, however, prosecuting someone for climate change-related crimes before the ICC would, in reality, be extremely difficult.[129] Other limitations to the ICC's effectiveness in resolving CCDs, include: its lack of jurisdiction over legal entities (meaning it could not address CCDs involving corporate parties); its limited and stretched resources; and its lengthy proceedings, which often take years, meaning it would not be able to provide the rapid outcomes required in the context of climate change.

Experts before the ICJ: Reflections on the *Whaling in the Antarctic* Case" (2015) 6 JIDS 621; and Joan Donoghue "Expert Scientific Evidence in a Broader Context" (2018) 9 JIDS 379.

[123] Stephens, above n 85, at 665.

[124] At 672; and Wewerinke-Singh, Aguon and Hunter, above n 84, at 413.

[125] Bodansky, above n 9, at 692.

[126] For example, in a domestic context, see Josephine Nelson "The Future of Corporate Criminal Liability: Watching the ESG Space" SSRN (20 March 2022) <www.papers.ssrn.com>.

[127] See for example, Ryan Gunderson and Claiton Fyock "Are Fossil Fuel CEOs Responsible for Climate Change? (2021) J Environ Stud Sci.

[128] Nema Milaninia and Jelena Aparac "Climate Change Litigation Before the International Criminal Court" in Alogna, Bakker and Gauci (eds), above n 75, 481 at 504.

[129] At 504-505.

Despite the improbability of a CCD being addressed in the ICC, it is not impossible. In 2016, the Court released a set of rule changes showing that it would be prioritising environmental cases,[130] and in 2019, New Zealander Mike Smith raised the specific possibility of Rainer Seele, the Chief Executive of Austrian oil company OMV, being prosecuted in the ICC.[131] Most significantly, in 2021 an NGO requested that the Office of the Prosecutor open an investigation into Brazil's President Jair Bolsonaro for crimes against humanity resulting from increasing deforestation and other related activities in the Amazon, in part on the basis that global climate security is dependent on the Amazon.[132]

A successful international criminal prosecution may have strong and broad dissuasive and preventive effects for emitters worldwide, including corporate actors. Further, the ICC could provide a process by which climate-vulnerable groups, including low lying and small island states and indigenous groups, may be able get some climate justice. Given the significant legal and political hurdles, however, adjudication of CCDs in the ICC is unlikely, especially in the short-term.

B Arbitration

This paragraph identifies how arbitration could be used more widely in order to effectively address CCDs. As established in Part B, arbitration is currently used for investor-state Mitigation and Adaptation disputes.[133] There is less substantive material in relation to its wider use but it has been suggested as an effective means of resolution for contract-based disputes more broadly, especially those involving transborder parties. Specifically, these disputes could make use of arbitration available through commercial "Legal Hubs" (state-established centres of DR that aim to promote cross-border transactions),[134] such as the Singapore International Arbitration Centre.[135] There is some evidence of parties' willingness to use arbitration in these disputes. For example, the Green Climate Fund, whose work relates to mitigation, has said it

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[130] International Criminal Court *Policy Paper on Case Selection and Prioritisation* (September 2016) at [41].

[131] Carmen Parahi "Iwi leader Mike Smith takes OMV oil boss to International Criminal Court" *Stuff* (online ed, New Zealand, 25 October 2019).

[132] Allrise "Communication under Article 15 of the Rome Statute of the International Criminal Court Regarding the Commission of Crimes Against Humanity Against Environmental Dependents and Defenders in the Brazilian Legal Amazon Perpetrated by Brazilian President Jair Bolsonaro and his Administration" Submitted in The Hague on 12 October 2021: Grantham Database.

[133] Chapter 4.II.C.3 and Chapter 5.II.C.

[134] Pamela Bookman and Matthew Erie "Experimenting with International Commercial Dispute Resolution" (2021) 115 AJIL 5 at 5.

[135] Singapore International Arbitration Centre <www.siac.org.sg>.

would arbitrate disputes arising under its contracts with private entities.[136] Arbitration has also been specifically suggested as a possible process for investor-state Transition Disputes,[137] as well as for use in inter-state CCDs, as a way to define and enforce obligations under climate agreements.[138] The effectiveness assessment made of arbitration (as summarised in Chapter Seven) applies to this suggested use as well. Given the significant problem confidentiality poses for CCDs, any expanded use of arbitration should be in line with the improvements set out in Section III above to ensure the necessary public accountability and consideration of public interests.

C Facilitation and Mediation

As established in previous chapters, there are other DR processes that are currently being used less frequently to address CCDs, specifically, facilitation and mediation are being used in Adaptation Disputes.[139] Wider use of these two processes for current and future CCDs has significant potential to address gaps within the CCDR system and enhance its effectiveness. Comprehensive definitions of these processes are provided in Chapter Two, but they are briefly explained again here.

In this thesis, facilitation is a consensual process that involves an impartial third party (the facilitator) assisting the parties (often a group) to make a decision, solve a problem, or resolve a dispute. This includes use where there is no crystallised or legal dispute but excludes use for more general purposes such as identifying tasks. There are a number of terms used to refer to processes that are either the same as, or very similar to, facilitation, including Public Engagement Techniques, Consensus Building, and Collaborative Decision Making. To manage scope and avoid unnecessary repetition I am not considering these processes separately. Mediation is a consensual process involving an impartial third party (the mediator) whose role is to assist the parties in making decisions for themselves. The exact form of this

136 Gerd Droesse "Green Climate Fund and its Role in Promoting and Funding Sustainable Investment" in Wendy Miles (ed) *Dispute Resolution and Climate Change: the Paris Agreement and Beyond* (International Chamber of Commerce, Paris, 2017) 52 at 53.

137 Golnaraghi and others, above n 38, at 31.

138 International Bar Association Climate Change Justice and Human Rights Task Force *Achieving Justice and Human Rights in an Era of Climate Disruption* (22 September 2014) at 139; and Elborough, above n 103, at 96.

139 As identified in Chapter 5.II.E, the UN Special Procedures is also being used in a Mitigation Dispute. It is, however, more akin to a complaint process and has no potential to be used more broadly as it is specific to the UN Human Rights Council, and so is not considered here.

assistance varies depending on the style, and ranges from purely procedural assistance to providing input on the substance or content of the dispute. Both the process and outcome of mediation will generally be confidential.

The following subsections summarise the effectiveness of facilitation and mediation from a general point of view,[140] using my usual measure, namely, how well do they: support the climate response; resolve and prevent CCDs; and comply with the rule of law? It also includes identification of any possible limitations of these processes in effectively addressing CCDs. Much of this assessment material will be applicable to other consensual processes (such as Māori DR and restorative practices considered in Section V below).[141]

1 Climate Response

The CCDs that have used facilitation or mediation are generally unreported or confidential, so there is limited evidence of any tangible impact on the climate response. There are, however, some examples of positive benefits to be found. The New England Climate Adaptation Project referred to in Chapter Five, used polling and statistical analysis to assess the impact of the public facilitation that was used to address climate change risks in coastal communities in the north-eastern United States.[142] It found that this process had positive benefits for the climate response, including public education, raising public awareness and positively influencing individuals' and officials' approaches to adaptation action.[143] In New Zealand, the Tangoio Marae Project resulted in increased understanding and specific adaptation actions being developed.[144] Other research shows the potential of this type of process for generating community-led mitigation action.[145] The UNFCCC's creation of the facilitative Talanoa Dialogue Platform arguably shows recognition of the need for, and benefits of, facilitation.[146]

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140 As explained in Chapter Seven, there is not enough evidence about the use of other processes to resolve CCDs to allow for a specific examination of their effectiveness as part of that chapter.

141 In a consensual process, the parties reach a decision by agreement (with or without the assistance of an impartial third party). In a determinative process a third party makes a decision about the outcome of the dispute. See Chapter 2.III.A.

142 Lawrence Susskind and others *Managing Climate Risks in Coastal Communities: Readiness, Engagement and Adaptation* (Anthem Press, London and New York, 2015). As explained in Chapter Five, the authors refer to this as a public engagement process, something I include as facilitation.

143 Susskind and others, above n 142.

144 Jackie Colliar and Paual Blackett *Tangoio Climate Change Adaptation Decision Model* (Maungaharuru-Tangitū Trust and Deep South National Science Challenge, July 2018) at 44 and 33.

145 Laura Donkers "Revitalising Embodied Community Knowledges as Leverage for Climate Change Engagement" (2022) 171 Climatic Change Online at 1.

146 UNFCCC *Report of the COP* FCCC/CP/2017/11/Add.1 (8 February 2018), decision 1/CP.23, art 10-11, and Annex II.

In his work on mediation and climate change, Oliver Leighton Barrett refers to successful outcomes in mediated water stress-related disputes as evidence of the positive impacts of consensual processes.[147] Further, Thomas Fiutak states that Mediators Beyond Borders' involvement in the UNFCCC Negotiation Process has created "a better environment for future conflict management"[148] within that process. A report by Mediators Beyond Borders themselves demonstrated the effective use of facilitation and mediation in environmental and climate-related disputes, including for cross-border conflicts.[149] There is also evidence of positive climate benefits being realised through environmental mediation.[150]

A particular benefit of facilitation and mediation in supporting the climate response is that they can lead to broader and more systemic change (especially compared to adjudication and arbitration) as parties agree to change their practices or behaviours.[151] Further, empirical research has found that mediation leads to parties taking increased responsibility for the situation in question.[152] Relatedly, as parties determine their own outcomes, these processes can provide a wider range of remedies that can more specifically meet the needs of the particular parties in dispute. These can be flexible and creative, including apologies, and changes in policy or practice.[153]

As identified in relation to arbitration, confidentiality limits the broader impacts a process can have on the climate response,[154] as well as the necessary consideration of public interests and accountability. Parties can, however, agree for outcomes to be more broadly available, for example, through open processes, and research and publication, as occurred with the New England Climate Adaptation and Tangoio Marae Projects.[155] Increased use of these processes should be as transparent as possible.

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[147] Oliver Leighton Barrett "Mediation as the Nexus of Climate Change and Conflict" in Georgakopoulos (ed), above n 47, 276 at 279.

[148] Fiutak, above n 52, 266 at 269.

[149] Mediators Beyond Borders "Case Studies Demonstrating the Use of Mediation, Consensus Building and Collaborative Problem Solving in Resolving Environmental and Climate-Related Conflicts" (October 2008).

[150] These are likely to include CCDs, for further detail, see Chapter 5.II.D.

[151] Stephen Subrin "A Traditionalist Looks at Mediation" (2002-2003) 3 Nev L J 196 at 215 at 224-225.

[152] Deborah Eisenberg "What We Know (And Need to Know) About Court-Annexed Dispute Resolution" (2016) 67 S C L Rev at 256.

[153] See for example, Hilary Astor and Christine Chinkin *Dispute Resolution in Australia* (2nd ed, LexisNexis Butterworths, New South Wales, 2002), at 69.

[154] See Chester Brown and Phoebe Winch "The Confidentiality and Transparency Debate in Commercial and Investment Mediation" in Catharine Titi and Katia Fach Gómez (eds) *Mediation in International Commercial and Investment Disputes* (Oxford University Press, Oxford, 2019) 293 at 321.

[155] Susskind and others, above n 142; and Colliar and Blackett, above n 144.

2 Resolution and Prevention

There is no guaranteed outcome from facilitation and mediation, meaning it is possible they will not lead to resolution (unlike adjudication and arbitration, which guarantee an outcome). General mediation resolution rates, however, show that the majority of cases, across different jurisdictions and types of disputes, do resolve.[156] This includes 60-70 per cent of environmental mediation cases in New Zealand.[157]

Consensual processes can also lead to broader resolution than is available through determinative processes. Framing issues as legal claims can distort the real dispute and result in it being only partially addressed, and such framing is not required for consensual DR.[158] Further, parties are more likely to feel that all of the underlying issues were explored and completely, as opposed to partially, resolved.[159] Lastly, third party consensual processes have higher rates of party satisfaction compared to negotiation and adjudication.[160] Additionally, these processes can be used in the early stages of a dispute, which can enhance the chances of a resolution, as well as prevent escalation. This will be a particular benefit in community-based Adaptation and Loss and Damage Disputes. Early resolution also has positive climate impacts, as Kenneth Cloke explains, the "ability to resolve these conflicts quickly and effectively will have a direct impact on the degree of damage they create."[161]

Facilitation and mediation are also claimed to be particularly effective for preventing future disputes, and this is often a specific aim of process. Although these processes lack the precedent and broader preventative impacts of more public processes, this prevention effect is not only limited to the parties involved in a dispute. One of the strengths of consensual processes is that they can change the way parties will behave in the future. As has been found in relation to mediation, it "can be much more than a simple dispute-resolving mechanism" and has the "potential to transform the way people think and act towards each other in conflict."[162] Further,

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[156] Mediation settlement rates are 70-90 per cent: Morris and Shaw, above n 9, at 269.

[157] Environment Court *Report of the Registrar* (2019) and Environment Court *Report of the Registrar* (2020).

[158] Astor and Chinkin, above n 153, at 67.

[159] Community Mediation Maryland *Impact of Alternative Dispute Resolution on Responsibility, Empowerment, Resolution, and Satisfaction with the Judiciary* (Maryland Administrative Office of the Courts, April 2014) at 2.

[160] Eisenberg, above n 152, at 257.

[161] Cloke, above n 47, 253 at 253.

[162] Nadja Alexander, Walther Gottwald and Thomas Trenczek "Mediation in Germany" in Nadja Alexander (ed) *Global Trends in Mediation* (2nd ed, Kluwer Law International, The Netherlands, 2006) 223 at 258; and Joseph Folger and Robert Bush *The Promise of Mediation: Responding to Conflict Through Empowerment and Recognition* (Jossey-Bass, San Francisco, 1994).

mediation and facilitation can positively impact resolution in subsequent DR processes, for example, by narrowing the issues in dispute, which can expedite later resolution.[163]

In relation to enforcement, as consensual processes, the outcomes are not automatically binding (as they are with adjudication, for example). As previously noted, however, negotiated outcomes, particularly those involving a high degree of party autonomy, have a high chance of compliance.[164] This has been specifically demonstrated in relation to mediation, with research finding that mediated outcomes have a higher rate of compliance than decisions made by third parties.[165] Further, outcomes from facilitation and mediation can be binding if the parties agree, and, for example, record it as a contract. One of the challenges, particularly in cross-border disputes, however, is enforcement of any such agreements. The 2018 Singapore Convention,[166] which provides for trans-border recognition of mediation agreements, addresses this challenge for commercial international CCDs.

3 Rule of Law

There is a longstanding claim that consensual processes do not comply with the rule of law, particularly those that are confidential and so fail to satisfy public accountability and interest requirements.[167] As described in relation to arbitration, this is a specific concern for CCDs, which have a strong public interest element. Facilitation, however, is often not a confidential process, and parties to a mediation can agree to make it public. Further, mediation's ability to involve a broad range of parties has led environmental DR scholar, Alana Knaster, to refer to it as the most inclusive DR process for maximising public involvement.[168]

Another rule of law concern is that these processes increase power imbalances between parties and lack the protection for less powerful parties that is available through the procedural rules

163 As is specifically claimed about environmental mediation in New Zealand: Ministry for the Environment "Mediation and the Environment Court" <www.environment.govt.nz>.
164 Chapter 4.III.A.1.
165 Lynn Cole "Exploring International Mediation" in Georgakopoulos (ed), above n 47, 315 at 317; and Eisenberg, above n 152, at 249.
166 Convention on International Settlement Agreements Resulting from Mediation Registration 56376 (opened for signature 7 August 2019, entered into force 12 September 2020).
167 Owen Fiss "Against Settlement" (1984) 93 Yale L J 1073, at 1085-1087; Harry Edwards "Alternative Dispute Resolution: Panacea or Anathema?" (1986) 99 Harv L Rev 668; David Luban "Settlements and the Erosion of the Public Realm" (1995) 83 Geo L J 2619; and Laurence Boulle, Virginia Goldblatt and Phillip Green *Mediation: Principles, Process, Practice* (2nd ed, Lexis Nexis, Wellington, 2008), at 105.
168 Alana Knaster "Resolving Conflicts over Climate Change Solutions: Making the Case for Mediation" (2010) 10 Pepperdine DRLJ 465 at 504.

and formality of adjudication and arbitration, thus being detrimental to vulnerable parties.[169] There is some evidence, however, that consensual processes can in fact help achieve a balance of power. Specifically, that the flexibility, informality, and high levels of self-determination allow resolution in a way that is more suitable to the parties involved, including indigenous groups.[170]

There is also a contrary point of view that consensual processes in fact provide better access to justice. First, they are usually quicker and cheaper than other DR processes, as has been found in relation to mediation.[171] When compared to negotiation, the additional cost of the third party DR practitioner can be offset by the efficiency they bring to the process. Secondly, facilitation and mediation can provide easier access to DR due to the flexibility of the process. This means that there is no restriction on the nature or number of parties involved and, as a result, these processes can address multi-issue and multi-party disputes involving all types of climate actors and stakeholders, including corporates, NGOs, the climate-vulnerable, governments, and communities. This flexibility also extends to the nature of the dispute to be addressed. The use of consensual processes does not require a legal dispute, resulting in much broader access to DR compared to adjudication and arbitration. Thirdly, facilitation and mediation provide better access for less powerful parties, as they are less formal and easier to access and participate in. These are all particular benefits for Adaptation, Loss and Damage and Transition Disputes.

Lastly, mediation in particular, is claimed to provide better access to justice for adjudication by benefitting judicial efficiency. Specifically, it is claimed that as more disputes are resolved through mediation, waiting lists and judicial workloads diminish, reducing demands on adjudication, and allowing matters that cannot be resolved through mediation, faster and cheaper access to adjudication.[172] Deborah Eisenberg's comprehensive analysis of randomised

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169 This issue was originally raised by Owen Fiss in the 1980s in Fiss, above n 167, at 1076; and has been repeated periodically since, see for example, Laura Nader "Controlling Processes in the Practice of Law" (1993) 9 Ohio St J on Disp Resol 1; and Mary Noone and Lola Akin Ojelabi **"**Ensuring Access to Justice in Mediation Within the Civil Justice System" (2014) 40 Mon L R 528 at 532.

170 Reuben, above n 67, at 6; Janet Fanslow "Understanding the Prevalence of Violence Against Women in New Zealand: Implications for Restorative Justice" in Anne Hayden and others (eds) *Restorative Approach to Family Violence: Changing Tack* (Ashgate Publishing Ltd, Surrey, 2014) 29 at 38; and Gitana Proietti-Scifoni and Kathleen Daly "Gendered Violence and Restorative Justice" (2011) 14(3) Contemporary Justice Review 269 at 285-286.

171 Cole, above n 165, at 317. The same may also be true of facilitation but there is less research on this process.

172 Nadja Alexander "Global Trends in Mediation" in Alexander (ed), above n 162, 1 at 9; Tania Sourdin "A Broader View of Justice?" in Michael Legg (ed) *The Future of Dispute Resolution* (LexisNexis Butterworths, Australia, 2013) 155 at 165; and Reuben, above n 67, at 6. Although these are dated sources,

studies on this issue found that these processes can result in "quicker disposition times and cost savings for the court and the parties."[173] As discussed above in relation to future-proofing, the access to justice concern about adjudication is relevant to the CCDR system. All of these access to justice benefits are constrained, however, by the fact that these are usually voluntary processes, meaning parties can decline to participate, unless they are required to by a DR clause in a relevant contract or statute, and even then they may not comply with those requirements.

In relation to the ability to manage the technical subject matter involved in CCDs, although these processes do not involve the determination of facts in the same way as adjudication and arbitration, they can involve independent experts,[174] or, in the case of evaluative mediation, an expert can act as mediator.

4 Summary

This assessment shows that facilitation and mediation have considerable potential to effectively address CCDs. Facilitation, which is already being used in some Adaptation Disputes,[175] could be used more, and more broadly, for example, to deal with any community Adaptation Dispute, not just those facing coastal communities, as well as Transition Disputes. Mediation could be used in the UNFCCC Negotiation Process to help resolve particular impasses slowing that process down. It could also be specifically added into the UNFCCC DR mechanism.[176] Mediation is already provided for in the UN Charter,[177] and is regularly used in complex international multi-party disputes, including armed conflicts,[178] so it is a familiar process for state parties and could be explicitly extended into the climate regime. Mediation is also currently being used for international private contractual and investor-state disputes in related fields, such as energy, and use could be expanded more specifically for CCDs.[179] There is an

they remain relevant as they refer to theoretical rule of law issues that have been raised and debated about alternative dispute processes over decades.

173 Eisenberg, above n 152.

174 New Zealand's Weathertight Homes Resolution Service provided a good example of this. See Morris and Shaw, above n 10, at 234.

175 As discussed above and detailed in Chapter 5.II.D.

176 UNFCCC, art 14(1). This is something that international mediation body, Mediators Beyond Borders, who have been an Official Observer Organisation in the UNFCCC Negotiation Process since 2009, have been calling for consistently: Mediators Beyond Borders "Climate Change Project" <www.mediatorsbeyondborders.org>.

177 Charter of the UN, art 33(1).

178 See for example, Siniša Vuković "International Multiparty Mediation" in Georgakopoulos (ed), above n 47, 305.

179 See for example, Peter Cameron and Abba Kolo "Mediating International Energy Disputes" in Titi and Fach Gómez (eds), above n 154, 293.

existing preference for using mediation in international commercial disputes.[180] Mediation could also be used in a domestic setting at state-wide, regional and local levels, where it has been found to be effective for addressing disputes that share many of the same features as CCDs.[181] Arguably, these consensual processes are best placed to address complex, multi-party disputes involving competing interests, contentious issues and ongoing relationships, that require collaboration, trade-offs and negotiations,[182] and are therefore currently underutilised in the CCDR system. As noted throughout, however, any use of confidentiality, as often applies to mediation, must be carefully considered and limited in CCDR.[183]

V Additional DR Processes

A Introduction

In describing climate change as "legally disruptive", Fisher, Scotford and Barritt said that it "gives rise to disputes and problems not easily addressed by existing legal doctrines and frameworks."[184] My research reinforces that claim. As I have shown, some CCDs are not being effectively addressed by the existing CCDR system, and the future increase in these disputes, in addition to the emergence of new subcategories, will further challenge its effectiveness. This is particularly true for Adaptation, Loss and Damage, and Transition Disputes. In addition to the broader use of DR some processes, as posited above, there are other processes that could be added to the CCDR system in order to improve its effectiveness.

Māori DR and restorative practices are two, related processes that are particularly relevant in this regard. Comprehensive definitions of these processes are provided in Chapter Two, but in the following subsections, they are, in turn, briefly explained and then assessed in terms of their potential effectiveness for addressing CCDs. Only the factors that are specifically relevant to Māori DR and restorative practices are examined here, but they should be considered in addition to relevant, general points about consensual processes made in the assessment of facilitation and mediation above.

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180 Cole, above n 165, at 317.
181 Knaster, above n 168, at 504.
182 This is discussed in further detail below in Section VI: Appropriate Use.
183 This is discussed in further detail below under Confidentiality in Section VI: Appropriate Use.
184 Fisher, Scotford and Barritt, above n 2, at 173.

B Māori DR

1 The Process

As explained in Chapter Two, there are many cultural-based DR processes that could be considered to enhance the effectiveness of the CCDR system. Given the responsibilities and commitment I have to Te Tiriti o Waitangi, I am focusing on the DR process of New Zealand's tangata whenua (people of the land). Whilst acknowledging the unique and varied nature of indigenous DR processes, I am also using Māori DR as a representative example to demonstrate the effectiveness of utilising other indigenous processes to resolve CCDs in relevant jurisdictions.

As defined in Chapter Two, Māori DR is not a formally recognised process of DR in the same way that mediation or arbitration are, for example. Rather, it is a values-based approach to addressing and resolving disputes that reflects te ao Māori (the Māori world view) and can be expressed through different forms or processes. It is underpinned by principles of collective identity, responsibility, accountability and the importance of relationships,[185] and seeks to achieve ea (state of resolution) by restoring and repairing *all* relationships that have been impacted by a dispute. Generally speaking, a Māori DR process involves the following aspects: identifying the causes of a dispute in order to reach a deeper understanding of it and be able to address the source of the problem; encouraging the parties to take responsibility for their actions; and making collective, consensus-based decisions about how the problem will be resolved.

2 Climate Response

Māori DR has particular potential strength in supporting the climate response, arguably, more so than any other DR process considered in this thesis. This is because it specifically provides for consideration of the natural environment through the concept of kaitiakitanga (stewardship and guardianship), which recognises a duty of care for the environment. As a result, Māori DR has a low risk of direct, negative climate outcomes, or other broader negative impacts such as chilling effects (as seen with arbitration and adjudication). Furthermore, it addresses the past, present and future aspects of a dispute from a values-based perspective that aligns with the climate response. Another significant benefit Māori DR holds for the climate response is that

[185] Khylee Quince "Māori Disputes and their Resolution" in Peter Spiller (ed) *Dispute Resolution in New Zealand* (2nd ed, Oxford University Press, Auckland, 2007) 256 at 284.

it can fill a current gap in the CCDR system for addressing large, complex, highly challenging, community Adaptation and Loss and Damage Disputes, including, for example, issues of displacement, resettlement, and territory loss. Although not specifically Māori DR, collaborative processes involving indigenous peoples have been suggested as appropriate ways to resolve some Mitigation and Adaptation Disputes.[186] Further, the public nature of Māori DR makes it particularly suitable for the inherent public interests involved in CCDs (unlike confidential ADR processes) and means it can have broader positive impacts for the climate response, such as raising awareness.

3 Resolution and Prevention

As noted, Māori DR (and other indigenous DR processes in other countries) has the potential to resolve particular CCDs, such as Loss and Damage Disputes, in a way that no other process currently does. As shown in Chapter Six, when it comes to resolving these particular issues, "[t]he money itself will never be enough."[187] Actual resolution of many of these disputes requires restitution and restoration.[188] Not only does Māori DR specifically provide for these aspects, but it actively seeks to reach ea (state of resolution) and therefore a comprehensive resolution. This provides the opportunity for broader resolution than other DR processes, such as adjudication and arbitration, that are limited to addressing particular, and often narrow, legal aspects of a dispute.

Prevention is another strength of Māori DR, as it not only seeks to resolve the immediate dispute, but also to prevent future disputes between the parties.[189] Further, as Māori DR is a public process, it has the potential for broader preventative effects, by influencing other parties to avoid or resolve their CCDs. This effect is obviously not legally persuasive in the way outcomes from adjudication are.

Although there is no specific legal enforcement and compliance mechanism for any outcome from Māori DR, this does not render it ineffective. There are ways in which outcomes can be formalised. For example, parties could elect to record any agreement in a contract (as with

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186 Marcela Brugnach, Marc Craps and Art Dewulf "Including Indigenous Peoples in Climate Change Mitigation" (2017) 140 Climatic Change 19.

187 Ben Batros "Climate Liability Suits as a Forward-Looking Strategy for Change" SSRN (30 September 2020) <www.papers.ssrn.com>.

188 Batros, above n 187.

189 Quince, above n 185, at 292-293.

mediation) or it may be provided for in legislation, as it was for Central North Island forestry settlement.[190] Even if this does not take place, as a consensual processes with a high degree of party autonomy, the chances of compliance are high.[191] Additionally, the public nature of Māori DR, its emphasis on acceptance of responsibility, and focus on accountability, including of the community, are factors that are likely to further enhance compliance.

4 Rule of Law

One of the potential criticisms in relation to Māori DR complying with the rule of law is that it can take time and therefore lack efficiency. As Māori DR processes involve communities, seek a deeper understanding and resolution of a dispute through all parties being heard, and prioritise comprehensive resolution over haste, they can take a number of days.[192] The resolution and prevention benefits of Māori DR outlined above, however, mean that it may be more efficient in the longer term.

Māori DR could also face an access to justice issue. As it is not a distinct, singular process, it is not available in the same way that other DR processes, such as adjudication or mediation, are. This is more of an administrative issue, however, and could be addressed by creating and providing a specific Māori DR process for CCDs. The forestry settlement example referred to above demonstrates how this could be done.[193] In addition, Māori DR's unique access to justice benefits outweigh this administrative challenge. The inclusion of Māori DR (and other indigenous processes in other jurisdictions) in the CCDR system could help address the access to justice and power imbalance issues facing many climate-vulnerable, indigenous peoples. First, Māori DR could provide access to a *process* through which to seek justice. Establishing it as part of the CCDR system could provide specific and culturally-appropriate access for indigenous parties. Secondly, Māori DR could help provide access to *justice* itself. Given its potential effectiveness to support the climate response, Māori DR could contribute to correcting the arguably unjust, and rule of law-inconsistent, outcome of the Loss and Damage Dispute currently in place via the UNFCCC.[194] Thus, Māori DR could fill another significant gap in the existing CCDR system.

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190 Central North Island Forests Land Collective Settlement Act 2008, Schedule 2(7)(2).
191 As noted in relation to facilitation and mediation above.
192 Carwyn Jones "Māori Dispute Resolution: Traditional Conceptual Regulators and Contemporary Processes" in Morgan Brigg and Roland Bleiker (eds) *Mediating Across Difference: Oceanic and Asian Approaches to Conflict Resolution* (University of Hawaii Press, Honolulu, 2011) 115 at 126.
193 Central North Island Forests Land Collective Settlement Act 2008, Schedule 2.
194 Chapter 6.III.A.3.

A further potential criticism of Māori DR is that the third party involved is likely to be someone known to the parties, which arguably runs contrary to any impartiality requirement of ADR. As established in Chapter Three, however, impartiality in this sense (that is, having no relationship with the parties) is not included as a criterion in my measure of effectiveness, as it is not relevant or appropriate to all DR processes.[195] Specifically, in relation to Māori DR, this notion of impartiality is a western justice concept. Given the underlying values of Māori DR, including whanaungatanga (connectedness) and mana (authority), this relationship with the parties is fundamental to the process. Also, any third party would have to be acceptable to all parties, which mitigates concerns about partiality. Additionally, Māori DR provides the rule of law-based public good benefits, including public accountability (as this is a specific aim of the process and it is not confidential), and particularly strong public interest, as it is an inclusive process that gives specific consideration to past and future generations.[196] As noted throughout, these public good benefits are inherently important for the effective resolution of CCDs.

C Restorative Practices

1 The Process

As defined in Chapter Two, I use the term restorative practices as an umbrella term for flexible DR processes that seek to repair and restore relationships between, not just the direct parties to a dispute, but also more widely impacted people, such as communities, based on values of accountability and inclusiveness.[197] Restorative practices are consensual processes involving a third party, often referred to as a facilitator. The specific process objectives, therefore, are for the parties to reach agreement between themselves through problem solving, as well as restore relationships, and prevent future disputes. As this definition makes apparent, restorative practices shares similar underlying values with Māori DR. It is different, however, in that it is not a culture-based process and has its own specific benefits that make it worth considering separately.

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[195] Chapter 3.III.C.4.

[196] Jones, above n 192, at 127.

[197] As also noted in Chapter Two, I use this term where others refer to a specific process, such as restorative justice, unless there is a necessary distinction. Although restorative justice is the most commonly known example, restorative practices are not restricted to criminal law.

2 Climate Response

As with Māori DR, restorative practices have the potential to fill a significant gap in the CCDR system, specifically, for particular Loss and Damage Disputes. Besides the question of financial compensation, complex Loss and Damage Disputes will involve past, present and future issues for individuals, communities and states, including, displacement, loss of statehood, and other non-economic impacts. Restorative practices could provide an effective DR solution for these disputes.[198] This would be a particular advantage, as these disputes are currently not being effectively addressed through other processes such as the UNFCCC Negotiation Process and adjudication.[199] Restorative practices could also be used to address a future gap for the climate response, as Transition Disputes are likely to face similar challenges through the commonly used processes. Additionally, restorative practices' potential for recognising non-human "victims" (such as the environment),[200] and its focus on restoration support the climate response. This is supported by Bryan Jenkins' research on New Zealand's Canterbury Regional Council's use of restorative practices in four environmental disputes, which demonstrated that it can support the environment and lead to superior environmental outcomes compared to adjudication.[201] A further point on the effectiveness of restorative practices is that it could impact positively on other processes. For example, Stacy-ann Robinson and D'Arcy Carlson suggest that restorative practices could be used to reach agreement on aspects of Loss and Damage Disputes, that could then be integrated into the UNFCCC Negotiation Process.[202]

3 Resolution and Prevention

Restorative practices specifically seek comprehensive resolution of disputes, restoration, and repair of relationships.[203] These are necessary for the effective resolution of many CCDs, including Loss and Damage Disputes,[204] and others that involve ongoing relationships, such as those concerning communities. The Canterbury experience examined by Jenkins provides

198 Darren McCauley and Raphael Heffron "Just Transition" (2018) 119 Energy Policy 1.
199 As summarised in Chapter 7.III.
200 Rachel Killean "Environmental Restorative Justice in Transitional Settings" in Brunilda Pali and Miranda Forsyth (eds) *The Palgrave Handbook of Environmental Restorative Justice* (Palgrave Macmillan) (forthcoming).
201 Bryan Jenkins "Environmental Restorative Justice: Canterbury Cases" (paper presented at the 38th Annual Conference of the International Association for Impact Assessment, Durban, 16-19 May 2018) at [5].
202 Stacy-ann Robinson and D'Arcy Carlson "A Just Alternative to Litigation: Applying Restorative Justice to Climate-Related Loss and Damage" (2021) 42 TWQ 1384 at 1392.
203 For example, see Michael King and others *Non-Adversarial Justice* (Federation Press, Sydney, 2009) at 64.
204 Batros, above n 187.

evidence of restorative practices' efficacy in this regard.[205] Further research shows that restorative practices can provide voice, validation, vindication and meaningful accountability, aspects that are particularly relevant to the climate-vulnerable, and are not provided through other processes, such as adjudication.[206]

Restorative practices are also particularly effective at preventing future disputes between the parties. This is one of the specific objectives of the processes, and it has been proven to reduce criminal offending,[207] and prevent future conflicts.[208] There is less evidence of restorative practices having broader preventative effects on other parties. However, if it was used to address a significant CCD, or an outcome was, as suggested above, incorporated into the UNFCCC, this broader impact would likely be evident.

4 Rule of Law

As with Māori DR, the focus on restoration and relationships can mean restorative practices take time and may, therefore, not be viewed as an efficient form of DR. Also as with Māori DR, however, restorative practices have considerable rule of law benefits. In terms of access to justice, a number of restorative practices already exist within domestic DR systems through statute,[209] other official processes (such as the Regional Council approach referred to above), and more informally within communities, such as schools. This pre-existing familiarity with restorative practices would contribute to ease of access for CCDs. Internationally, some scholars suggest that restorative practices could be made accessible under the UNFCCC, for example, via the Warsaw International Mechanism on Loss and Damage's mandate to enhance action and support for addressing loss and damage.[210] Restorative practices also have access to justice and power balancing benefits for climate-vulnerable parties. Specifically, they are said to better reflect indigenous peoples' experiences of environmental harms,[211] better meet the

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205 Jenkins, above n 201, at [5].

206 Leigh Goodmark "Keynote Address" (speech to the Family Violence, the Law and Restorative Justice Conference, Wellington, 7 May 2015).

207 See Ministry of Justice "Reoffending Analysis for Restorative Justice Cases 2008-2011" (April 2014) <www.justice.govt.nz>; Lawrence Sherman and others "Are Restorative Justice Conferences Effective in Reducing Repeat Offending?" (2015) 31 J Quantitative Criminology 1; and Heather Strang "Concluding Thoughts" in Hayden and others, above n 170, 221 at 221.

208 In schools for example, see David Simson "Exclusion, Punishment, Racism and Our Schools" (2014) 61 UCLA L Rev 506 at 554-556.

209 For example, in New Zealand's criminal law through the Sentencing Amendment Act 2014, s 24A(1).

210 See for example, Pekkarinen, Toussaint and van Asselt, above n 30 at 49; and Robinson and Carlson, above n 202. This mandate was established in 2013: UNFCCC *Report of the COP* FCCC/CP/2013/10/Add.1 (31 January 2014), decision 2/CP.19, art 5, and is discussed in Chapter 6.II.A.

211 Killean, above n 200.

needs of indigenous communities,[212] and have been suggested for climate-vulnerable parties who face difficultly accessing justice in Loss and Damage Disputes through adjudication.[213] The presence of the facilitator in restorative practices also provides power balancing benefits, as well as assisting with efficiency (as part of their role is to facilitate the process). Further, restorative practices can improve access to justice to other processes, specifically adjudication. Restorative justice research has shown that these processes can result in resource savings for courts, including fewer cases, thus reducing delays and allowing easier access.[214]

Restorative practices also provide public good benefits. These processes do not just involve the direct parties to a dispute, but also those more widely impacted, such as communities, and they are based on underlying values of accountability and inclusivity. These factors provide for the necessary incorporation of vital public interests in CCDs and enhance the public nature of the process.[215]

D Summary on Additional Processes

Māori DR and restorative practices are not the only additional processes that would benefit the CCDR system. Other proposed processes include People's Climate Tribunals,[216] which incorporate a truth and reconciliation type function, and Public Inquiries, which have been specifically suggested for investor disputes,[217] but could also have wider application, especially to CCDs involving communities. Other determinative DR processes, such as neutral fact-finding, case appraisal, and expert determination, could also provide effective resolution for some CCDs, and others may emerge or become apparent over time.

International conciliation is another process that has significant potential, specifically to address inter-state CCDs, and deserves brief consideration. As explained in Chapter Two, it is a consensual process involving an impartial third party body that investigates a dispute and

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[212] Fanslow, above n 170, at 38; and Proietti-Scifoni and Daly, above n 170, at 285-286.
[213] Robinson and Carlson, above n 202, at 1392.
[214] Mark Umbreit, Robert Coates and Betty Vos "Restorative Justice Dialogue" (2007) 10 Contemporary Justice Review 23.
[215] Leigh Goodmark's view is in fact that the 'public' of community, available through restorative practices, is sometimes even more important than the 'public' of the public justice system: Goodmark, above n 206.
[216] International Rights of Nature Tribunal <www.rightsofnaturetribunal.org>.
[217] Emily Davies "Recommendations for Effectively Resolving Climate Change Disputes Against Investors" (2020) 1 CCLR 49 at 53-54.

makes a non-binding recommendation for possible settlement.[218] Under the UNFCCC dispute settlement mechanism, if negotiation (or other peaceful means) are unsuccessful, a state may request the creation of a conciliation commission, and must consider its recommendatory award in good faith.[219] As referenced in relation to other DR processes above, this mechanism has not been used. There are, however, some examples of conciliation being used in other contexts, such as through the Permanent Court of Arbitration under its conciliation rules.[220] Much of the effectiveness assessment made in relation to the ICJ's advisory proceedings is relevant to international conciliation. The key distinctions are that it is: more accessible (as it requires the parties agreement through an establishing instrument, not a referral from a UN agency); more likely to lead to resolution, as its specific objective is conciliation of the parties' dispute;[221] and better suited to consider non-legal, technical and scientific expert evidence; but less broadly impactful than an ICJ opinion. The 1981 Jan Mayen Case,[222] which involved a boundary dispute between Iceland and Norway, is a good example of the potential efficacy of international conciliation.

Despite the potential of these other processes, Māori DR and restorative practices provide wider and unique benefits for effectively addressing CCDs, particularly those that are currently not well provided for, including a number of Adaptation and Loss and Damage Disputes, and those involving the climate-vulnerable, as well as emerging Transition Disputes. Further, indigenous DR processes require specific consideration and inclusion in the CCDR system, as indigenous rights, knowledge and solutions are "critical to the formulation of effective and equitable responses to climate change".[223] Māori DR is an especially important process to include, given New Zealand's responsibilities to, and under, Te Tiriti o Waitangi. Some scholars do not believe that indigenous methods of justice should be used as a part of non-

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218 J G Merrills *International Dispute Settlement* (6th ed, Cambridge University Press, Cambridge, 2017) at 69.

219 Art 14(5) and (6).

220 Specifically, the 1996 Optional Conciliation Rules or 2002 Optional Rules for Conciliation of Disputes Relating to Natural Resources and/or the Environment. See, Judith Levine and Nicola Peart "Procedural Issues and Innovations in Environment-Related Investor-state Disputes" in Kate Miles (ed) *Research Handbook on Environment and Investment Law* (Edward Elgar Publishing Limited, Gloucestershire, 2019), at 240.

221 Merrills, above n 218, at 70.

222 Conciliation Commission on the Continental Shelf Area Between Iceland and Jan Mayen *Report and Recommendations to the Governments of Iceland and Norway (Decision)* 27 UNRIAA 1 (June 1981).

223 Belfer and others, above n 60, at 13. Also see Brugnach, Craps and Dewulf, above n 186; James Ford and others "Adaptation and Indigenous Peoples in the UNFCCC" (2016) 139 Climatic Change 429; and Julie Maldonado and others "Engagement with Indigenous Peoples and Honoring Traditional Knowledge Systems" (2016) 135 Climatic Change 111.

indigenous systems.[224] Detailed examination of this issue is outside of the scope of my thesis. However, as my assessment demonstrates, Māori DR and restorative practices would address gaps in the CCDR system, particularly in regard to climate-vulnerable indigenous peoples, and should, therefore, be incorporated into it. Like all DR processes, however, they are not a universal remedy, and will not be an effective or appropriate process for all CCDs. The issue of appropriate use is addressed in the following section.

VI Appropriate Use

A Introduction

Throughout, this thesis has demonstrated that no one, single DR process is the most effective for addressing CCDs. Rather, different types of these disputes will be most effectively resolved using different processes from across the DR spectrum. Identifying which of those processes will be most effective in any given CCD is a matter of "fitting the forum to the fuss" by considering and weighing up various factors.[225] This final section of the chapter addresses this issue. In doing so, it begins to provide guidance for how the CCDR system may be most effectively navigated. It should be noted, however, that assessing which process is the most appropriate for a particular dispute is not a simple, proscriptive, "box ticking" exercise, and should be done on a case-by-case basis. Due to the complexity and relevance of context in any dispute, it is not possible to make definitive claims about appropriate use. Rather, the following consideration is generalised guidance based on the relevant, indicative features. For the purposes of this thesis, features of a dispute include: the parties involved; the nature of the dispute; and any specific process requirements the parties have. Although these features are considered here separately, in reality they are interconnected. They also have some overlap with material covered by the effectiveness assessments.

B Parties

One factor to consider when deciding on the most effective process for a particular CCD is the nature of the parties to the dispute, and how many of them are involved. As this work has made apparent, CCDs involve a broad range of actors. The most common are considered here. As

224 For example, Carole Goldberg "Overextended Borrowing: Tribal Peacemaking Applies in Non-Indian Disputes" (1997) 72 Wash L Rev 1003.

225 Frank Sander and Stephen Goldberg "Fitting the Forum to the Fuss: A User-Friendly Guide to Selecting an ADR Procedure" (1994) 10 Negotiation Journal 49.

with all features, however, this is not a single, determinative factor, and will interact significantly with the nature of dispute.

1 States

The UNFCCC Negotiation Process, or other forms of negotiation and diplomatic means, will generally be more appropriate than other DR processes for multi-party, inter-state Mitigation and Adaptation Disputes. Restorative practices and indigenous DR also have potential benefits and applicability for these disputes. This is due to their climate response benefits, consensual nature, high levels of self-determination allowing states to protect their sovereignty (which is particularly important in the context of climate change[226]), and comparative informality and flexibility. In the case of Loss and Damage Disputes, the ICJ may be best suited for climate-vulnerable state parties to progress their disputes. Conciliation and commissions of inquiry are particularly well suited to inter-state CCDs. Specialised, public arbitration is likely best suited for investor-state CCDs.

2 Domestic Parties and Corporations

Non-state parties (including individuals, NGOs, corporations, and local or state governments) have been recognised as playing an increasingly important part in the climate response.[227] There is, however, no one DR process that is best suited for these parties, as it will depend on the nature of the dispute (see below). Involving corporate parties in CCDs is vital for the effective resolution of climate change issues. As a non-consensual process, domestic adjudication allows for CCDs to be brought against corporate parties in a way that requires their participation, making it particularly appropriate. This process also allows for the development of law, which is especially important as climate change-related, legal corporate responsibility is still evolving. Additionally, adjudication provides for the all-important public interest and accountability. These last two aspects relate to the nature of dispute, and are examined further below.

3 Climate-Vulnerable Parties

Adjudication provides a process through which climate-vulnerable parties (including individuals, communities, and states) can force reluctant parties, including corporations and

226 See for example, Bodansky, above n 9, at 695.

227 Preamble to the Paris Agreement; and see Jacqueline Peel and Hari Osofsky "Climate Change Litigation" (2020) 16 Annual Review of Law and Social Science 21 at 22.

developed states, to participate in CCDs. Whether this process is most appropriate, however, will depend on the nature of the dispute. Facilitation, mediation, Māori (and other indigenous) DR, and restorative practices may also be appropriate processes. If they are not mandated, however, they rely on voluntary participation, which limits their accessibility.

Where a power imbalance exists in a CCD, as will often be the case for those involving the climate-vulnerable, a third party process may be more appropriate, given part of their role is to address such imbalances. Adjudication and arbitration have more formal protections in this regard but also have considerable barriers to access for less powerful parties. In these cases, mediation could be more appropriate. Further, the flexibility of consensual processes can in fact make them more appropriate for vulnerable parties. Māori DR would have particular strength in this regard for CCDs involving tangata whenua, as would other indigenous processes in relevant jurisdictions.

4 Multiple Parties

CCDs often involve more than two parties given their polycentric nature. Generally, adjudication is not best suited to address multi-party disputes, and arbitration can provide more flexibility in this regard. Alternative processes are generally considered most appropriate to manage to large, multi-party disputes.[228]

C Nature of Dispute

In this thesis, the nature of a dispute includes the issues in dispute, the parties' interests,[229] and their desired outcomes. These latter two may or may not align, another factor that makes a definitive approach to appropriate use problematic. However, the nature of a dispute does give some indication of which DR processes will be more, or less, appropriate. This is examined here under two typical distinctions made in DR about the nature of disputes: those involving a limited number of legal issues; and those involving multiple, relational issues and interests. How long a dispute has been going is also part of its nature and, as a more distinct component, is addressed separately following this more generalised consideration.

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[228] Astor and Chinkin, above n 153, at 69.

[229] As defined in Chapter Two, "interests" in a DR context refer to the parties' underlying needs, reasons, or concerns.

It should be noted in this context that, generally speaking, all CCDs involve complex technical issues. As well as involving scientific considerations, they may also include issues of social and economic capability, justice, and equity. As established through the effectiveness assessments, specialised DR that can manage the technical content is important in this regard, and most DR processes considered can provide for this to some degree, and this is not specifically considered here again.[230]

1 Limited Legal Issues

If a CCD involves a limited number of issues of fact, law or rights, it may be more appropriate for them to be decided by a third party through a determinative process, such as adjudication or arbitration. However, it also depends on the parties' desired outcome. If a party is specifically seeking a determination of rights, the creation of precedent, or the development or clarification of a particular law, such as through a strategic CCD, then these can be provided through adjudication. If the parties want a quicker resolution on these issues, then arbitration may be more appropriate. For parties in these disputes that want to maintain or improve their relationship, minimise costs, or reach an even speedier resolution, evaluative mediation would be more appropriate. If state parties desire an authoritative but non-binding finding of facts (perhaps, for example, as a way to move through an impasse in negotiations), this could be achieved through the ICJ's advisory proceedings or, more accessibly, by commission of inquiry or conciliation.

There are instances, however, where adjudication may be inappropriate for hearing and resolving CCDs involving legal issues, especially in Loss and Damage Disputes. This is because the existing laws, causes of action, and remedies, along with the inherently "wicked" nature of CCDs, make judicial, fact-based decision-making difficult.[231] Further, although adjudication may typically be thought of as most appropriate for parties who are seeking to redress harm or be heard, this is not necessarily the case. As seen from the assessment of Māori DR and restorative practices above, these processes may be more appropriate for achieving these particular aims. The assumption that adjudication is the only process by which to achieve public accountability is also incorrect. The public nature of adjudication does make it especially appropriate for CCDs in which accountability is important, but this can also be achieved to

[230] This aspect is considered under the Rule of Law heading in the effective assessments in Chapters Four-Seven.

[231] Fisher, Scotford and Barritt, above n 2, at 178.

some degree through other processes, such as community-based facilitation, public mediation, Māori DR, and restorative practices.

2 Multiple Relational Issues or Interests

If a CCD involves: ongoing relationships (not just interpersonal in nature, but also those between states, businesses, government agencies, and an interested public); multiple and contentious issues; diverse interests that require tradeoffs; or outcomes that are more subjective and difficult to determine, a consensual process is likely to be most appropriate.[232] This is also the case if parties desire control over the outcome, a collaborative resolution, or flexibility and innovation in the development of solutions. Facilitative mediation is specifically designed for joint problem solving so may be particularly appropriate for these disputes. The flexibility of consensual processes also provides the benefit of continuing DR. An ongoing mediation or facilitation, for example, is not constrained to a one-off event, and can be convened and reconvened as needed. This is an appropriate form of DR to deal with the dynamic complexity of CCDs, not only as they provide for more flexible outcomes, but also as they allow for these to be agreed and re-negotiated as matters evolve. The fixed, determined outcomes of determinative processes do not provide this same responsiveness. Further, consensual processes can look to the future, require acceptance of responsibility for actions, and focus on future dealings between parties in ways determinative processes cannot.[233]

3 Length of Dispute

If a CCD is in the early stages, facilitation can be particularly appropriate. Mediation is also an appropriate process for early intervention. It can also be effective at the other end of the spectrum, where a dispute has been going on for some time and parties have become stuck or entrenched. A dispute needs to be relatively crystalised for determinative processes such as adjudication and arbitration, so these are not appropriate for early interventions. Restorative practices and Māori DR are most appropriate at the stage where there is some acceptance of wrong-doing or harm to be addressed.

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[232] Knaster, above n 168, at 504.
[233] Astor and Chinkin, above n 153, at 68.

D Process Requirements

There are a number of specific process considerations that may be important to the parties in a particular CCD and will therefore inform appropriate process choice. These include confidentiality, speed, enforceability, and precedent. They have been covered to some extent in relation to the nature of a dispute as they may overlap with desired outcomes, but are included here separately as they may be a primary consideration in their own right, particularly in strategic CCDs.

1 Confidentiality

As found in this thesis, confidential CCDR is generally inappropriate, and CCDs are best served through public processes, which is usually assumed to mean adjudication. As seen with the UNFCCC Negotiation Process and other consensual processes, however, adjudication is not the only appropriate choice in this regard. The flexible nature of consensual processes allows the parties to agree that the process and its outcomes will be public. The same is true of arbitration, and as particular issues have been raised about the suitability of private arbitration to address CCDs, as recommended above, improvements should be made in this regard. If parties do wish for the process and/or outcome to be confidential, mediation may be more appropriate. Given confidentiality can limit the necessary consideration of public interests involved in many CCDs, however, it should not be assumed to apply in CCDR. Rather, it should be used where such public interests are limited, for example, in narrow, routine CCDs with no wider relevance (such as, some contractual disputes[234]), or where necessary, for example, to specifically protect sensitive information.

2 Speed

Timely resolution is a particularly important consideration in CCDs from a climate response perspective. This is due to the time sensitive nature of the underlying issue of climate change itself. To date, the UNFCCC Negotiation Process has not produced outcomes quickly enough. As noted above, however, this could be improved by the involvement of facilitators or the incorporation of mediation. Determinative processes are producing outcomes more rapidly than the global negotiations, and private negotiations can be faster still, but this is generally because the disputes they are dealing with are smaller and less complex. Arbitration can

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[234] The dispute about the transfer of ownership of carbon credits included in Chapter 4.II.B.3, is an appropriate example of such a dispute: *Carbonext Tecnologia Ltd v Amazon Imóveis* Sao Paolo Civil District Court, Action 1072768-63.2021.8.26.0100, 7 October 2021.

arguably be accessed more readily than adjudication, and therefore produce an outcome more quickly. Although some third party consensual processes can take longer, such as Māori DR and restorative practices, they can result in more comprehensive and enduring outcomes.

3 Enforceability and Compliance

Where the enforceability of, and compliance with, a CCD outcome are of particular concern, the following considerations will be relevant. Adjudication guarantees a binding and enforceable outcome. However, there can be some challenges with the enforcement and compliance of adjudicated outcomes.[235] Arbitration also guarantees a binding and enforceable outcome, and can provide specific cross-border recognition and enforcement that domestic adjudication may lack.[236] This makes it particularly appropriate for disputes involving cross-jurisdictional parties. The UNFCCC Negotiation Process and other consensual processes do not guarantee an outcome, and lack specific enforcement mechanisms available to determinative processes. If an agreement is reached, however, compliance rates for consensual outcomes are higher than for those that are imposed. Indeed, the higher the level of party autonomy, the higher the level of compliance. Therefore, for inter-state CCDs, these non-binding processes may actually be most appropriate. This would not be the case, however, for strategic disputes that are seeking to more rapidly and progressively advance a specific issue, such as liability, which would be better suited to adjudication.

4 Precedent

As noted above, the creation of legal precedent nationally, or persuasive authority in the case of international adjudication, may be a specific desire for a party, for example, in a strategic CCD. This would make adjudication the most appropriate process. Arbitral awards can provide guidance in other cases, which may be appropriate in a particular context. For many routine CCDs, however, such as administrative Adaptation Disputes, precedent will not be important, and parties will be more concerned with getting the matter resolved as quickly as possible. Mediation may be more appropriate in these instances.

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[235] See Chapters 4.III.B.2; and 5.III.B.2.

[236] For example, under the Convention on the Recognition and Enforcement of Foreign Arbitral Awards 330 UNTS 38 (opened for signature 10 June 1958, entered into force 7 June 1959) [*New York Convention*].

E Summary on Appropriate Use

CCDs are particularly complex and multi-faceted, involving many, varied features. This reality makes it is difficult to "specify criteria for the allocation of disputes to a particular process in advance or in the abstract."[237] As set out above, however, there are some features that can indicate whether one DR process will be more effective than others. Nonetheless, fixed prescription should be limited. Rather, processes should be presented as different pathways, or Frank Sander's "multi-door courthouse", as part of a comprehensive CCDR system that incorporates a number of DR processes.[238]

VII Chapter Summary

In its current state, the CCDR system is suffering from a number of deficiencies that limit its effectiveness. First, the commonly used processes have efficacy shortcomings. Secondly, the lack of some potentially effective processes means that there are gaps within the system. Thirdly, it is not adequately future-proofed. In order to address these deficiencies and provide effective resolution for CCDs, the existing CCDR system can, and should, be improved. This can be achieved through a number of changes. First, by broader use of some current processes, including adjudication in the ICJ, and considerable expansion of mediation and facilitation. Secondly, by use of additional processes, including Māori DR and restorative practices. Thirdly, through appropriate use of all processes.

These improvements would create a more effective CCDR system – one, that in incorporating a full range of DR processes, will most effectively resolve CCDs. This is the answer to my research question, are there other DR processes that would more effectively resolve CCDs? As this thesis has shown, CCDs will continue to increase in number, variety, severity and complexity. Such heterogenous disputes will not have an effective homogenous resolution. Instead, a "portfolio of approaches" is required.[239] As such, it is this whole CCDR system as a comprehensive entirety, as opposed to a single process, that is most effective. However, this chapter has also highlighted some limitations even a comprehensive CCDR system does not

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237 Michael Legg and Sera Mirzabegian "The Continuing Role for Litigation" in Legg (ed), above n 172, 117 at 127.

238 Frank Sander "Varieties of Dispute Processing" (address to the National Conference on the Causes of Dissatisfaction with the Administration of Justice, Minnesota, 7-9 April 1976).

239 Bodansky, above n 9, at 692.

address, specifically, it cannot overcome fragmentation, and it is still inadequately future-proofed. These remaining issues are considered and addressed in the next, and final, chapter.

Chapter 9: The Most Effective Climate Change DR System

I Chapter Outline

This final, concluding chapter consists of three main sections. Section II summarises my research by outlining the problems and questions considered and answered by the preceding chapters. Section III addresses a final gap in this research by identifying and addressing the outstanding problems with the climate change DR (CCDR) system. Lastly, Section IV provides an overall conclusion of this thesis.

II Summary of Research

A Research Problems

As set out in Chapter One, there are several problematic gaps in the current CCDR research. The first is the lack of an overarching definition and understanding of the broad topic of climate change disputes (CCDs). This is problematic as it means that there is no comprehensive understanding of the causes or scope of CCDs. This impacts on the ability to resolve, and possibly prevent, these disputes most effectively, as understanding the sources and nature of disputes is necessary to determine how to best avoid or resolve them. The second gap is an absence of work examining the full range of DR processes being used to address CCDs, meaning that there is no comprehensive understanding of the CCDR system. Thirdly, there is limited research considering how effective the various DR processes are for addressing CCDs. There is not even general consideration of what "effective" resolution means in relation to CCDs, nor a clear and specific mechanism for assessing it. This lack of research examining and assessing the full scope of CCDs and CCDR processes means that there is no substantiated basis on which CCDs can be most effectively identified, understood, resolved, or prevented, nor on which the system for resolving them can be improved. Therefore, although a cursory consideration suggests that the current approach to resolving CCDs is not effective – as climate change worsens and related disputes increase – this assumption has not been demonstrated by evidence-based examination. The practical implications of these research gaps are apparent when examining DR responses to natural disasters. Analysis of these responses globally showed that the lack of a specific and comprehensive system for resolving these disputes

contributed to backlogs and delays in addressing them, personal stress, financial loss, and economic slowdown.[1]

B Research Questions Answered and Thesis

In order to address the research problems outlined above, my overarching research question is, what is the most effective way to resolve climate change disputes? My hypothesis was that there is not one, best way to resolve CCDs. To test this, I approached the broad, overarching question by considering a number of sub-questions, which I addressed through three main parts, as summarised below.

In Part A, I used the "three pillars" of the climate change response to create a broad, taxonomical definition of CCDs that properly reflects their complexity and gives this thesis the widest and most enduring scope. More precisely, I defined CCDs as any dispute (not only legal or international) related to the causes, impacts or harms of climate change, specifically mitigation, adaptation, and loss and damage. I argued that CCDs should be considered a distinct category or discipline of DR. This work answered, in broad terms, what are climate change disputes? In this Part, I also formulated the assessment mechanism necessary for robustly measuring the effectiveness of CCDR, which included the requirement that climate change be addressed.

In Part B, I addressed the second research gap by mapping and assessing the existing CCDR system through the three subcategories of disputes. This research answered the question, what processes are currently used to address CCDs and how effective are they? It also extended the answer to my first sub-question by providing further understanding of the scope, causes and nature of CCDs. This Part supported my thesis that there is not one, best way to resolve CCDs.

In the first chapter of Part C, I answered my next research sub-question, are there other DR processes that would more effectively resolve CCDs? Specifically, by identifying the specific needs for improvement in the existing CCDR system that had been raised in Part B, and proposing ways to address them, leading me to recommend an enhanced, comprehensive system that incorporates a full range of DR processes. This Part also examined how to make

[1] Freya McKechnie *Dispute Resolution Following Natural Disasters* (Victoria University of Wellington and GCDR, April 2018) at 13 and 19.

most effective use of that system through a consideration of the appropriateness of the various DR processes. All of this work further corroborated my thesis by showing that CCDs are most effectively resolved using different processes from across the entire DR spectrum, and that it is this CCDR system as a comprehensive whole, as opposed to any single process, that is most effective. Chapter Eight, however, highlighted problems that comprehensiveness in a DR system does not address, thereby indicating that a comprehensive CCDR system is still not *the* most effective way to resolve CCDs. Section III below addresses this outstanding issue.

In summary, this thesis has attempted to provide a clearer understanding of CCDs and their current methods of resolution, establishing them as a distinct category of disputes. It has proven through systematic assessment that there is no "silver bullet" or panacea when it comes to resolving CCDs. Instead, it has determined that a comprehensive CCDR system, incorporating a full range of processes is most effective. In this way, I have confirmed my thesis. Further to this, my research has demonstrated on an empirical basis what improvements are required to enhance that effectiveness.

III Outstanding Research Gap

A Introduction

Even a comprehensive CCDR system (that is, one consisting of processes from across the DR spectrum) has limitations on its efficacy. As raised in the previous chapter, it still suffers from fragmentation and the possibility of being overwhelmed by future disputes, rendering it inadequately future-proofed. These two issues are exacerbated by the "wicked" nature of CCDs, and are particularly problematic because of it. There are, however, ways these concerns can be addressed and the efficacy of the CCDR system further enhanced. Specifically, by being considered and constructed as cohesive; deliberate yet adaptable; and preventative. In the following sections, the remaining problems with the CCDR system are outlined and the proposed solutions then detailed.

B Problems

As examined in Chapter Eight, the existing, traditional DR system is not equipped to manage CCDs. It was not designed for the type of complexity, variety and scale these disputes bring.

As a result, "we cannot fool ourselves that the solution lies within current paradigms."[2] Having a comprehensive system alleviates these issues to some degree but does not address fragmentation nor adequately manage the volume of CCDs. These two problems are now articulated in further detail.

1 Fragmentation

There is currently no overarching or systemic resolution response to CCDs. Rather, they arise and present before a particular DR process in an unplanned and ad hoc way. Responding to any area of disputes on a piecemeal basis raises efficacy, access to justice, and broader rule of law issues,[3] but given that CCDs are a result of one of the world's most challenging problems, these concerns are acutely problematic. Fragmentation of global climate change governance more broadly, has been found to negatively impact speed, ambition, participation, and equity.[4] These are all factors that are vital to addressing climate change, and relevant to CCDR. Fragmentation is also a problem for resolution. As identified in previous chapters, piecemeal, case-by-case resolution is a specific restriction on the climate response.[5] The fragmentation of the response to, and resolution of, CCDs is exacerbated by the traditional, conventional view that DR processes are discrete, rather than parts of one system.

2 Unmanageable Volume

As shown through this thesis, CCDs already cover an extensive and rapidly expanding range of subject matters, sources of law, actors, consequences, potential solutions and contextual considerations. As further shown, CCDs are, and will continue, to increase in number, variety, severity and complexity. As Chapter Eight established, a comprehensive CCDR system affords some future proofing but not to the extent required to provide for CCDs given their rapidly growing, "wicked" and unpredictable nature. An overwhelmed DR system results in inadequate provision of DR, which is a serious concern from both a practical and rule of law perspective. CCDs most suited to, and requiring, adjudication will be especially affected, as it is the courts that have the most limited capacity and are liable to backlogs. Given the unique

[2] Luke Elborough "International Climate Change Litigation" (2017) 21 NZJ ENVTL L 89 at 126.
[3] These implications, such as court delays, backlogs, cost barriers, and judicial inefficiency, are identified in Annabel Shaw "ADR and the Rule of Law Under a Modern Justice System" (LLM Thesis, Victoria University of Wellington, 2016) at 25-29.
[4] Frank Biermann and others "The Fragmentation of Global Governance Architectures" (2009) 9 GEP 14.
[5] Chapter 7.III.A. Also see, Daniel Bodansky "The Role of the International Court of Justice in Addressing Climate Change" (2017) 49 Ariz St LJ 689 at 701.

law creation function of this process, and the importance of this to the climate response, this is a serious risk for the CCDR system.

C Solutions

As with any aspect of climate change, there is no simple solution to these problems. There are, however, ways in which a comprehensive CCDR system can be enhanced to address fragmentation and manage volume. Specifically, by making it cohesive, deliberate yet adaptable, and preventative. These solutions are theoretical to some extent, in that they relate to how the system is conceived, but they can also be realised in practical and material ways.

1 Cohesive

A cohesive CCDR system takes the comprehensive range of DR processes and brings them together within one, holistic system. An example of this can be seen in international law, where a hierarchy of DR processes make up one whole system that states use to peacefully resolve disputes.[6] This same idea can be applied to CCDs. Cohesion would help better manage the "wicked" nature of CCDs, address fragmentation, and allow for planning, which is necessary for future proofing (and is dealt with in the following section). Research examining the DR response to the 2010/2011 Canterbury earthquakes in New Zealand corroborates this: "[t]here is a need to plan a cohesive framework for DR following natural disasters."[7] CCDs are, and will increasingly be, on an vastly larger scale than individual disaster events (both in terms of the disputes themselves, and the impacts of failing to resolve them effectively), further amplifying the need for a cohesive DR system.

As well as requiring a shift in the way we perceive the CCDR system, there are some concrete ways in which cohesion can be achieved. For example, by designing a multi-tiered DR response to CCDs that provides flexible pathways for resolution, and functions as a system in the way in which parties access and use it. A key component of this system design is the formalisation or creation of a climate change-specific alternative DR track, which provides easily accessible alternative processes on subnational, national, and international levels, particularly, those that are traditionally more difficult to access, including facilitation, restorative practices, Māori DR and other indigenous processes. Thus, bringing Frank Sander's 47 year-old aspiration for a

[6] As reflected in the Charter of the UN, art 2(3) and 33(1); UNFCCC, art 14; and Paris Agreement, art 24.
[7] McKechnie, above n 1, at 31.

multi-doored courthouse to life.[8] As established in Chapter Eight, deciding which process (or "doorway") will be most effective in any given situation is a matter of "fitting the forum to the fuss."[9] Fixed prescription or constrained channels of DR should be avoided. Whilst maintaining this flexibility, however, a cohesive system should promote the most appropriate form of DR, and in some cases, on the basis of the climate response, mandate it. In the introduction to a 2021 text about climate change litigation, the editors compared the adjudication system to an orchestra playing without a conductor.[10] This is also true of the broader, global CCDR system. It requires cohesion to bring it together and operate most effectively as one entity.

2 Deliberate yet Adaptable

A deliberate DR system is one that is: specific to CCDs; planned; and purposeful. This is in comparison to a system that is reactive and ad hoc, with parties using arbitrary processes in a unsystematic way. A deliberate approach helps avoid fragmentation and manage large volumes of disputes. Establishing such a system first requires a thorough understanding of material covered in this thesis, specifically, the nature of current and future CCDs, as well as the map and assessment of the existing CCDR system. This should inform the design of the cohesive system as outlined above. Adequate resourcing for all DR processes within that system is vital. This is particularly important for those processes that are commonly overlooked and underfunded through traditional justice systems, that is, the alternative processes.

A deliberate DR system also requires that potential disputes are specifically contemplated and provided for in advance, as demonstrated by Baetens' green development example in the previous chapter.[11] Therefore, when climate change-related contracts, agreements, policy, or legislation are being created, at either an international or national level, the parties involved should be required to provide an appropriate DR pathway for potential disputes within the comprehensive and cohesive CCDR system.

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8 Frank Sander "Varieties of Dispute Processing" (address to the National Conference on the Causes of Dissatisfaction with the Administration of Justice, Minnesota, 7-9 April 1976).

9 Frank Sander and Stephen Goldberg "Fitting the Forum to the Fuss: A User-Friendly Guide to Selecting an ADR Procedure" (1994) 10 Negotiation Journal 49.

10 Ivano Alogna, Christine Bakker, and Jean-Pierre Gauci (eds) *Climate Change Litigation: Global Perspectives* (Brill, Leiden, 2021) at 1.

11 Freya Baetens "Combating Climate Change through the Promotion of Green Investment: From Kyoto to Paris without Regime-Specific Dispute Settlement" in Kate Miles (ed) *Research Handbook on Environment and Investment Law* (Edward Elgar Publishing Limited, Gloucestershire, 2019) 107 at 110-111, as discussed in Chapter 8.II.B.

The deliberate nature of the CCDR system needs to be continuous. This means that the system should be consistently monitored and adjusted as necessary, rather than being established and then left without this oversight. Although this is true of all DR systems, the rapidly-evolving, unpredictable, and complex nature of CCDs makes this even more important, and will help combat fragmentation and allow for the escalating volume of disputes. This continuous monitoring and improvement is part of an adaptable system. That is, one that is proactive, responsive and flexible.[12] This thesis has demonstrated that the traditional approaches and solutions to DR are not sufficient to effectively address CCDs.[13] The CCDR system needs to be more malleable, broadly-focused, and innovative in terms of approaches to resolution. It should, for example, support "diverse local initiatives, coordinating efforts internationally and developing unique, culturally supported, integrated combinations of [DR] techniques and approaches."[14] It should also be open to exploring possible new DR approaches, particularly as climate change worsens and more assertive and creative solutions become necessary. For example, research has found that supranational, prosecution-based DR schemes are more effective in addressing cases of non-compliance, and are less susceptible to the influence of power imbalances on dispute settlement outcomes, compared to systems relying on state-initiated complaints.[15] Perhaps paving the way for a climate change enforcement body.

Additionally, a deliberate DR system will be specifically designed to be most effective for addressing CCDs. As established in formulating a relevant effectiveness measure, and demonstrated through the application of that measure in this thesis, there are some aspects of effectiveness that are specific to CCDs (as opposed to other types of disputes). Supporting the climate response is necessary for a DR process to be effective, whereas the more traditional notions of confidentiality and impartiality are not.[16] Preventing CCDs is also necessary, and this is detailed separately in the following subsection. The other two effectiveness criteria used (resolution and compliance with the rule of law) are more generally accepted aspects of DR. For the CCDR system to be most effective, these aspects need to be explicitly included or excluded from it as appropriate. First, they should be stated in the system's purpose or objective

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[12] The design and use of responsive DR systems (that include various ADR approaches) has recently been considered in Nofit Amir and Michal Alberstein "Designing Responsive Legal Systems" (2022) 22 Pepperdine DRLJ 263.

[13] See Chapter 8.II.

[14] Kenneth Cloke "Thinking Locally, Acting Globally" in Alexia Georgakopoulos (ed) *The Mediation Handbook: Research, Theory, and Practice* (Taylor & Francis Group, New York, 2017) 293 at 295.

[15] Jonas Tallberg and James McCall Smith "Dispute Settlement in World Politics" (2014) 20 EJIR 118 at 118.

[16] As established in Chapter 3.III.C.4.

(as a part of its governing Rules). Second, they should be implemented in the system's design and operation. This can be achieved, in part, by employing the improvements recommended through this thesis. A more detailed consideration of how these aspects should be implemented is beyond the scope of this research. Some possible approaches are, however, included in the following two paragraphs.

To ensure that the CCDR system supports the climate response in practice, relevant DR service providers and third parties should have an inherent obligation to consider (in determinative processes) or require parties to consider (in consensual processes) climate change issues and outcomes that mitigate climate change, support adaptation to it, or address the loss and damage caused by it. As previously identified, this conflicts with facets of traditional impartiality. This concept has, however, been found to be dated, unhelpful and unrealistic when applied to some modern ADR practices.[17] Moreover, climate change requires the reconsideration of traditional approaches and, in this case, avoiding an imminent threat to the planet's survival must prevail over the status quo. The precise mechanism for implementing this obligation needs to be more thoroughly explored but could be realised through requiring adherence to the liberalism, rule of law-based theory as outlined in this thesis.[18] Alternatively (and more broadly beneficial for the climate response), it could be achieved through a specific legal requirement, such as would be created by a constitutional nature's rights law as proposed by Sir Geoffrey Palmer.[19]

Given confidentiality is not relevant to most DR processes and can have negative consequences on the climate response,[20] it should be explicitly limited within the CCDR system, and not automatically apply to any ADR processes as it usually would. This is particularly relevant to investor-state arbitration and national mediation processes. The ways in which CCDR-appropriate confidentiality can be implemented is discussed as a part of the recommended improvements to the CCDR system in Chapter Eight. Broadly speaking, these processes need to provide for the public interests involved in CCDs, for example, by receiving public input and making outcomes public. This could be operationalised through the Rules of the CCDR system. In regard to impartiality, those Rules should clearly define what that means in relation

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17 Rachael Field and Jonathan Crowe *Mediation Ethics* (Edward Elgar Publishing Ltd, Gloucestershire, 2020).

18 See Chapter 1.III.C.4 for further detail.

19 Geoffrey Palmer "Can Judges Make a Difference?" in Alberto Costi and James Renwick (eds) *In the Eye of the Storm* (SPREP, Victoria University of Wellington and NZACL, Wellington, 2020) 107.

20 Chapter 3.III.C.4.

to CCDs, as set out in Chapter Three.[21] Again, these qualified approaches to traditional aspects of DR will require change in the way it is conceived and delivered. Such change is vital, however, for the effective resolution of CCDs, and given the realities of CCDs as established in this thesis.[22]

3 Preventative

The CCDR system should provide for the prevention of disputes. (This is in addition to planning for potential CCDs, as explained above in relation to a deliberate system). Preventative DR systems are not a new idea. As shown in Chapter Eight, this is part of the reason for establishing restorative justice within criminal justice systems.[23] As Michael King and others state, "[p]revention, or early intervention, is clearly better than post-conflict or post-harm interventions."[24] This is especially true of CCDs given their potential for harm, and is vital to the climate response, as prevention of climate impacts and harms is demonstrably preferrable. Prevention would also help limit the volume of disputes threatening to overwhelm the CCDR system. Further, it has benefits by way of costs savings.[25] There are a number of alternative processes alongside restorative practices that offer specific preventative benefits, including: facilitation, conflict coaching, interest-based negotiation, mediation, Māori DR and other indigenous DR processes.[26] This is further justification for the increased and broader use of these processes with the CCDR system, as I argue for in Chapter Eight.

There are some other, more specific ways prevention can be built into the CCDR system, for example, through the creation of preventative planning schemes. These could be based on the environmental collaboration and conflict resolution institutions in the United States, which are public sector centres that provide third party, consensual processes to develop and implement environmental policy.[27] This concept could be extended to provide these services to all parties,

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21 Chapter 3.III.C.4.

22 More specifically, CCDs concern an imminent threat to human survival, involve highly vulnerable parties and fundamental power imbalances, and are burgeoning in complexity and volume. See Chapter One.

23 Chapter 8.V.C.3.

24 Michael King and others *Non-Adversarial Justice* (Federation Press, Sydney, 2009) at 19.

25 See Chapter 3.III.C.2 for discussion on the costs of disputes.

26 Michael Moffitt "Which is Better, Food or Water: The Rule of Law or ADR" (2009) 16 Disp Resol Mag 8 at 14; and Laurence Boulle, Virginia Goldblatt and Phillip Green *Mediation: Principles, Process, Practice* (2nd ed, Lexis Nexis, Wellington, 2008), at 15-16.

27 William Hall and Michael Kern "The Public Sector as Mediator" in Georgakopoulos (ed), above n 14, at 282.

including the private sector and international actors. Such an institution could, for example, be utilised to assist the UNFCCC Negotiation Process.

Another preventative measure that should be built into the CCDR system is to specifically allow for it to easily address non-legal disputes. Addressing non-legal issues is a necessary function of any modern justice system, as it prevents those issues from escalating into legal disputes at a volume that would overwhelm the formal justice processes.[28] As discussed, this is especially pertinent for CCDs given the burgeoning increases predicted.[29] One of the functions of alternative processes is to address non-legal disputes. The benefits of this approach have been demonstrated in New Zealand through the employment relations DR system. That regime provides for a broad range of parties to have access to mediation to deal with a wide range of non-legal issues.[30] This inclusion has been found to provide a number of outcomes that would benefit CCDs, including: early identification of conflict; prevention of escalation; avoidance of legal claims; facilitating behavioural changes; and improving relationships.[31]

There are other ways in which CCDs can be prevented that fall outside of the CCDR system. All climate actors at all levels should be encouraged to consider how any climate-related policy or decision they are making will raise disputes, and what, if anything, could be done to mitigate that.

D Summary

As this examination shows, the current fragmentation in considering and approaching CCDs and their resolution is problematic, and will rapidly become more so as these disputes increase and threaten to overwhelm the system. As many scholars make clear, something more than our traditional approaches and solutions is required to address CCDs.[32] I argue that part of that "something" is a more systemic view of, and approach to, CCDR. Specifically, one that supports the climate response, and is not only comprehensive, but also cohesive, deliberate yet

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28 Shaw, above n 3, at 51-52.

29 See subsection III.B.2 above; and Chapter 8.II.C.

30 Employment Relations Act 2000, ss 144, 4(2), and 144A. See Chapter 3.II.C for further discussion on the appropriate definition of disputes.

31 Karen Radich with Peter Franks, *Employment Mediation* (2nd ed, Brookers, Wellington, 2013), at 34-35 and 136.

32 For example, see Mike Hulme *Why We Disagree About Climate Change* (Cambridge University Press, Cambridge, 2009) at 334; Elizabeth Fisher, Eloise Scotford and Emily Barritt "The Legally Disruptive Nature of Climate Change" (2017) 80 MLR 173 at 177; and Elborough, above n 2.

adaptable, and preventative. Creating a formalised, institutionalised climate change conflict resolution centre would be one way to achieve this, and the possibility warrants further research. It should be noted, that providing any sort of response to CCDs requires them to be explicitly identified. This further reinforces the need for a workable definition and comprehensive understanding of CCDs, as proposed in this thesis.

IV Conclusion

Climate change is arguably the greatest threat humanity has been called to face. Our very survival depends on managing it, and yet the obstacles to doing so are enormous.[33] Indeed, it is too late for us to prevent climate change, and almost too late for us to meaningfully limit its impacts and harms.[34] The many environmental, social, and financial disasters it is currently causing are going to get worse, and become more frequent, severe, widespread, impactful and costly. These climate disasters are causing disputes. Disputes that are rooted in the very structure of our society. Disputes that are immensely complex and multipolar, touching on all aspects of that society – scientifically, ecologically, socially, politically, and economically, and involving parties from all levels of it – regionally, nationally, and internationally. Disputes that are increasing and escalating, and will continue to do so, as more individuals, communities, states, and ecosystems are affected, and the urgency with which the climate crisis is viewed grows. Moreover, "time is of the essence."[35] As Kenneth Cloke states, "[t]he ability to resolve these conflicts quickly and effectively will have a direct impact on the degree of damage they create."[36] Our current way of addressing CCDs is lacking. There is no definitive solution to the challenge of CCDs but we can do better. Doing so requires a change in the way we think about and approach CCDR. We need to conceive of, and realise, a CCDR system that supports the climate response, is comprehensive, cohesive, deliberate yet adaptable, and preventative. A system that, in large part, relies on more and better use of innovative alternative DR processes, particularly restorative and indigenous approaches.

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33 Bernard Mayer *Staying with Conflict: A Strategic Approach to Ongoing Disputes* (Jossey-Bass, San Francisco, 2009) at 34.

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