International Climate Law: Recapping, Reviewing, and Exposing State Responses to Climate Change

Ash Murphy*

Abstract

International climate law came into existence in 1992 through the United Nations Framework Convention on Climate Change (UNFCCC). Since then, there has been the Kyoto Protocol 1997 and the Paris Agreement 2015. Yet, despite the existence of international law to address climate change the threat does not just continue to exist but is exacerbating. The purpose of this paper is to provide a recap of international climate law to contextualise the pathway that has led to the current response through the nationally determined contributions system of the Paris Agreement. A response which continues to prove unable to stimulate states to take the required action to address the threat of climate change. In short, this paper argues that international climate law continues to be an inadequate response to climate change.

I. Introduction

In 1992 the United Nations Conference on Environment and Development took place in Rio de Janeiro. This was the first time that climate change had featured prominently at the world level, acting as the launch point for what would become international climate law. Since this pivotal conference twenty-nine years ago, there has been one framework convention on climate change, twenty-five Conferences of the Parties (COP), and two subsequent international treaties in the form of the Kyoto Protocol and Paris Agreement. These legislative efforts, particularly the latter, have managed to transcend typical international legal fauna and percolate into the mainstream, featuring prominently across global media platforms. As such, electorates around the world are very much aware of the threat stemming from climate change and, broadly speaking, the response taking place at the international level. The abstract problem of climate change in 1992 is now perceived in much clearer terms as a global threat, and it would be difficult to find democratic governments, even recalcitrant ones, that refuse to engage with the climate response narrative. Climate change and the reactions to it are very much part of the world we live in.

Given this reality, one might be forgiven for assuming the climate crisis is well in hand. Compounding this comforting assumption, governments can be found making statements that place climate change as their 'foremost international priority', or

*Ash Murphy is a lecturer of international environmental law at the Manchester Law School, Manchester Metropolitan University.

¹ Anonymous, 'Global Britain in a Competitive Age: the Integrated Review of Security, Defence, Development and Foreign Policy' (16th Match 2021) https://www.gov.uk/government/publications/global-britain-in-a-competitive-age-the-integrated-review-of-security-defence-development-and-foreign-policy accessed 24th May 2021.

suggesting they will meet their 'Paris commitments'.² Yet, does this impression of response resonate when compared to the magnitude of the problem? Do the legal efforts reflect the concern felt almost unanimously throughout the scientific world?³ Is the international community making sound and impactful climate response decisions, and are states taking the requisite action to mitigate climate change?

It is the purpose of this paper to provide a recap of international climate law to contextualise the pathway that has led to the current response in the form of the Paris Agreement. A broad review of these efforts will take place, before a more detailed examination of the Paris Agreement is provided. This paper will make the argument that international climate law is presently inadequate when matched against the scale of the threat, largely because it places states in a position of complete discretion that allows them to avoid taking the required action. Following this introduction, section two will provide a snapshot of the climate threat, detailing how the problem has exacerbated. Section three will recap and review the international climate framework. Section four will examine the nationally determined contributions system of the Paris Agreement to explore how states are choosing to implement their commitments. This paper will then conclude, having made clear that state efforts to tackle climate change through the Paris Agreement are lacking given the severity of the pending catastrophe.

II. The Escalating Threat of Climate Change

Anthropogenic activities have caused alterations to the composition of the global atmosphere, heating the earth and triggering climate change.⁴ There is no doubt in the scientific world that the temperature of the earth's atmosphere is rising in response to swelling concentrations of greenhouse gases.⁵ Between 1880 and 2017 the earth's temperature increased by 0.9 degrees.⁶ Humanity is staring at the start of a catastrophe that has the potential to decimate the entire global environment. Ecosystems are already beginning to breakdown, with repercussions reaching across the biosphere.⁷ Flora and fauna face conditions they are ill equipped to survive in, changing fundamental relationships across the species barrier and altering symbiotic patterns throughout habitats.⁸ Since the onset of the last ice age, the natural world has never been threatened in this way, and between 1970 and 2016 there was a 68% decline in wildlife populations.⁹ Astounding is the speed at which the natural world is shrinking, and this will only intensify as animal and plant populations are squeezed out of existence by the relentless march of human development and the climatic consequences.

² Australian Prime Minister, 'National Statement to the United Nations General Assembly' (25th September 2019) https://www.pm.gov.au/media/national-statement-united-nations-general-assembly> accessed 24th May 2021.

³ IPCC, 'Global Warming of 1.5°C: Summary for Policymakers' (2018).

⁴ UNEP, 'GEO6: Healthy Planet Healthy People' (2019).

⁵ IPCC, 'Global Warming of 1.5°C: Summary for Policymakers' (2018).

⁶ Anonymous, 'Global Temperature' (NASA, 13th February 2018) https://climate.nasa.gov/vital-signs/global-temperature/ accessed 15th February 2018.

⁷ IPBES, 'The global assessment report on biodiversity and ecosystem services: Summary for policymakers' (2019).

⁸ A Hoffmann, et al., 'Impacts of recent climate change on terrestrial flora and fauna: Some emerging Australian examples' (2019) 44 (1) Austral Ecology 3.

⁹ WWF, 'Living Planet Report 2020: Bending the Curve of Biodiversity Loss' (2020).

Moreover, humanity is also ill equipped to cope with these changing conditions. Rising temperatures in the atmosphere cause icecaps to melt.¹⁰ This triggers fresh water to be deposited into the oceans causing sea levels to rise, which produces greater levels of coastal erosion, while submerging some states one centimetre at a time. 11 Some regions of the world are beginning to experience unprecedented flooding and changes to their local hydro systems.¹² The depositing of fresh water into the oceans also has an effect on thermohaline currents, causing shifts that may have colossal repercussions on climatic stability for entire continents.¹³ Climate induced droughts and flooding instigate food and water insecurity around the world, which has implications for population centres in many different regions.¹⁴ Such repercussions include the possibility of conflict prompted indirectly by climate change. 15 Extreme weather events like hurricanes are becoming more destructive and increasingly frequent as temperatures rise in both the atmosphere and oceans. 16 It is only by chance that the supercharged Hurricane Dorian in 2019 did not make land in a more populated location.¹⁷ Climate change is not simply a matter of increasing atmospheric temperatures, instead comprising impacts that have devastating consequences for humanity and the wider ecology of flora and fauna the world over.

Yet despite these exacerbating impacts, greenhouse gas emissions have continued to proliferate. Between 2000 and 2010 the increase in output grew by 2.2% compared with an average growth figure of 1.3% between 1970 and 2000. In 2010 over 49 gigatonnes of greenhouse gas emissions were released into the atmosphere. In both 2010 and 2011 the rate of output increased by 3.5% before slowing slightly in 2012 and 2013 to a 1.8% increase. September 2016 saw the Mauna Loa Observatory report for the first time in recorded history the breaching of 400 parts per million of CO₂ concentration in the atmosphere. In May 2019 this concentration increased to the highest value recorded at 415 parts per million, only to be eclipsed in June 2020, and then again in February 2021 by an increase to 419 parts per million. If we carry on at

 $^{^{10}}$ B Wouters et al., 'Early 21st Century Mass Loss of the North-Atlantic Glaciers and Ice Caps' (2016) 18 Geophysical Research 1579.

¹¹ Tuvalu and Funafuti are experiencing sea-level rises at three times the pace of the global average, resulting in 2.8 to 3.6 millimetres a year, see: UNEP, 'GEO Small Island Developing States Outlook' (2014).

¹² K Morton, 'Climate Change and Security at the Third Pole' (2011) 53 Survival 121.

¹³ UNEP, 'GEO6: Healthy Planet Healthy People' (2019).

¹⁴ Anonymous, 'UN Warns Climate Change is Driving Global Hunger' (UN Climate Change, 12th September 2018) https://unfccc.int/news/un-warns-climate-change-is-driving-global-hunger accessed 15th October 2019.

¹⁵ N Gleditsch, et al., 'Whither the weather? Climate change and conflict' (2012) 49 (1) Journal of Peace Research 3.

¹⁶ UNEP, 'GEO 6: Healthy Planet Healthy People' (2019).

¹⁸ UNEP, 'The Emissions Gap Report 2016' (2016).

¹⁹ IPCC, 'Climate Change 2014 Synthesis Report Summary for Policymakers' (2014).

²⁰ UNEP, 'The Emissions Gap Report 2016' (2016).

²¹ B Kahn, 'The World Passes 400 PPM Threshold. Permanently' (27th September 2016) http://www.climatecentral.org/news/world-passes-400-ppm-threshold-permanently-20738 accessed 7th November 2016.

²² Anonymous, 'Daily CO₂' (CO₂ Earth, Mauna Loa Observatory, August 2019) https://www.co2.earth/co2-records accessed 19th February 2021.

the current rate the earth's atmospheric temperature will heat between 3°C and 5°C by the year 2100.²³

The anthropogenic causes of climate change show no signs of deceleration despite the existence of international climate law. More concerning, the final years before we lose the ability to respond effectively are upon us, and soon the cascade effect will be in unstoppable motion.²⁴ By recapping and reviewing international climate law, the following section will take aim at the discrepancy between the scientific reality of climate change and the legal responses that are supposed to be stemming its escalation.

III. Recapping and Reviewing International Climate Law

International climate law can be interpreted to mean the system of state level obligations designed with the express intent to tackle climate change. This definition captures the traditional sources of international law under Article 38(1) of the International Court of Justice Statute, including: customary law; conventions; and general principles.²⁵ However, the specificity that has been necessitated in the environmental context means that, although existing broadly, general principles have been relegated to a secondary role.²⁶ Furthermore, Bodansky asserts that 'the growing importance of treaties suggests a diminished role for customary international environmental law'.²⁷ Where international climate law (ICL) is concerned it is difficult to refute that conventions have become the principal forum in which states have sought to tackle climate change.²⁸ The United Nations Framework Convention on Climate Change (UNFCCC) 1992 was the first platform to situate climate change at its centre.²⁹ It remains today, underpinning the agreements and protocols intended to address climate change. The objective of the UNFCCC and subsequent instruments is to achieve the 'stabilisation of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system'.30

²³ Anonymous, '2019 Set to Be the 2nd or 3rd Warmest Year on Record' (WMO, 20th December 2019) https://public.wmo.int/en/media/news/2019-set-be-2nd-or-3rd-warmest-year-record accessed 20th December 2019.

²⁴ IPCC, 'Global Warming of 1.5°C: Summary for Policymakers' (2018).

²⁵ United Nations, Statute of the International Court of Justice, (24th October 1945 entered into force 18th April 1946) 33 UNTS 993, Article 38(1).

²⁶ Aurescu and Zaharia assert that international environmental law 'cannot be conceived outside scientific concepts' rendering the practice-based and often generic customary law unsuitable in the development of environmental principles. B Aurescu, F Zaharia, 'Science, Technology and International Environmental Law' (2011) 3 Acta Universitatis Lucian Blaga 203. See also: J Rawls, *The Law of Peoples* (1st edition, Harvard University Press 2001) for a discussion on how the general principles of law have lost further relevance because of their out-dated focus.

²⁷ D Bodansky, 'Customary (And Not so Customary) International Environmental Law (1995) 3 (1) Indiana Journal of Global Legal Studies 105.

²⁸ R Keohane, D Victor, 'The Regime Complex for Climate Change' (2010) 10 (33) The Harvard Project on International Climate Agreements 1.

²⁹ United Nations Framework Convention on Climate Change (adopted 9th May 1992, entered into force 21st March 1994) 1771 UNTS 107.

³⁰ Ibid., Article 2.

The UNFCCC was not intended to be the definitive framework in which climate change would be tackled. It was expected to provide a platform that would facilitate more indepth responses as 'scientific understanding of the problem' evolved.³¹ Through Article 7 the Conference of the Parties (COP) was established as the supreme body of the convention with a range of powers and responsibilities designed to 'promote the effective implementation of the Convention'.³² One of the COP's functions is to act as a forum for the creation of further ICL.³³ The Kyoto Protocol 1997 and the Paris Agreement 2015 represent the two instances of international law created through the COP and within the jurisdiction of the UNFCCC.³⁴ Together these three conventions embody the principal iterations of international law intended to address climate change. Within them are housed the primary norms of international climate law that are failing to mitigate rising emissions.

The Kyoto Protocol 1997 attempted to introduce hard law to the climate problem.³⁵ The states listed in Annex I of the Protocol were required to individually or jointly reduce their emissions by 5% below 1990 levels.³⁶ The Protocol also made it law that by 2005 each Annex I state was to have made 'demonstrable progress in achieving its commitments'.³⁷ It provided that these states must introduce monitoring systems and communicate their results periodically.³⁸ It even specified the methodologies to be used to calculate emissions.³⁹ There remains some doubt over the consistency and accuracy of recording methods, but this was a step in the right direction to ensure action was taken.⁴⁰ These commitments were far more specific than those found in the UNFCCC and acted to further the climate response agenda by creating targets and conditions for Annex I states. The Kyoto Protocol at first glance appears comprehensive in its intent to address the problem.

The Protocol attempted to tackle the problem of global heating by reducing greenhouse gas emissions. The gap between this objective and the 5% reduction target is problematic. Early scientific analysis indicated that the Protocol's commitments were likely to generate a reduction in global heating between 0.08°C and 0.28°C.⁴¹ If the Protocol generated results closer to the top end of this spectrum it was still unlikely

³¹ P-M Dupuy, J Vinuales, *International Environmental Law* (2nd edition, Cambridge University Press 2018) 177.

 $^{^{32}}$ United Nations Framework Convention on Climate Change (adopted 9th May 1992, entered into force 21st March 1994) 1771 UNTS 107, Article 7(2).

³³ Ibid., Article 17.

³⁴ Kyoto Protocol to The United Nations Framework Convention on Climate Change (adopted 11th December 1997, entered into force 16th February 2005) UN Doc FCCC/CP/1997/7/Add 1; Paris Agreement to The United Nations Framework Convention on Climate Change (adopted 12th December 2015, entered into force 4th November 2016) UN Doc FCCC/CP/2015/L.9/Rev.1.

³⁵ Hereinafter 'the Protocol'; Kyoto Protocol to The United Nations Framework Convention on Climate Change (adopted 11th December 1997, entered into force 16th February 2005) UN Doc FCCC/CP/1997/7/ Add 1.

³⁶ Ibid., Article 3(1).

³⁷ Ibid., Article 3(2).

³⁸ Ibid., Article 5.

³⁹ Ibid., Article 5(2).

⁴⁰ J Gupta, X Olsthoorn, E Rotenberg, 'The Role of Scientific Uncertainty in Compliance with the Kyoto Protocol to the Climate Change Convention' (2003) 6 Environmental Science and Policy 475.

⁴¹ T Wigley, 'The Kyoto Protocol: CO₂, CH₄, and Climate Implications' (1998) 25 Geophysical Research Letters 2285.

to reduce global heating by the levels required to slow climate change.⁴² Others examined the Protocol from the perspective of global CO₂ concentrations and found that an increase to 382 PPM would occur by 2010, of which Annex I states would contribute 43%.⁴³ Even if Annex I states fulfilled their commitments they would still be responsible for nearly half of the increase in CO₂ concentration, seriously bringing the 5% target into question. While some consider that the benefits of Kyoto reside in its foundation and symbolic attempt to address the problem,⁴⁴ the fact remains that from the beginning it was relatively unambitious, unable to inspire confidence that the necessary level of reductions would take place. As Wigley said, the 'Protocol, therefore...can be considered as only a first and relatively small step towards stabilizing the climate'.⁴⁵

A second problem related to the ambition of the Kyoto Protocol was the inclusion of Article 17 which allowed emissions trading to take place.⁴⁶ The purpose behind this is to allow states with spare emissions units to swap these with states that have exceeded their allocation.⁴⁷ This creates a system whereby the actual reductions a state makes might be significantly less than their posted results. It allows states with the capacity to respond to climate change to take less actual action and use emissions trading to meet their targets.⁴⁸ Some suggest that the trading mechanism is useful,⁴⁹ and perhaps it might be if used properly and in conjunction with capacity-building initiatives.⁵⁰ Still, its inclusion was too vague to prevent use by those states that should make tangible reductions. Global emissions would likely have decreased by a much greater margin if this facility had not been available to all Annex I states.

Moving to specific objectives, Annex I states were able to set a reduction target applicable to their individual circumstances.⁵¹ In some cases states were able to negotiate a capped increase in their emissions, which was deemed to be better than if they were going to proceed without joining the Protocol. Australia, for instance, was able to negotiate an emissions target of 108% of pre-1990 levels,⁵² and Iceland agreed

⁴² Ibid.

⁴³ B Bolin, 'The Kyoto Negotiations on Climate Change: A Science Perspective' (1998) 279 Science 330.

⁴⁴ C Bohringer, 'The Kyoto Protocol: A Review and Perspectives' (2003) 19 Oxford Review of Economic Policy 451.

 $^{^{45}}$ T Wigley, 'The Kyoto Protocol: CO₂, CH₄, and Climate Implications' (1998) 25 Geophysical Research Letters 2285, 2288.

⁴⁶ Kyoto Protocol to The United Nations Framework Convention on Climate Change (adopted 11th December 1997, entered into force 16th February 2005) UN Doc FCCC/CP/ 1997/7/ Add 1, Article 17.

⁴⁷ P-M Dupuy, J Vinuales, *International Environmental Law* (2nd edition, Cambridge University Press

⁴⁷ P-M Dupuy, J Vinuales, *International Environmental Law* (2nd edition, Cambridge University Press 2018).

⁴⁸ Canada represents a developed state that could take greater action to reduce its emissions, but may continue to rely on carbon trading, Canada's INDC Submission to the UNFCCC (May 2015), Clarifying Information Table.

⁴⁹ P Christoff, 'Post-Kyoto? Post-Bush? Towards an Effective Climate Coalition of the Willing' (2006) 82 International Affairs 831.

⁵⁰ M Trexler, L Kosloff, 'The 1997 Kyoto Protocol: What Does It Mean for Project-Based Climate Change Mitigation?' (1998) 3 Mitigation and Adaptation Strategies for Global Change 1.

⁵¹ Anonymous, 'Kyoto Protocol – Targets for the first commitment period' (UN Climate Change, 2019) https://unfccc.int/process-and-meetings/the-kyoto-protocol/what-is-the-kyoto-protocol/kyoto-protocol-targets-for-the-first-commitment-period accessed 19th December 2019.

⁵² M Roarty, 'The Kyoto Protocol Issues and Developments Through to Conference of the Parties (COP7)' (Parliament of Australia, 13th September 2002)

an increase to 110%.⁵³ The utility in allowing developed states like Australia and Iceland to negotiate an increase is highly problematic, but these compromises did bring emitters to the Protocol and under Article 3 still meant the 5% target was achievable jointly. The Protocol appears to represent a positive compromise which was able to demand actual action on the part of Annex I states, while providing the flexibility to recognise their individual circumstances. Yet, it was unsustainable for highly developed economies to increase their emissions, seriously limiting the Protocol's effectiveness and enabling the obstructive attitude of some states to prevail.

The success of the Protocol was further undermined by the reception from the wider international community. Many developing nations declined to sign up to binding targets because of perceived interference with their economic advancement (non-Annex I states).⁵⁴ This created a significant detraction because some of the greatest emitters of CO₂ came from the developing world, including, for example, India and China.⁵⁵ As a consequence, those that had signed up to set reduction targets began to question the utility of the agreement, as well as its fairness. The USA signed the Protocol as an Annex I state but did not ratify it, arguing observed inequity when compared to its global counterparts.⁵⁶ With the utility of the Protocol in question, other states lost faith and did not sign up for a second round of commitments.⁵⁷ For example, Canada left the Protocol on 15th December 2012,⁵⁸ claiming that its inability to regulate the USA and China undermined its chance of success, and that it would save \$14 billion dollars a year in fines by leaving.⁵⁹ The second round of commitments was only able to attract 37 parties.⁶⁰

Although the Protocol was able to attribute greater responsibility for climate change with the developed world, this created contemporary disagreement that frustrated its chance of success. The limited ambition attached to the Protocol was still too high in comparison to the muted level of commitment states were prepared to provide. By

https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/Parliamentary_Library/Parliamentary_Departments/Parliamentary_Library/Parliamentary_Library/Parliamentary_Departments/Parliamentary_Library/Parliamentary_Departments/Parliamentary_Library/Parliamentary_Departments/Parliamentary_Library/Parliamentary_Library/Parliamentary_Departments/Parliamentary_Library/Parliamentary_Departments/Parliamentary_Departments/Parliamentary_Library/Parliamentary_Departments/Parliamentary_Library/Parliamentary_Departments/Parliamentary_Library/Parliamentary_Departments/Parliamentary_Library/Parliamentary_Departments/Parliamentary_Departments/Parliamentary_Departments/Parliamentary_Departments/Parliamentary_Departments/Parliamentary_Departments/Parliamentary_Departments/Parliamentary_Departmentary

⁵³ Anonymous, 'Kyoto Protocol – Targets for the first commitment period' (UN Climate Change, 2019) https://unfccc.int/process-and-meetings/the-kyoto-protocol/what-is-the-kyoto-protocol/kyoto-protocol-targets-for-the-first-commitment-period accessed 19th December 2019.

⁵⁴ C Sunstein, 'Montreal versus Kyoto: A Tale of Two Protocols' (2006) Harvard Environmental Law Review Working Paper 06-17, 1 https://papers.ssrn.com/sol3/papers.cfm?abstract_id=913395 accessed 4th July 2019.

 $^{^{55}}$ At the time of the Protocol's introduction India emitted 2.1 gigatonnes of CO_2 annually, and China released 8.2 gigatonnes annually. Climate Watch, 'Historical GHG Emissions' (World Research Institute, 2018) https://www.climatewatch data.org/ghg-emissions?breakBy=locat ion&filter=G77%2CIND&source=31&versi on=1> accessed 10th October 2018.

⁵⁶ G Bush, (White House Archives, 16th April 2008) https://georgewbush-whitehouse.archives.gov/news/releases/2008/04/20080416-6.html accessed 10th October 2018.

⁵⁷ New Zealand, for example, did not sign up for a second round of commitments. G Palmer, 'New Zealand's Defective Law on Climate Change' (2015) 12 New Zealand Journal of Public International Law 115.

⁵⁸ Kyoto Compliance Committee, 'Canada's Withdrawal from the Kyoto Protocol and its Effects on Canada's Reporting Obligations Under the Protocol' (20th August 2014) CC/EB/25/2014/2.

⁵⁹ Anonymous, 'Canada pulls out of Kyoto Protocol' *The Guardian* (13th December 2011) https://www.theguardian.com/environment/2011/dec/13/canada-pulls-out-kyoto-protocol accessed 1st November 2019.

⁶⁰ Anonymous, 'The Doha Amendment' (UN Climate Change, 2019) https://unfccc.int/process/the-kyoto-protocol/the-doha-amendment accessed 13th November 2019.

taking this hard and targeted approach towards solving the problem the Protocol inadvertently precluded any significant measure of success, creating an atmosphere of disagreement and defeat, leading Dupuy and Vinuales to describe it as 'largely obsolete'.⁶¹ The hard law of Kyoto failed to generate a global consensus at creation stage, and this fractured its foundations beyond repair.⁶² These problems, combined with the lack of ambition, are part of the reason that the Protocol has failed to have any real impact on the problem of emissions. Within the period of 1990 to 2013, global output of CO₂ rose by 60%, seriously undermining any level of effectiveness that might be attributed to the Protocol.⁶³ Looking at greenhouse gases more broadly, between 1990 and 2014 the world's total emissions have increased by 31%.⁶⁴ NASA indicates that global mean temperatures continued to rise in the period 1997 to 2012.⁶⁵ The Kyoto Protocol cannot be considered an effective response to rising emissions or global heating.

Learning from the Kyoto Protocol, the Paris Agreement was premised on the avoidance of the same inherent defects. The Paris Climate Conference 2015 was one of the most publicised conferences to date, with unrivalled participation and 197 signatories. Many state officials made public overtures of international cooperation towards meeting the threat of climate change. Great emphasis was placed on participation, but the subsequent content of the Paris Agreement failed to reflect the commitment and hype espoused publicly by political leaders.

The Paris Agreement must be considered soft law by comparison with the Kyoto Protocol. That is not to say that the instrument is soft because as a convention it is hard law. However, its content is soft. The language is very much advisory as opposed to authoritative, a response to the failings of the Kyoto Protocol and a desire to keep state parties in the negotiations.⁶⁹ Moreover, unlike the Kyoto Protocol there is no

⁶¹ P-M Dupuy, J Vinuales, *International Environmental Law* (2nd edition, Cambridge University Press 2018) 181.

⁶² Bohringer disagrees with this, finding that the Protocol was a valuable starting point. C Bohringer, 'The Kyoto Protocol: A Review and Perspectives' (2003) 19 Oxford Review of Economic Policy 451.

⁶³ T Khokhar, 'Chart: Global CO₂ Emissions Rose 60% between 1990 and 2013' (The World Bank, 21st April 2017) http://blogs.worldbank.org/opendata/chart-global-co2-emissions-rose-60-between-1990-and-2013> accessed 1st November 2019.

⁶⁴ K Lebling, M Ge, J Friedrich, '5 Charts Show How Global Emissions Have Changed Since 1850' (World Resources Institute, 2nd April 2018) https://www.wri.org/blog/2018/04/5-charts-show-how-global-emissions-have-changed-1850 accessed 1st November 2019.

⁶⁵ Anonymous, 'GISS Surface Temperature Analysis' (NASA, 2019) https://data.giss.nasa.gov/gistemp/history/ accessed 18th December 2019.

⁶⁶ Anonymous, 'Paris Agreement – Status of Ratification' (United Nations Climate Change, 2019)
https://unfccc.int/process/the-paris-agreement/status-of-ratification> accessed 26th September 2018.

⁶⁷ A Vaughan, E Howard, A Holpuch, 'World Leaders Call for Action at Paris Climate Talks' *The Guardian* (30th November 2015) <www.theguardian.com/environment/blog/live/2015/nov/30/parisclimate-summit-world-leaders-meet-for-opening-day-live last accessed > last accessed 30th November 2019.

⁶⁸ P Huang, 'International Environmental Law and Emotional Rational Choice' (2002) 31 (1) The Journal of Legal Studies 237.

⁶⁹ The word 'should' appears throughout the agreement as opposed to the word 'shall', for example, Paris Agreement to The United Nations Framework Convention on Climate Change (adopted 12th December 2015, entered into force 4th November 2016) UN Doc FCCC/CP/2015/L .9/Rev.1, Article 4(4).

system of penalties for non-compliance; a consequence of not having specific targets in which to measure state action against. The priority of the Paris conference was to generate a high level of participation. Article 2 of the Agreement sets out the broad objective to prevent a temperature increase of 2°C, yet Article 3 provides only reference to ambitious nationally determined contributions to achieve this.⁷⁰ The word ambitious is highly subjective and inherently ambiguous, meaning immediately the aspiration and subsequent actions that will underpin the Paris Agreement are cast into doubt.

The provisions of the Paris Agreement make no mention of specific reduction targets. It is unclear from the convention if the nationally determined contributions will, when considered cumulatively, be able to give effect to the 2°C objective of the agreement.⁷¹ Additionally, the text of the Agreement fails to include any reference to fossil fuels, a core source of the emissions problem, highlighting a further deficiency and a likely indication that its overall objective will not be achieved.⁷² It appears there was no appreciation of solving the problem in the minds of those negotiating the agreement, but instead, they were intent on avoiding a culture of division and frustration. Hence there is no link between the already questionable ambition of the Agreement and the means to achieve its objectives.

Looking at the 2°C objective in more detail, it will be unable to have a globally positive impact and will instead result in serious climatic changes. Under this ambition, by 2100: sea levels will rise by 56 cm; there will be 23 times the number of annual ocean heat waves causing drastic consequences for marine life; there will be an 80% chance of the Arctic becoming ice free in at least one summer; a 37% increase in severe heat waves will occur; 388 million people will be exposed to water scarcity; and the average global crop yield will decrease by 9%.⁷³ These impacts undermine how much hope we should place in the achievement of the 2°C objective and devalue the vigour that can be attached to the Paris Agreement's ambition. Furthermore, many of these impacts will be felt to varying degrees but will likely be much worse in the developing world, where there is much less capacity to absorb the effects of climate change.⁷⁴ It could be argued that the Paris Agreement reflects an attempt to safeguard the developed world while allowing those states developing to suffer the effects of a 2°C increase in temperature.

The hype of political leaders when the cameras were rolling far exceeded their enthusiasm for binding provisions and the legality of the agreement has been questioned with some labelling it 'voluntary'.75 Bodansky challenges this, asserting a distinction between legality and enforcement, finding an absence of the latter does not

⁷² J Dehm, 'Carbon Colonialism or Climate Justice? Interrogating the International Climate Regime from a TWAIL Perspective' (2016) 33 Windsor Yearbook of Access to Justice 129.

⁷⁰ Ibid., Article 3.

⁷¹ Ibid.

⁷³ Anonymous, 'The Impacts of Climate Change at 1.5C, 2C and Beyond' (Carbon Brief, 2019) https://www.carbonbrief.org/the-impacts-of-climate-change-at-1-point-5-2c-and-beyond accessed 1st December 2019.

⁷⁴ S Seneviratne et al., 'The Many Possible Climates from the Paris Agreement's Aim of 1.5°C Warming' (2018) 558 Nature 41.

⁷⁵ R Falk, "Voluntary" International Law and the Paris Agreement' (Global Justice in the 21st Century, 16th January 2016) https://richardfalk.wordpress.com/2016/01/16/voluntary-international-law-and-the-paris-agreement/ accessed 10th October 2018.

affect the former.⁷⁶ This position is a pillar of international law, but it does nothing to address the reality that the Paris Agreement is voluntary in nature, albeit legally voluntary, and likely to encourage only minimal input from many states. The bottom-up approach that was deemed necessary to stimulate a high participation rate has created a system where states have too much control over their own commitments to tackle climate change. As George Monbiot commented, 'By comparison to what it could have been, it's a miracle. By comparison to what it should have been, it's a disaster.'⁷⁷

The discretionary nature of the Paris Agreement means it is better viewed as soft and not hard law. Some may disagree with this, arguing that a convention is hard by definition and soft law is something else entirely.⁷⁸ Others contend the provisions within a convention must be analysed to determine its overall character.⁷⁹ In either case, there can be little dispute that the Paris Agreement does not place significant obligations upon its signatories, instead situating them in a position of discretion that reflects more closely the vague or fragile nature of soft law.⁸⁰ This character underpins the core content of the convention, attracting criticism here for being ineffective when measured against the problem.⁸¹

Moreover, in the context of ICL, the assertion that 'what we call soft today, will be called hard tomorrow' is inaccurate, and rather, what was hard law yesterday through the Kyoto Protocol is now soft law through the Paris Agreement. The typical relationship between hard and soft norms seems to be operating in reverse. There might be good reasons for this based on the failings of the Kyoto Protocol, but it is now proving clear that the regression to a softer approach has not been successful on the grounds that the problem is still exacerbating. The debate surrounding soft and hard norms, although valid in the wider context of international law, loses significance here. We have continually witnessed the inability of states to negotiate and tackle the climate crisis effectively. Sa

⁷⁶ D Bodansky, 'The Legal Character of the Paris Agreement' (2016) Review of European, Comparative and International Environmental Law 1.

G Monbiot, 'Grand Promises of Paris Climate Deal Undermined by Squalid Retrenchments' The Guardian
 (12th December 2015)

https://www.theguardian.com/environment/georgemonbiot/2015/dec/12/paris-climate-deal-governments-fossil-fuels accessed 10th November 2019.

⁷⁸ C Ingelse, 'Soft Law?' (1993) 20 Polish Yearbook of International Law 75.

⁷⁹ D Bodansky, 'Rules VS. Standards in International Environmental Law' (2004) 98 American Society of International Law 275; D Bodansky, 'Legally Binding Versus Non-legally Binding Instruments' in S Barrett, C Carraro, J de Melo (eds) *Towards a Workable and Effective Climate Regime* (1st edition, CEPR Press 2015) 155.

⁸⁰ P Weil, 'Towards Relative Normativity in International Law?' (1983) 77 (3) The American Journal of International Law 413; R Falkner, 'The Paris Agreement and the New Logic of International Climate Politics' (2016) 92 International Affairs 1107.

⁸¹ See section IV for an analysis on the effectiveness of the INDC system.

⁸² C Castaneda, 'A Call for Rethinking the Sources of International Law: Soft Law and the Other Side of the Coin' (2013) 13 Anuario Mexicano de Derecho Internacional 355, 396.

⁸³ A Chandrasekhar, 'The UN Climate Talks Ended in Deadlock. Is This Really The Best the World Can Manage?' *The Guardian* (21st December 2019) https://www.theguardian.com/commentisfree/2019/dec/21/un-climate-talks-deadlock-cop25 accessed 30th December 2019.

Although we can only learn from our past mistakes, in this instance the failings of the Kyoto Protocol influenced too deeply the Paris Agreement negotiations. The premise appears to be that Kyoto was hard and failed and therefore Paris must be soft to succeed. While this has proved to attract a greater global consensus the substance of the agreement will prove to be ineffective. The Paris Agreement may have a high participation rate, but this means that it is significantly held back according to varying political interests, and the complete autonomy afforded to states does not paint a positive picture of global climate action, as will become clear in the following section.⁸⁴

IV. Nationally Determined Contributions

Highlighted earlier, the Paris Agreement's main thrust comes from the system of nationally determined contributions. Under Article 3 'all parties are to undertake and communicate ambitious efforts...with the view to achieving the purpose of this Agreement as set out in Article 2. He Agreement then goes on to ensure that 'Each Party shall prepare, communicate and maintain successive nationally determined contributions that it intends to achieve', and that these shall 'reflect its highest possible ambition'. Herein lies the problem, these obligations are ambiguous and fail to set out any guidance as to the level of ambition states should aspire to. The Agreement does point to each party's 'common but differentiated responsibilities and respective capabilities, in the light of different national circumstances', but this is not strong enough to be interpreted as directing particular action. In short, the Paris Agreement is premised on a model of discretion that confers upon states the complete autonomy to set their own level of climate commitment.

This section will examine the discretion-based model of the Paris Agreement, implemented through the nationally determined contribution (NDC) system. Several Paris signatories and their NDCs will comprise the objects of study. These include: Australia; Canada; the European Union (EU);90 Russia; Brazil; and Mexico. These signatories have been selected because they represent states at varying levels of development and with ranging perspectives.91 Australia, Canada and the EU embody developed states; Russia, Brazil and Mexico exemplify developing states. It will be

⁸⁴ D Bodansky, 'The Legal Character of the Paris Agreement' (2016) 25 Review of European, Comparative and International Environmental Law 1.

⁸⁵ This section was crafted prior to the second round of NDC commitments submitted by states in 2020, but it was not updated due its inclusion in a series of papers that will see analysis of the second round in due course.

Paris Agreement to The United Nations Framework Convention on Climate Change (adopted 12th December 2015, entered into force 4th November 2016) UN Doc FCCC/CP/2015/L .9/Rev.1, Article 3.
 Paris Agreement to The United Nations Framework Convention on Climate Change (adopted 12th December 2015, entered into force 4th November 2016) UN Doc FCCC/CP/2015/L .9/Rev.1, Article

⁸⁸ Paris Agreement to The United Nations Framework Convention on Climate Change (adopted 12th December 2015, entered into force 4th November 2016) UN Doc FCCC/CP/2015/L .9/Rev.1, Article 4(3).

⁸⁹ Paris Agreement to The United Nations Framework Convention on Climate Change (adopted 12th December 2015, entered into force 4th November 2016) UN Doc FCCC/CP/2015/L .9/Rev.1, Article 4(4).

⁹⁰ The EU is referred to as a state because it acts like a state in terms of its participation in the Paris Agreement.

⁹¹ Anonymous, 'Country Classification: Data sources, country classifications and aggregation methodology' (UN, World Economic Situation and Prospects, 2014) ST/ESA/STAT/SER.M49/Rev.

shown that across the development spectrum, the common but differentiated responsibility model is undermined by the overwhelming discretion conferred upon states by the Paris Agreement, reflected through NDCs that are totally out of sync with the 2°C ambition.

These six states have signed the Paris Agreement and undertaken ratification steps. 92 Each one has submitted an NDC document and so met their obligations. 93 Absent any analysis of these documents, the Agreement is a success in terms of participation. This creates a superficial confidence in the current mechanisms designed to mitigate climate change. Across the UNFCCC membership state engagement with the Paris Agreement is high and the submission of NDCs helps to generate the misleading appearance of effectiveness. As the earlier discussion noted, simply being a member of the Paris Agreement does not subject states to rigorous impactful obligations. Simple submission of an NDC is a misleading metric in which to consider the Agreement a success, and so analysis must delve into the specifics of each one.

Looking at the targets of developed states, the impression is not one of ambition. Australia commits to 'reduce greenhouse gas emissions by 26-28 per cent'.94 The EU aims for 'an at least 40% domestic reduction in greenhouse gas emissions',95 and Canada offers to cut 'emissions by 30%'.96 Australia and Canada are highly developed economies with the capacity for greater ambition than these targets reflect. Moreover, they both use 2005 as the base level to reduce emissions by, lessening further still the aspiration attached. The EU's target appears more determined and does set 1990 as its base year to measure reductions against, but considering its own recognition that global emissions must be halved by 2050 it is perplexing why its ambition does not reflect this need more accurately.97 The 40% target is not based on each EU member making an equivalent reduction, but on the EU's emissions decreasing by this much overall. Some states within the EU will be able to take relatively little or no action, denting the intention behind common responsibilities. These three states have not offered targets that take account of their increased capacities as highly developed economies.

Russia pledged to limit 'anthropogenic greenhouse gases...to 70–75%'.98 This language is misleading and Russia is committing only to a 25% to 30% reduction, which is not justifiable given its place as the world's fourth biggest emitter and status as a nation of increasing economic capacity.99 Brazil intends to reduce its emissions by 37% before

Anonymous, 'Depository' (UNTS, 2019)

 accessed 27th November 2019.">https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-7-d&chapter=27&lang="en*> accessed 27th November 2019.

⁹³ Anonymous, 'INDC's Communicated by Parties' (UNFCCC, 2019) https://www4.unfccc.int/sites/submissions/indc/Submission%20Pages/submissions.aspx accessed 21st November 2019.

 $^{^{94}}$ Australia's Intended Nationally Determined Contribution to a New Climate Change Agreement (August 2015), para 3.

⁹⁵ Intended Nationally Determined Contribution of the EU and its Members States (March 2015), Article 3.

⁹⁶ Canada's INDC Submission to the UNFCCC (May 2015), para 3.

⁹⁷ Intended Nationally Determined Contribution of the EU and its Member States (March 2015).

⁹⁸ The Russian Federation, Intended Nationally Determined Contribution (March 2015), Table 1.

 ⁹⁹ M Elzen et al., 'Are G20 economies making enough progress to meet their NDC targets' (2019) 126
 Energy policy 238; Anonymous, 'Russia' (Climate Action Tracker, June 2019)
 https://climateactiontracker.org/countries/eu/ accessed 15th August 2019; Anonymous, 'On

2025 and 43% by 2030.¹¹ºº This appears at first glance to be quite ambitious, but it is softened by the inclusion that these targets 'might be adjusted, as appropriate', and use of 2005 as the base level to make reductions against further dents these objectives.¹º¹ Mexico sets an unconditional reduction of 25% and a conditional reduction of up to 40% if international support is provided.¹º² Assuming international efforts will not be forthcoming, at least to the required level, Mexico will make a 25% reduction, which when compared to developed states like Australia and Canada is relatively ambitious. The dual-target approach of Brazil and Mexico provides a misleading account of what action these states are going to take, and the range provided allows a significant amount of ambiguity as to the ambition present. The lower end targets are not ambitious, but they are more justifiable given the developing status of these states. The ambiguity created by various targets and the potential lack of capacity to monitor whether they are achieved poses feasibility questions that further undermine their vigour.

Across the development spectrum the low level of ambition attached to reduction targets indicates that states are not willing to obligate themselves beyond a certain threshold. The relative similarity of all six targets may suggest that states are not acting according to their respective capacities but instead intend to reflect some idea of global parity. Nonetheless, these states can show that they have met their legal obligations and politicians can make statements to this affect, pointing to specific Paris commitments. The next question is to ask whether or not these NDC documents are able to signpost action plans that will meet these muted objectives. If so, it may be possible, despite the limited ambition, to argue that there is at least real intent to implement behavioural changes.

Australia attempts to signpost a route to its target. Paragraph two talks about a 'direct action policy' and how it supports businesses and communities to 'reduce emissions', but no explanation is provided on how this policy operates. ¹⁰³ The NDC later points to 'additional policy measures in place to promote the deployment of renewable energy'. ¹⁰⁴ No details as to what these measures are and how they will be supporting the renewable energy sector are provided; instead this point masks the fact that 84% of Australia's electricity comes from coal burning. ¹⁰⁵ However, Australia does point out that only 23% of its energy will come from renewable sources, ¹⁰⁶ highlighting the low level of action that will be taken on energy provision in the immediate future. The NDC claims to place 'Australia on a stable pathway towards longer term emissions reductions', which is problematic due to the lack of clarity on how this will be

Russia's Participation in BRICS' (Russia in BRICS, 2019) https://brics.mid.ru/en_GB/rossia-v-briks> accessed 10th December 2019.

¹⁰⁰ Federative Republic of Brazil: Intended Nationally Determined Contribution (September 2015), para5.

¹⁰¹ Ibid., para 2.

¹⁰² Mexico: Gobierno De La Republica: Intended Nationally Determined Contribution (March 2015).

¹⁰³ Australia's Intended Nationally Determined Contribution to a New Climate Change Agreement (August 2015), para 2.

¹⁰⁴ Ibid., para 8.

¹⁰⁵ P Wolfram, T Wiedmann, M Diesendorf, 'Carbon Footprint Scenarios for Renewable Electricity in Australia' (2016) 124 Journal of Cleaner Production 236.

 $^{^{\}tiny{106}}$ Australia's Intended Nationally Determined Contribution to a New Climate Change Agreement (August 2015), para 8.

achieved.¹⁰⁷ Considering the wider economic policies in operation it seems unlikely this is factually accurate.¹⁰⁸ Australia relies on, and exports, a vast amount of fossil fuels,¹⁰⁹ and even in the NDC restates its role as a 'leading global resources provider'.¹¹⁰ It is reliant on trading in the very thing that is causing the problem, and so the extent to which Australia is willing to introduce workable alterations to its behaviour is suspicious at best, likely the reason for its vague action plan which will be difficult to monitor.¹¹¹

The EU's 40% ambition is to be 'fulfilled jointly',¹¹² and so its ability to alter the behaviour of all 28 Member States is limited, albeit this is subject to internal negotiations. The EU carbon trading scheme will further encourage free riding and allow some states to avoid behavioural alterations altogether.¹¹³ The NDC points to the Land Use, Land Use Change and Forestry (LULUCF) sector to achieve its reduction targets.¹¹⁴ A framework to monitor the impact of LULUCF will be established 'as soon as technical conditions allow'.¹¹⁵ The EU's lack of preparedness to provide details as to the LULUCF sector is either an astonishing oversight or deliberately intended to create flexibility.¹¹¹⁶ This sector can make a significant contribution to overall emissions, allowing the level of mitigation efforts that take place across the wider economy to be reduced.¹¹¹⁷ If the EU finds itself in a position to offer significant LULUCF reductions this may preclude states taking further action to alter their individual behaviour in terms of CO₂ output. The EU's plan lacks the specificity that should be demanded from some of the most developed states in the world and again creates ambiguity as to what action can be expected.

Canada reveals its intention to rely on international mechanisms to achieve its target, which implies the use of carbon-trading schemes. As such, a state capable of making actual reductions to its emissions and adopting green technologies may well continue without making behavioural alterations. Carbon trading does offer a way for

¹⁰⁷ Ibid., para 7.

¹⁰⁸ Ibid.

¹⁰⁹ M McDonald, 'Fair Weather Friend? Ethics and Australia's Approach to Global Climate Change' (2005) 51 Australian Journal of Politics and History 216.

¹¹⁰ Australia's Intended Nationally Determined Contribution to a New Climate Change Agreement (August 2015), para 7.

 $^{^{111}}$ S Vorrath, 'Coalition CO₂ target: scientists, analysts, financiers, islands unimpressed' (Renew Economy, 11th August 2015) https://reneweconomy.com.au/coalition-co2-target-scientists-analysts-financiers-islands-unimpressed-65282/ accessed 16th August 2019.

¹¹² Intended Nationally Determined Contribution of the EU and its Member States (March 2015), Article 3.

¹¹³ S Schleicher, A Koppl, M Schratzenstaller, 'Deciphering the Paris Agreement on Climate Policy: What Might Be the Implications for the EU' (OGFE Policy Brief, Vienna, September 2016).

 $^{^{114}}$ LULUCF relates to the preservation of natural land and forests to encourage CO $_2$ absorption.

¹¹⁵ Intended Nationally Determined Contribution of the EU and its Member States (March 2015), Annex, p 2.

¹¹⁶ Oberthur points out that the bureaucracy of the EU system might have precluded some of the detail being included in this initial INDC, but this may be rectified through its final submission. S Oberthur, 'Perspectives on EU Implementation of the Paris Outcome' (2016) 1 Carbon and Climate Law Review 34.

¹¹⁷ Ibid.

¹¹⁸ Canada's INDC Submission to the UNFCCC (May 2015).

¹¹⁹ S Jordaan et al., 'The role of energy technology innovation in reducing greenhouse gas emissions: A Case Study of Canada' (2017) 78 Renewable and Sustainable Energy Reviews 1397; it should be noted

cooperation among states, but in this instance it will allow Canada to avoid taking specific action.¹²⁰ This lack of intent to take action is reflected in the vague plans to 'accelerate the phase-out of existing coal fire electricity generation units'.¹²¹ There is no detail as to how this might be achieved or in what timeframe. Canada should have made quantifiable commitments to reduce its own emissions, after which it could have made further promises to cooperate through the carbon trading initiatives. Instead, the NDC alludes to a limited response from Canada that is unable to signpost a credible action plan.

The NDCs submitted from these developed states are designed to avoid detailed commitments that might be used as a measure of scrutiny. There is an absence of rigorously set-out intentions to meet the already unambitious targets that have been set. This lack of precision will preclude critics from definitively arguing these states have not met their own NDC commitments. More concerning is that these developed states will be able to claim they have a target and a broad plan of action to achieve it. They will be able to avoid taking a leading role and easily defend their actions when questioned, undermining the front-runner role envisaged for them at the founding of the UNFCCC.

Russia's NDC reveals a distinct lack of detail. It pledges to make economy-wide efforts at emissions reduction and lists several prominent sectors this applies to, but does not provide any details as to how these sectors will be expected to take action. ¹²² It seeks to support the renewable energy sector, but the mechanisms and the percentage of energy this sector is expected to provide across the economy are absent. Regarding the LULUCF sector, the preservation of the Boreal Forests is mentioned in connection to mitigation efforts. No measure of detail as to what actions will be taken to achieve their protection and restoration is provided. Aside from pointing vaguely to 'forest management' it is not clear what Russia intends to do that will ensure the Boreal Forests are able to help mitigate emissions. ¹²³ This lack of detail suggests that detailed action was not planned when the NDC was drafted, and it is likely that such alterations are not built into the internal policy responses of Russia.

Brazil intends to achieve its reduction targets through LULUCF preservation policies.¹²⁴ It aims to purge all illegal deforestation by 2030 and introduce forestry management projects to help curb illegal and unsustainable practices.¹²⁵ These are positive ideas but introducing them will be challenging, and it will be difficult to quantify impact in terms of reducing emissions.¹²⁶ By placing a lot of emphasis on

¹²⁴ A Gurgel et al., 'The Impacts of the Brazilian NDC and Their Contribution to the Paris Agreement on Climate Change' (2019) 24 (4) Environment and Development Economics 1.

that Canada claims to have invested '\$10 billion in green infrastructure', Canada's INDC Submission to the UNFCCC, para 8.

¹²⁰ M Carr, 'Canada Plans First Carbon Trades Under Paris Climate Change Agreement' *Financial Post* (16th August 2018) https://business.financialpost.com/commodities/energy/canada-plans-first-carbon-trades-under-paris-climate-change-agreement accessed 14th August 2019.

¹²¹ Canada's INDC Submission to the UNFCCC (May 2015), para 6.

¹²² The Russian Federation, Intended Nationally Determined Contribution (March 2015).

¹²³ Ibid., Table 1.

 $^{^{125}}$ Federative Republic of Brazil: Additional Information on the INDC for Clarification Purposes Only (September 2015), para 14.

¹²⁶ T Solinge, 'Researching Illegal Logging and Deforestation' (2014) 3 International Journal for Crime, Justice and Social Democracy 35.

these strategies Brazil is traversing unsteady ground. ¹²⁷ Instead of having more tangible policies at the level of, for instance energy production, it is targeting the social level. It will be hard to monitor and persuade people of the need to cease activities they are reliant on for their livelihoods. ¹²⁸ The lack of precision in this area also suggests that actual action was not planned at the time of drafting, perhaps a consequence of the difficulty of implementing such proposals.

Mexico sets out to 'give priority to the least costly mitigation actions', which clouds its NDC in a shroud of negligible action. 129 Its NDC claims to be 'consistent with Mexico's pathway to reduce 50% of emissions by the year 2050', which leads to the possibility it did not introduce anything new and simply became a copy and paste exercise for the Mexican Government.¹³⁰ It lists a number of prominent greenhouse gases but these are not given reduction targets or linked to action that will see their declining use. This is followed by a section within the document titled 'Planning Process', which acts as a list of instruments that exist in relation to climate change. 131 There is no further detail within this document as to how these instruments will alter or prompt behavioural changes to meet the problem. Moreover, the dates attached to these instruments demonstrate that they were not newly adopted but are instead part of an already existing climate policy, which is ineffective. 132 It has been argued that a developing state taking any action on climate change is positive, 133 but the implementation of these legislative actions has been difficult because of the internal infrastructure of Mexico. 134 The Mexican economy remains highly dependent on fossil fuels with 89% of its energy coming from their use. 135 There is a lack of intended action within the NDC that would reduce this figure and the climate legislation highlighted has so far been unable to reduce Mexico's reliance on fossil fuels. By transplanting these laws into Mexico's NDC no significant behavioural alterations will be forthcoming.

Across the development spectrum states are unprepared to establish a clear set of actions that will lead to the achievement of their targets. The level of development does not determine the level of commitment a state will make. If this were the case developed states would be committing to significantly more obligations through behavioural alterations. There is something other than capacity and level of development that prevents states from adopting robust action plans. Nonetheless, although these plans are vague, they still allow the claim that states are taking steps to

¹²⁷ A Gurgel et al., 'The Impacts of the Brazilian NDC and Their Contribution to the Paris Agreement on Climate Change' (2019) 24 (4) Environment and Development Economics 1.

¹²⁸ L Barbosa, 'Save the Rainforest! NGOs and Grassroots Organisations in the Dialectics of Brazilian Amazonia' (2003) 55 International Social Science Journal 583.

¹²⁹ Mexico: Gobierno De La Republica: Intended Nationally Determined Contribution (March 2015), para 5.

¹³⁰ Ibid., para 10.

¹³¹ Ibid., p 3.

¹³² Anonymous, 'Mexico' (Climate Action Tracker, June 2019) https://climateactiontracker.org/countries/russian-federation/fair-share/ accessed 16th August 2019.

¹³³ E Vance, 'Mexico sets climate targets' (2012) 484 Nature https://www.nature.com/news/mexico-sets-climate-targets-1.10503 accessed 22nd November 2019.

¹³⁴ J Valanzuela, 'Climate Change Agenda at the Subnational Level in Mexico: Policy Consideration or policy competition?' (2014) 24 Environmental Policy and Governance 188.

¹³⁵ A Diaz, E Gutierrez, 'Competing Actors in the Climate Change Arena in Mexico: A Network Analysis' (2018) 215 Journal of Environmental Management 239.

alter their behaviour towards the achievement of the Paris Agreement. If questioned, any one of these states will be able to point without hesitation to behavioural policies that it has legally introduced to meet the climate threat. One last measure is to determine what impact these NDC commitments will have on the problem of climate change. This final metric will showcase that the NDCs are unable to mitigate climate change largely because of the obstructive attitudes found within them.

Australia only intends to implement the upper end of its 26–28% target 'should circumstances allow'. ¹³⁶ This provision permits Australia a way to avoid taking more ambitious action. The marginal 2% range also implies that if circumstances do not allow the 26% target might become flexible. Australia argues its efforts are reflective of other comparable states, setting out its intention to avoid leading against the problem. Instead, it is willing to partake in a race to the bottom, which is reinforced when it 'reserves the right to adjust our target'. ¹³⁷ The extent to which Australia is prepared to tackle the problem is virtually non-existent. This claim can be evidenced with reference to the Climate Action Tracker (CAT), which finds the overall policies and subsequent actions of Australia when matched against the need to prevent a 2°C temperature increase is seriously inept. ¹³⁸

The attitude of the EU is not so readily present within its NDC and unlike Australia it does seem to set out with the right intention. However, its 40% target is compared to its previous 20% target, appearing to use this to accentuate its improved effort. This masks that the EU is still not doing enough considering its developed status and although improvements are important, they do not necessarily reflect enough effort to solve the problem. The CAT finds that if the actions of the EU are replicated around the world there would be a 2°C to 3°C increase in global temperatures. 140

Canada highlights its contribution to global warming that 'represents only 1.6% of the world's greenhouse gas emissions'. There is no point of authority to authenticate where this figure comes from, but if accurate 1.6% in a collection of 193 states still represents a significant share. While the figure might be comparably low to other big emitters it is not low enough to justify Canada taking a nonchalant approach. Its inclusion signifies a perception on the part of Canada that there are those with responsibility and those without it. This is reinforced when Canada says it is 'committed to doing more in concert with all major emitters', which might be read to mean that it will take further action only in conjunction with other comparable states. The NDC also points out the approach of Canada is designed to ensure that its 'economic competitiveness is protected.' Canada is only prepared to obligate

Anonymous, 'Australia' (Climate Action Tracker, June 2019)
https://climateactiontracker.org/countries/australia/current-policy-projections/> accessed 15th
August 2019.

¹³⁶ Australia's Intended Nationally Determined Contribution to a New Climate Change Agreement (August 2015), para 4.

¹³⁷ Ibid.

¹³⁹ Intended Nationally Determined Contribution of the EU and its Member States (March 2015), Annex, p 3.

Anonymous, 'EU' (Climate Action Tracker, June 2019) https://climateactiontracker.org/countries/eu/ accessed 15th August 2019.

¹⁴¹ Canada's INDC Submission to the UNFCCC (May 2015), para 3.

¹⁴² Ibid., para 4.

¹⁴³ Ibid., para 7.

itself to the extent reflecting the actions of other states, and is within its competitive reach, signifying a similar approach to Australia.

The CAT finds the efforts of Canada are comparable to other developed states, which if reflected around the world would force temperatures to rise between 2°C and 3°C.¹⁴⁴ The efforts of Canada are not able to solve the problem or meet the Paris Agreement's objective. The parting statement from Canada that 'every country must do its part' is contrary to its own level of engagement, reflecting the hidden assertion that Canada will not take a leading role on this challenge.¹⁴⁵ Studies provide further validation for this claim by indicating that Canada is not even going to achieve its own NDC commitments by some margin,¹⁴⁶ adding justification to the characterisation of Canada's efforts as 'insufficient' to meet the problem.¹⁴⊓

The message from developed states is clear. They are not prepared to utilise their advanced capacities to implement far reaching internal change to cut emissions. They are more content to ensure their actions are comparable to other similarly developed states, which has created a race to the bottom scenario. The developed world has the capacity but not the attitude to respond effectively to climate change. They should be leading, but they are instead obfuscating and inadvertently transferring the Kyoto Protocol's problem of perceived inequity into the Paris Agreement, completely undermining the purpose of total discretion.

Switching to developing states, the CAT takes a scathing view of Russia's NDC, finding that its efforts would lead to a global heating of plus 4°C.¹⁴⁸ Russia's target will not require it to take any serious action that is not already built into its infrastructure. This target allows Russia to mislead through reference to its commitment to avoid using global mechanisms to achieve its intended objectives.¹⁴⁹ Its target is so weak it will not require access to carbon-sharing schemes. The entire NDC of Russia is lip service to the Paris Agreement absent any real intent on the part of the Government to enact changes to its infrastructure that will tackle the problem. Russia claims to prioritise long-term commitments, using this as a justification for its weak NDC promises. This is nothing more than a smoke screen to justify the avoidance of acting now.¹⁵⁰

Brazil's NDC holds that '12 million hectares of forest by 2030' will be restored and reforested, intending to rely on this to meet its targets. This positive commitment

¹⁴⁶ M Elzen et al., 'Are G20 Economies Making Enough Progress to Meet Their NDC Targets' (2019) 126 Energy Policy 238.

Anonymous, 'Canada' (Climate Action Tracker, June 2019) https://climateactiontracker.org/countries/canada/ last accessed 17th August 2019.

¹⁴⁵ Canada's INDC Submission to the UNFCCC (May 2015), para 11.

Anonymous, 'Canada' (Climate Action Tracker, June 2019) https://climateactiontracker.org/countries/canada/ accessed 17th August 2019.

Anonymous, 'Russian Federation' (Climate Action Tracker, June 2019)
https://climateactiontracker.org/countries/russian-federation/fair-share/> accessed 16th August 2019.

¹⁴⁹ The Russian Federation, Intended Nationally Determined Contribution (March 2015) Scope and Coverage Section, 1.

¹⁵⁰ Anonymous, 'Russian Federation' (Climate Action Tracker, June 2019) https://climateactiontracker.org/countries/russian-federation/fair-share/ accessed 16th August 2019.

 $^{^{151}}$ Federative Republic of Brazil: Additional Information on the INDC for Clarification Purposes Only (September 2015), para 14.

has been undermined by internal political change. In 2018, now President Bolsonaro campaigned on a manifesto to increase deforestation irrespective of global commitments. The intention of Bolsonaro is to allow logging companies into the Amazon Rainforest at a rate that is totally unsustainable and will mean the 12 million hectares even if restored will be a small figure compared to the amount of deforestation that will take place. The ability of Brazil to ensure that its NDC commitments are fulfilled has been significantly undercut by a change in government. The CAT rates the actions of Brazil as 'insufficient', finding that current efforts will see a 32% reduction by 2030. The It is also likely that come 2030 the mitigation efforts of Brazil will be very far from its stated NDC targets, which will, it is predicted here, continue to evaporate under the current administration. This shows the fragility of the discretion-based model.

The intent of Mexico to solve the problem of emissions is curbed by its interpretation of the situation as someone else's problem. Mexico, like Canada, points out that it is only responsible for 1.4% of global emissions. 155 The CAT finds its reduction target 'is at the least stringent end of what would be a fair share', 156 indicating that the rubric of a 'highly ambitious' target linked to Mexico's share of emissions is deceptive. 157 Mexico, as the least developed state examined here, could argue its actions are more defensible. Yet, it has not pledged robust steps to solve this problem in reflection of its capacity, and its contribution will see an average temperature increase between 2°C and 3°C.158 The CAT further reveals that as time elapses the actions of Mexico are becoming more unsustainable and its current description of insufficient will be upgraded to highly insufficient.¹⁵⁹ Mexico is not taking responsible or proportionate action towards the advancement of a green economy, but instead reflects a developing state embarking upon a journey that will see the problem intensify. This is particularly worrying given that Mexico admits its susceptibility to climatic impact, and even in the face of harm continues to prioritise ruthless economic development over sustainable practices.

The restricted capacity of developing states to provide robust NDCs might have been an argument capable of justifying reduced action. However, not unlike the developed states, it is more about the attitude of those drafting the NDCs as opposed to their capacity. The common but differentiated responsibility model is meant to create a system where each state takes action proportionate to their infrastructure and resources, but this has not materialised. Instead, states are avoiding the required action irrespective of their capacity. They are taking steps to increase economic

¹⁵² A Murphy, 'Jair Bolsonaro Wants to Deforest the Amazon – What Powers Does the UN Have to Stop him? *The Conversation* (12th July 2019) https://theconversation.com/jair-bolsonaro-wants-to-deforest-the-amazon-what-powers-does-the-un-have-to-stop-him-120154 accessed 16th August 2019.

¹⁵³ P Rochedo et al., 'The Threat of Political Bargaining to Climate Mitigation in Brazil' *Nature* (July 2018) https://www.nature.com/articles/s41558-018-0213-y accessed 16th August 2019.

¹⁵⁴ Anonymous, 'Brazil' (Climate Action Tracker, June 2019) https://climateactiontracker.org/countries/brazil/current-policy-projections/ accessed 16th August 2019.

¹⁵⁵ Mexico: Gobierno De La Republica: Intended Nationally Determined Contribution (March 2015). 'Mexico: Share' (Climate Anonymous. Fair Action Tracker. https://climateactiontracker.org/countries/mexico/fair-share/ accessed 16th August 2019. ¹⁵⁷ Mexico: Gobierno De La Republica: Intended Nationally Determined Contribution (March 2015), 4. Anonymous. 'Mexico: Fair Share' (Climate Action Tracker. https://climateactiontracker.org/countries/mexico/fair-share/ accessed 16th August 2019. 159 Ibid.

development regardless of the impact this will have on the climate or wider environment. The total discretion found in the NDC system has allowed states to avoid taking proportionate action on the climate threat, inadvertently undermining the common but differentiated responsibility norm.

V. Conclusion

It is undeniable that greenhouse gas emissions are increasing and in direct correlation to this, the global temperature is rising. If we carry on at the current rate the earth's atmospheric temperature will warm between 3°C and 5°C by 2100,¹60 causing devastation for billions around the globe.¹61 With this in mind, the objective of the UNFCCC to stabilise the concentration of greenhouse gases in the atmosphere at a level to prevent dangerous anthropogenic climate change has not been met. Instead, the framework has been able to achieve hesitance, delay, argument and two subsequent Protocols unable to offer any measure of effectiveness when compared with the problem.

It is the argument here that the Kyoto Protocol failed and the Paris Agreement will not succeed in stemming climate breakdown. The systemic problems inherent within these models of international legal response preclude effective agreements. States do not align behind a central position and the objectives set and means of achieving them are not robustly matched to the scale of the threat. Despite having a global span and impacting severely upon the entire international community, climate change still does not generate a level of unity among states that will see them cooperate to take the necessary individual and collective action. The norms of international climate law reflect too closely the lowest common denominator. This problem reached its peak through the Paris Agreement, which was unable to include an ambitious temperature cap or even move beyond merely asking states to set and implement their own action plans. The gap between the Paris Agreement's objectives and its means of achieving them is titanic.

This is reflected in the NDCs examined, which show that states are intentionally avoiding ambitious steps. Some states are doing virtually nothing despite fulfilling their legal obligations under the Paris Agreement. We cannot wait for further proof that the current system will not result in a less than 2°C temperature increase. Instead, we must search for alternative ways to bolster the climate response. Or, to borrow from Sir Geoffrey Palmer, we must find new ways to stimulate greater international climate action if we are to stave off the advance of this certain threat.¹⁶²

¹⁶⁰ Anonymous, '2019 Set to Be the 2nd or 3rd Warmest Year on Record' (WMO, 20th December 2019) https://public.wmo.int/en/media/news/2019-set-be-2nd-or-3rd-warmest-year-record accessed 20th December 2019.

¹⁶¹ S Leahy, 'Climate Change Impacts Worse than Expected, Global Report Warns' *National Geographic* (7th October 2018) https://www.nationalgeographic.com/environment/2018/10/ipcc-report-climate-change-impacts-forests-emissions/ accessed 1st December 2019; IPCC, 'Impacts of 1.5°C of Global Warming on Natural and Human Systems' (2018); IPCC, 'Global Warming of 1.5 C: An IPCC Special Report on the Impacts of Global Warming' (October 2018).

¹⁶² G Palmer, 'New Ways to Make International Environmental Law' (1992) 86 (2) The American Journal of International Law 259.