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Jennifer Huang

Center for Climate and Energy Solutions, jennifer.a.huang@gmail.com

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Exploring Climate Framework Laws and The Future of Climate Action

JENNIFER HUANG*

Every country in the world now has at least one law or policy to address climate change; these laws vary widely in type, scope, and ambition. Although scholarship on the many types and levels of effectiveness of enacted climate legislation is still growing, legal experts are taking note of a recent trend in the adoption of formal climate legislation that is economy-wide or cross-sectoral in scope, sets out both a broad and long-term direction for climate policy, and ensures some measure of accountability for the executive branch. In the absence of a commonly agreed definition, this article will loosely define criteria for these “climate framework laws.”

This article identifies several countries that have adopted climate framework laws of this type: The United Kingdom, Mexico, New Zealand, and Denmark. These countries form a small case set from which to compare elements. From existing scholarship, this article draws on what lessons can be learned from their implementation. Whether the law is new or two decades old, each faces particular challenges and shortcomings. Climate framework laws create new risks but also incur a number of benefits that may be unique to them. This article examines the relationship between climate framework laws and the Paris Agreement, as well as implications for climate litigation. Finally, the article touches on the future of climate framework laws in other countries.

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* Jennifer Huang, Associate Director for International Strategies at the Center for Climate and Energy Solutions.

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I. INTRODUCTION

The world is quickly losing precious time to address the climate crisis. The years from 2016 to 2020 have been a tumultuous and trying time for the international climate community. Those years are set to be the warmest five-year period on record, underling the rising and dangerous impacts of climate change.¹ The 2016 United States (U.S.) presidential election abruptly flipped the narrative of an American climate renaissance from one in which President Barack Obama forged a historic partnership with China to ensure the successful adoption of the 2015 Paris Agreement to one in which President Donald Trump would “save” America from a “bad” deal by withdrawing the U.S. from the very deal it helped secure,² underscoring the dangers of leaving climate action up to individual or party leadership.

In spite of, or because of, these events, countries are increasingly adopting “climate framework laws”: top-down, legally binding

1. WORLD METEOROLOGICAL ORG., UNITED IN SCIENCE 2020 at 2, 8 (Jürg Luterbacher et al. eds., 2020), https://library.wmo.int/doc_num.php?explnum_id=10361 [<https://perma.cc/2YQ4-VVW4>].

2. President Donald Trump, *Statement by President Trump on the Paris Climate Accord*, THE WHITE HOUSE: BRIEFINGS & STATEMENTS (June 1, 2017), <https://trumpwhitehouse.archives.gov/briefings-statements/statement-president-trump-paris-climate-accord/> [<https://perma.cc/R9AA-RGY4>]. In 2019, President Trump formally submitted the notice of withdrawal, and on November 4, 2020, the United States officially withdrew from the Paris Agreement. U.N. Secretary-General, Paris Agreement: United States of America: Withdrawal (Nov. 4, 2019), <https://treaties.un.org/doc/Publication/CN/2019/CN.575.2019-Eng.pdf> [<https://perma.cc/H7CX-BUG2>]; U.N. Secretary-General, Paris Agreement: United States of America: Acceptance (Jan. 20, 2021), <https://treaties.un.org/doc/Publication/CN/2021/CN.10.2021-Eng.pdf> [<https://perma.cc/4ETN-WY7K>].

frameworks for climate action. While there are no commonly agreed definitions of “climate framework laws,” recent studies demonstrate that many of these climate laws are effective, producing real emission reductions over time and ensuring continuous climate action regardless of changes in political leadership. Scholarship on the many types and levels of effectiveness of these and other types of climate legislation is still growing.³

Part II of this article will provide a brief introduction to current trends in climate laws and legislation. In Part III, this article will propose some initial criteria by which to define a “climate framework law,” the most robust and expansive of existing types of legal climate frameworks. In Part IV, this article identifies several countries that have adopted climate framework laws of this type—the United Kingdom (UK), Mexico, New Zealand, and Denmark—and compares the elements of their laws. From existing scholarship, Part V further draws on what lessons can be learned from their implementation. Whether the law is new or two decades old, they each face particular challenges and shortcomings. Climate framework laws create new risks but also incur a number of benefits that may be unique to them. Part VI examines their relationship to the Paris Agreement, and Part VII further explores implications for climate litigation. Finally, Part VIII of this article touches on the future of climate framework laws in other countries.

II. TRENDS IN CLIMATE LAW AND LEGISLATION

Every country in the world now has at least one law or policy to address climate change; globally, there are 1,800 such laws.⁴ These laws vary widely in type, scope, and ambition. While some are executive orders or policies issued by governments, others may be

3. See generally *Climate Change Governance, Legislation and Litigation*, GRANTHAM RSCH. INST. ON CLIMATE CHANGE & ENV'T, <https://www.lse.ac.uk/granthaminstitute/research-areas/climate-change-governance-legislation-and-litigation> [https://perma.cc/E9H9-NHRX].

4. SHAIKH ESKANDER ET AL., *Global Lessons from Climate Change Legislation and Litigation*, in 2 ENVIRONMENTAL AND ENERGY POLICY AND THE ECONOMY 44, 45–46, 48 (Matthew Kotchen et al. eds., 2021); see also *Climate Change Laws of the World*, GRANTHAM RSCH. INST. ON CLIMATE CHANGE & ENV'T., <https://climate-laws.org> [https://perma.cc/5XN6-PT4E] (publicly accessible, searchable database hosted by the Grantham Research Institute on Climate Change at the London School of Economics to identify trends in climate change legislation and litigation over the past 30 years).

legislative acts passed by parliament. Some provide a legal foundation for governmental process committed to carrying out specific obligations under the United Nations Framework Convention on Climate Change (UNFCCC), the international environmental treaty addressing climate change. Others are broader, setting out a framework of laws that guide objectives, principles, and general procedures for climate policy development but otherwise lack specific targets and measures or accountability mechanisms.⁵

While the sheer number of climate laws is impressive, legal experts are taking note of a growing trend in the adoption of formal climate legislation that is economy-wide or cross-sectoral in scope, sets out both a broad and long-term direction for climate policy, and ensures some measure of accountability for the executive branch. These types of frameworks seem like an ideal tool to both effectively address obligations under international climate agreements and to maximize national implementation efforts.

III. CRITERIA FOR “CLIMATE FRAMEWORK LAWS”

No definition of “climate framework law” or “framework climate legislation” has yet been established to describe these types of broad, ambitious, overarching legal instruments.⁶ They have been called “flagship legislation”⁷ and described as “wide-ranging pieces of high-profile legislation that fundamentally define[] a country’s approach to climate change.”⁸ Grantham Research Institute calls them “strategic framework laws, which aim to create a unifying institutional structure to reduce greenhouse gas (GHG) emissions or address physical climate risks, or often both.”⁹ An earlier, more expansive definition is “a law, or regulation with equivalent status, which serves as a comprehensive, unifying basis for climate change policy, which addresses multiple aspects or areas of climate change

5. Michael A. Mehling & James S. Rawlins, *Enacting Framework Legislation on Climate Change: Rationale, Trends and Outlook 2–3* (2019) (unpublished manuscript) (on file with authors).

6. *Id.* at 3.

7. Terry Townshend et al., *Legislating Climate Change at the National Level*, 53 ENV’T. SCI. AND POL’Y FOR SUSTAINABLE DEV. 5, 6–9 (2011).

8. Sam Fankhauser et al., *The Political Economy of Passing Climate Change Legislation: Evidence from a Survey*, 35 GLOB. ENV’T CHANGE 52, 55 (2015).

9. ESKANDER ET AL., *supra* note 4, at 49.

mitigation or adaptation (or both) in a holistic, overarching manner.”¹⁰ Three out of four countries have overarching framework laws.¹¹ From ten to nearly thirty countries have adopted a “climate framework law” or “climate framework legislation,” depending on how such laws are defined.¹²

As legal scholar Michael Mehling points out, these definitions take a functional approach that are at odds with how many lawyers would define legislation—by examining the formality of the legislation.¹³ While setting out a precise definition or criteria for identifying a climate framework law is challenging, this article attempts to begin to define climate framework laws by looking at the formality of the legislation and the constellation of arrangements that set a high bar for the governmental administration of climate change. These criteria are:

- *A legally-binding, comprehensive framework adopted by parliament with a singular focus on climate change, across all sectors, covering all greenhouse gases.* Such a framework excludes single policy instruments or pieces of legislation with a narrow sectoral focus, such as energy; legislation serving multiple objectives, like development; and executive orders.
- *A mid-century mitigation target, or long-term direction of travel.* The framework law explicitly recognizes the long-term challenge of addressing climate change, often providing a

10. MICHAL NACHMANY ET AL., THE 2015 GLOBAL CLIMATE LEGISLATION STUDY 28 (2015), http://eprints.lse.ac.uk/65347/1/_lse.ac.uk_storage_LIBRARY_Secondary_libfile_shared_repository_Content_Grantham%20Institute_Globe%20climate%205ed_Global_climate_legislation_study%205t%20ed_2015.pdf [<https://perma.cc/F9ZT-5QHD>].

11. Shaikh Eskander & Sam Fankhauser, *Reduction in Greenhouse Gas Emissions from National Climate Legislation*, 10 NATURE CLIMATE CHANGE 750, 751 (2020).

12. See Mehling & Rawlins, *supra* note 5, at 4; Sean Fleming, *These Are the Countries That Have Made Their Climate Commitments Law*, WORLD ECON. F. (Nov. 13, 2019), <https://www.weforum.org/agenda/2019/11/new-zealand-net-zero-2050> [<https://perma.cc/J9RY-GCB5>].

13. Energy FutureX, *Governing for 2050: Climate Framework Laws in the EU, the US and Beyond*, YOUTUBE, at 06:03 (Dec. 2, 2019), https://www.youtube.com/watch?v=n_dJprt_ubA&ab_channel=EnergyFutureX [<https://perma.cc/XMY8-PHXY>].

pathway by which to guide or judge shorter-term climate targets.

- *Short- or mid-term economy-wide mitigation target(s) or rolling carbon budgets.* Rather than focusing on a specific sector or serving multiple objectives, the framework sets out an interim target or a series of targets on a pathway towards achieving climate neutrality. These have taken the form of a nationally determined contribution (NDC) under the Paris Agreement or carbon budgets that inform such an NDC.
- *Consolidation of authority to act on climate to the executive branch and delegation of that authority to bodies through a clear hierarchy with public accountability.* Responding to the myriad challenges of addressing climate change and the often data-driven obligations to global climate agreements requires clear mandates and delegated responsibilities. The executive branch is held publicly accountable, through regular reporting or other measure.
- *An independent climate change committee.* An independent body of experts, rather than a government body tasked with the oversight of climate measures, can provide constructive criticism, incorporate civil society views, take into account scientific updates, review performance, and improve transparency of climate action.
- *Regular review, or regular process(es) to take into account new science, assess adequacy, update or realign ambition.* For the framework and its processes to remain effective and relevant, targets and the latest science must be revisited on a periodic basis and updated as needed.

These elements are not necessarily independent; they may be partnered or serve overlapping functions. For instance, the review process may be undertaken by the independent climate change committee, by internal review, or both.

A number of jurisdictions' climate laws possess many or some of these elements. However, climate framework laws that are the most robust and provide the greatest accountability for governments seem to meet all or nearly all of these criteria. Nevertheless, it is not to say that these are the only means by which to implement effective climate action. What may be covered in one overarching piece of

legislation in one jurisdiction could be covered by several interventions in another. China, for instance, has eight climate change laws, but they are effectively carried out when included as powerful provisions in Five-Year Plans—China’s blueprints for its economic and social development.¹⁴ Some governments can implement climate action more directly under other political structures.

The importance of political will to carry out the aims of the climate law cannot be underestimated, but a combination of most of the criteria listed seem to ensure a framework that is durable, effective, and provides for accountability. This article considers several climate framework laws that illustrate this growing trend.

IV. COUNTRY CASES

This paper will briefly examine the climate framework laws for the UK, Mexico, New Zealand, and Denmark. It is worth noting that despite shared responsibility for climate policy under the European Union (EU), Member States’ approaches still vary. Several have adopted climate framework laws, though more have adopted climate framework law elements. The UK’s climate framework law predates its departure from the EU, but its effectiveness may bolster its reputation as an independent climate leader, particularly as host of the COP 26 climate change conference. Denmark’s climate framework law embeds a mid-century target that is more ambitious than the shared EU target.

A. United Kingdom

The UK’s 2008 Climate Change Act is generally credited as the earliest example of a climate framework law and the world’s first globally legally binding mitigation target.¹⁵ The Act was passed on the basis of increasing British support for climate action, which started in 2005 and continued gaining momentum leading up to the 2009 Copenhagen climate summit as international expectations for

14. ESKANDER ET AL., *supra* note 4, at 59.

15. See Climate Change Act 2008, c. 27 (UK); *World’s First Climate Law is a Victory for People Power*, FRIENDS OF THE EARTH EUROPE (Oct. 29, 2008), <https://friendsoftheearth.eu/press-release/worlds-first-climate-law-is-a-victory-for-people-power/> [<https://perma.cc/MLJ7-ZCAS>].

the adoption of a new climate agreement grew.¹⁶ Passed with high political consensus and strong UK leadership, the Act is one of the most ambitious legislative frameworks on climate.

The Act, as originally passed, mandated a reduction in greenhouse gas emissions of at least eighty percent below 1990 levels by 2050.¹⁷ By amendment in 2019, the UK became the first major economy to commit to “net zero” emissions by 2050.¹⁸ The Act sets out five-year carbon budgets, limiting total emissions over each five-year period consistent with the 2050 target.¹⁹ The Act also mandates a continuous five-year cycle of adaptation planning to increase resilience, requiring a risk assessment before developing a national adaptation program.²⁰

The Act further establishes a Committee on Climate Change (CCC), an independent advisory body that recommends the carbon budgets and monitors progress on mitigation and adaptation.²¹ Other measures that ensure accountability include regular and public reporting. For example, the CCC produces an annual progress report²² as well as a biannual adaptation progress report.²³ Further, the Secretary of State and ministers regularly report to Parliament,

16. Mehling & Rawlins, *supra* note 5, at 11.

17. Climate Change Act 2008, c. 27 § 1 (UK), <https://www.legislation.gov.uk/ukpga/2008/27/section/1/enacted> [<https://perma.cc/QV3T-SS8J>] (“It is the duty of the Secretary of State to ensure that the net UK carbon account for the year 2050 is at least 80% lower than the 1990 baseline.”); *What is the 2008 Climate Change Act?*, GRANTHAM RSCH. INST. ON CLIMATE CHANGE & ENV’T (Apr. 20, 2020), <https://www.lse.ac.uk/granthaminstitute/explainers/what-is-the-2008-climate-change-act/#:~:text=It%20represents%20the%20first%20global,target%20set%20by%20a%20country.&text=The%20Act%20committed%20the%20UK,2050%2C%20compared%20to%201990%20levels.&text=The%20new%20target%20requires%20the,to%20net%20zero%20by%202050> [<https://perma.cc/NP7R-XQUA>].

18. Climate Change Act 2008, c. 27, § 1. “Net zero” or climate neutrality refers to achieving an overall balance between emissions produced and emissions taken out of the atmosphere. Josh Burke, *What is Net Zero?*, GRANTHAM RSCH. INST. ON CLIMATE CHANGE & ENV’T (Apr. 30, 2019), <https://www.lse.ac.uk/granthaminstitute/news/what-is-net-zero/> [<https://perma.cc/QU7P-U87Y>].

19. Climate Change Act 2008, c. 27, § 4.

20. *Id.* §§ 56, 58.

21. *Id.* §§ 32–43.

22. *Id.* § 36.

23. *Id.* § 59.

taking into consideration the advice of the CCC,²⁴ and the reports are debated in Parliament. Finally, the government has a statutory obligation to respond to the reports.²⁵

B. Mexico

In 2012, Mexico became one of the first developing countries and the first large oil-producing emerging economy to adopt a climate framework law.²⁶ In the three years prior, Mexico's president worked across party lines at federal, state, and city levels in order to secure agreement on the policies needed to meet the bill's targets. Additionally, Mexico's climate credentials were further reinforced by its diplomatic efforts as host of the 2010 climate change conference in Cancún, which was praised for producing tangible outcomes in the wake of the 2009 Copenhagen summit.²⁷ The bill passed in Mexico's lower house with few objections and was passed unanimously by the Senate.²⁸

Mexico's General Law on Climate Change (GLCC) commits to a long-term target of reducing greenhouse gas emissions by fifty percent below 2000 levels by 2050.²⁹ The law was amended in 2018 to incorporate its Paris Agreement targets, which includes an

24. *See id.* §§ 14, 16, 18–20, 37, 56, 65.

25. *Id.* § 37.

26. Ley General de Cambio Climático [LGCC], Diario Oficial de la Federación [DOF] 06-06-2012, últimas reformas DOF 13-07-2018 (Mex.).

27. *See Cancún Climate Change Conference – November 2010*, UNITED NATIONS CLIMATE CHANGE, <https://unfccc.int/process-and-meetings/conferences/past-conferences/cancun-climate-change-conference-november-2010/cancun-climate-change-conference-november-2010-0> [<https://perma.cc/U7S6-9GMT>]; *Intro to Cancun Agreements*, UNITED NATIONS CLIMATE CHANGE, <https://unfccc.int/process-and-meetings/conferences/past-conferences/cancun-climate-change-conference-november-2010/cancun-climate-change-conference-november-2010-0> [<https://perma.cc/YS8K-FM68>]. The 2009 Copenhagen conference did not adopt a binding climate agreement. *15th Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change*, CTR. FOR CLIMATE & ENERGY SOLUTIONS, <https://www.c2es.org/content/cop-15-copenhagen/> [<https://perma.cc/4RPA-EG4D>].

28. Erik Vance, *Mexico Passes Climate-Change Law*, NATURE (Apr. 20, 2012), <https://www.nature.com/news/mexico-passes-climate-change-law-1.10496> [<https://perma.cc/7MNT-QNNV>].

29. Ley General de Cambio Climático [LGCC] art. 2, Diario Oficial de la Federación [DOF] 10-10-2012, últimas reformas DOF 13-07-2018 (Mex.); *General Law on Climate Change*, GRANTHAM RSCH. INST. ON CLIMATE CHANGE & ENV'T, <https://www.climate-laws.org/geographies/mexico/laws/general-law-on-climate-change> [<https://perma.cc/V5WM-Y5MS>].

unconditional commitment to reduce greenhouse gas emissions by twenty-two percent by 2030.³⁰ The GLCC also emphasizes adaptation measures, calling for “risk atlases” that include information about current and future vulnerability scenarios.³¹

The GLCC reassigned mandates to several entities. The National Institute of Ecology became the National Institute of Ecology and Climate Change (INECC), entrusted with national inventory accounting and supporting the evaluation of national climate policy.³² The Inter-ministerial Commission on Climate Change formally coordinates government action as well as the development and implementation of national climate policies.³³ The GLCC also established the National Climate Change System to coordinate the efforts of the federal government, states, and local governments.³⁴

Further, the GLCC creates a climate change fund to channel all funding projects that contribute to adaptation and mitigation actions,³⁵ and, as part of the 2018 amendment, it launched a national emissions trading market.³⁶ Additionally, the Secretariat and the Commission will periodically review and, on the basis of the review, revise the National Strategy at least every ten years for mitigation and at least every six years for adaptation.³⁷ The Commission shall propose and approve changes when there are new international climate commitments adopted or when new, relevant scientific information or technology suggest updates.³⁸

30. Ley General de Cambio Climático [LGCC] transitory art. 2, Diario Oficial de la Federación [DOF] 10-10-2012, últimas reformas DOF 13-07-2018 (Mex.). Mexico’s GLCC also includes an unconditional commitment to reduce black carbon emissions by 51 percent below business as usual by 2030 as well as a conditional target to further reduce greenhouse gas emissions by 36 percent and black carbon by 70 percent below business as usual by 2030, subject to international support. *Id.*

31. *Id.* art. 30.

32. *Id.* art. 13, art. 15.

33. *Id.* art. 47.

34. *Id.* art. 38.

35. *Id.* art. 80.

36. *Id.* art. 89, 94–95.

37. *Id.* art. 61.

38. *Id.* art. 63.

C. New Zealand

The Climate Change Response Act 2002 created the institutional and legal framework for New Zealand to ratify the Kyoto Protocol and to otherwise meet its obligations under the UNFCCC.³⁹ The Climate Change Response (Emissions Trading) Amendment Act 2008 amended the 2002 Act to introduce the New Zealand emissions trading scheme (ETS).⁴⁰

The recent 2019 Zero Carbon Amendment makes the Act far more comprehensive.⁴¹ Originally proposed as a separate piece of legislation, the government chose to ensure that all key climate legislation was administered by one Act.⁴² The amendment was passed with 119 votes to one, with Prime Minister Jacinda Ardern striking a contrast with the previous administration by declaring that New Zealand would not be a “slow follower” on climate change.⁴³

The Act as amended sets a long-term target of reducing net carbon emissions to zero by 2050.⁴⁴ The amendment also establishes five-year carbon budgets.⁴⁵ It further mandates a periodic climate risk assessment with an obligation for the government to create a national adaptation plan after each assessment.⁴⁶

Further, the amended Act creates a Climate Change Commission, an independent advisory body that provides expert

39. See Climate Change Response Act 2002, s 3 (N.Z.).

40. Climate Change Response (Emissions Trading) Amendment Act 2008, ss 3, 5 (N.Z.).

41. See Climate Change Response (Zero Carbon) Amendment Act 2019 (N.Z.).

42. *Climate Change Response (Zero Carbon) Amendment Act*, N.Z. MINISTRY FOR THE ENV'T (Nov. 25, 2019), <https://www.mfe.govt.nz/climate-change/zero-carbon-amendment-act#:~:text=The> [<https://perma.cc/8WG6-C7RJJ>].

43. (7 November 2019) 742 NZPD 14899; Laurel Wamsley, *New Zealand Commits to Being Carbon Neutral by 2050 – With a Big Loophole*, NPR (Nov. 7, 2019) <https://www.npr.org/2019/11/07/777259573/new-zealand-commits-to-being-carbon-neutral-by-2050-with-a-big-loophole> [<https://perma.cc/URT8-GTFM>]. Former Prime Minister John Key often described New Zealand as a “fast follower, not a leader.” (16 November 2016) 718 NZPD 15100.

44. Climate Change Response (Zero Carbon) Amendment Act, s 5Q.

45. *Id.* s 5X. The Ministry of Environment is developing a provisional emissions budget for 2021–2025, which will provide an early sense of direction before the next series of emissions budgets to be recommended by the Climate Change Commission. *Climate Change Response (Zero Carbon) Amendment Act*, *supra* note 42.

46. Climate Change Response (Zero Carbon) Amendment Act, ss 5ZP–5ZR. The Ministry of Environment has already begun on the first National Climate Change Risk Assessment; future Risk Assessments will be carried out by the Climate Change Commission. See *id.*

advice to the government on mitigation and adaptation and monitors its progress towards its goals.⁴⁷ Other measures ensure accountability, such as regular and public reporting. The Minister is required to present a copy of the Commission's report to the House of Representatives; the Commission itself must make the document publicly available thereafter.⁴⁸ The Minister must consult with a subset of the House of Representatives before finalizing an emissions budget, at which point it is registered, presented to the House of Representatives, and made publicly available.⁴⁹

D. Denmark

Denmark has historically set ambitious energy targets. But, in December 2019, eight of the ten parties in the Danish Parliament agreed to completely overhaul its climate policy in a “green transition” in order to create a stable direction of travel and a comprehensive framework around its climate policies.⁵⁰ The Climate Act explicitly states that Denmark has been a pioneering country in international climate action and has a historical and moral responsibility to lead on ambition and to inspire and influence others.⁵¹

The Act commits Denmark to a long-term target of reaching “net zero” emissions by 2050.⁵² It sets an interim target to reduce emissions by seventy percent below 1990 levels by 2030,⁵³ which exceeds both the shared EU target to reduce emissions by forty percent below 1990 levels by 2030⁵⁴ and the EU's amended 2030 target to reduce emissions by fifty-five percent by 2030.⁵⁵ The Act also mandates that the Minister for Climate, Energy and Utilities

47. *Id.* pt 1A.

48. *Id.* s 5L.

49. *Id.* s 5ZD.

50. See State of Green, *During COP25, Denmark Passes Climate Act with a 70 Per Cent Reduction Target*, STATE OF GREEN (Dec. 9, 2019), <https://stateofgreen.com/en/partners/state-of-green/news/during-cop25-denmark-passes-climate-act-with-a-70-per-cent-reduction-target> [https://perma.cc/D2RC-MUZW].

51. Lov nr. 965, art. 1, af 26.6.2020 om klimal (Den.).

52. *Id.*

53. *Id.*

54. Council Conclusions 169/14 of 24 Oct. 2014, 1.

55. Council Conclusions 22/20 of 11 Dec. 2020, 5.

set national five-year targets that align with the 2050 target; each target is set ten years in advance.⁵⁶

The Danish Council on Climate Change, which was established in 2014,⁵⁷ has had its funds doubled and mandate expanded.⁵⁸ The climate council is now independent, with a self-electing new chairman.⁵⁹ It also meets with a Climate Dialogue Forum, composed of members from think tanks, NGOs, workers organizations, and ministries.⁶⁰ The Council assesses the government's climate efforts and makes recommendations for future climate action.⁶¹

At least once every five years, the Danish government must develop Climate Action Plans that will outline concrete policies to reduce emissions in all sectors.⁶² To monitor progress and ensure accountability, the Minister for Climate, Energy and Utilities must submit an annual policy report to the parliament on the status of greenhouse gas emissions and compliance with international obligations.⁶³

In what may be a global first, the Act makes a commitment to deliver on climate support to developing countries.⁶⁴ It also requires the government to report on emissions from its imports and

56. Lov nr. 965 art. 1.

57. *About the Danish Council on Climate Change*, KLIMARÅDET, <https://klimaraadet.dk/en/about-danish-council-climate-change> [<https://perma.cc/8Q5P-3CK5>] (the Danish Council on Climate Change was established as a result of the original Climate Change Act No. 716 of 06.25.2014); SALLY WEAVER ET AL., OVERVIEW OF NATIONAL CLIMATE CHANGE ADVISORY COUNCILS 8 (Mar. 2019), <https://www.ilmastopaneeli.fi/wp-content/uploads/2019/05/Overview-of-national-CCCs.pdf> [<https://perma.cc/9FAP-RF9>].

58. *The Climate Act*, GRANTHAM RSCH. INST. ON CLIMATE CHANGE & ENV'T, <https://climate-laws.org/geographies/297uropa297/laws/the-climate-act> [<https://perma.cc/W4YV-EKX6>].

59. Lov nr. 965 art. 10.

60. *Id.* art. 2; DANISH MINISTRY OF CLIMATE, ENERGY & UTILS., DENMARK'S INTEGRATED NATIONAL ENERGY AND CLIMATE PLAN 27–28 (Dec. 2019), https://ec.europa.eu/energy/sites/ener/files/documents/dk_final_necp_main_en.pdf [<https://perma.cc/9USF-UP9H>].

61. Lov nr. 965 art. 4.

62. *See id.* art. 2.

63. *Id.* art. 8

64. Jocelyn Timperley, *Denmark Adopts Climate Law to Cut Emissions 70% by 2030*, CLIMATE HOME NEWS (June 12, 2019), <https://www.climatechangenews.com/2019/12/06/denmark-adopts-climate-law-cut-emissions-70-2030/#:~:text=Denmark's> [<https://perma.cc/TNN5-TAAL>]; *see* Lov nr. 965 art. 7.

consumption.⁶⁵ The Act also requires the government to prepare an annual global strategy to ensure that its foreign, development, and trade policies support Denmark's role as a global leader in international climate policy.⁶⁶

Some trends are evident across these examples of climate framework laws. The passage of each of these laws reflected political momentum for ambitious climate policy at the time of their adoption. Each of these countries are among those with the strongest engagement in the UNFCCC process. Three have been or will be a UNFCCC COP host⁶⁷ and New Zealand, via the co-leadership of Ambassador Jo Tyndall, guided the negotiation process to the adoption of the Paris Agreement in 2015.⁶⁸ International pride and peer pressure should not be discounted. Danish Minister for Climate, Energy and Utilities, Dan Jørgensen, said that in passing their climate framework law, "we hope Denmark can inspire other countries to follow suit,"⁶⁹ although the law's enactment followed that of their neighbor, Sweden. Adopted in 2017, Sweden's Climate Act and Policy Framework consists of a climate act, climate targets, including reaching zero net greenhouse gas emissions by 2045, and a climate policy council.⁷⁰

Peer pressure also encourages ambitious target-setting. China's September 2020 announcement that it would reach carbon

65. Lov nr. 965 art. 6. Timperley, *supra* note 64.

66. Lov nr. 965 art. 7; Timperley, *supra* note 64.

67. *Uniting the World to Tackle Climate Change*, UN CLIMATE CHANGE CONFERENCE UK 2021, <https://www.ukcop26.org> [<https://perma.cc/2PQ7-QVHS>]; *Cancun Climate Change Conference – November 2010*, *supra* note 27; *Copenhagen Climate Change Conference – December 2009*, UNITED NATIONS CLIMATE CHANGE, <https://unfccc.int/process-and-meetings/conferences/past-conferences/copenhagen-climate-change-conference-december-2009/copenhagen-climate-change-conference-december-2009> [<https://perma.cc/4H3D-YWJ8>].

68. See Jo Tyndall, *From Cancun to Katowice: The Flame of Multilateralism Still Burns*, N.Z. MINISTRY OF FOREIGN AFF. & TRADE (Feb. 28, 2019), <https://www.mfat.govt.nz/en/media-and-resources/ministry-statements-and-speeches/from-cancun-to-katowice-flame-of-multilateralism-burns> [<https://perma.cc/RV24-LJZX>].

69. State of Green, *supra* note 50.

70. *Sweden's Climate Act and Climate Policy Framework*, SWED. ENV'T PROT. AGENCY, <http://www.swedishepa.se/Environmental-objectives-and-cooperation/Swedish-environmental-work/Work-areas/Climate/Climate-Act-and-Climate-policy-framework-> [<https://perma.cc/T9XP-HA49>] (Oct. 26, 2020); SWED. MINISTRY OF ENV'T & ENERGY, *THE SWEDISH CLIMATE POLICY FRAMEWORK 2*, <https://www.government.se/495f60/contentassets/883ae8e123bc4e42aa8d59296ebe0478/the-swedish-climate-policy-framework.pdf> [<https://perma.cc/FD38-3GWP>].

neutrality by 2060⁷¹ prompted swift target announcements from Japan and South Korea. In October 2020, Japan committed to reaching net zero emissions by 2050,⁷² and South Korea announced that it would strive to achieve climate neutrality by 2050,⁷³ quickly and significantly raising the ambition of climate action in Asia.

Of these illustrative examples, several do not possess every climate framework element, while others created a climate framework law by amendment. Mexico's climate framework law, for example, takes a "gradual approach" rather than maximizing ambition across the board, and its climate committee is not independent.⁷⁴ New Zealand's Zero Carbon amendment added to its primary climate act, only meeting most of the climate framework law criteria with revision.⁷⁵ Denmark used its Climate Act to overhaul its original climate framework.⁷⁶

A number of countries have climate frameworks or climate targets embedded in law, but lack one or several of the climate framework law criteria: a legally-binding, overarching framework; a mid-century mitigation target; short-term targets; executive authority; an independent climate change committee; and a regular review process.⁷⁷ The European Union has proposed adding its first European Climate Law to the 2030 Framework for Energy and Climate.⁷⁸ In doing so, the European Green Deal aspiration to

71. Somini Sengupta, *China, in Pointed Message to U.S., Tightens Its Climate Targets*, N.Y. TIMES (Nov. 13, 2020), <https://www.nytimes.com/2020/09/22/climate/china-emissions.html> [<https://perma.cc/5Y3F-VMLN>].

72. Justin McCurry, *Japan Will Become Carbon Neutral by 2050, PM Pledges*, THE GUARDIAN (Oct. 26, 2020, 3:04 PM), <https://www.theguardian.com/world/2020/oct/26/japan-will-become-carbon-neutral-by-2050-pm-pledges> [<https://perma.cc/246A-264M>].

73. Isabelle Gerretsen, *South Korea Formally Commits to Cutting Emissions to Net Zero by 2050*, CLIMATE HOME NEWS (Oct. 28, 2020, 3:01 PM), <https://www.climatechangenews.com/2020/10/28/south-korea-formally-commits-cutting-emissions-net-zero-2050> [<https://perma.cc/5MNX-FYYP>].

74. Ley General de Cambio Climático [LGCC], art. 31-34, 102, Diario Oficial de la Federación [DOF] 06-06-2012, últimas reformas DOF 13-07-2018 (Mex.).

75. See discussion *supra* Part IV.C.

76. See discussion *supra* Part IV.D.

77. Mehling & Rawlins, *supra* note 5, at 4.

78. European Commission Press Release IP/20/1599, State of the Union: Commission Raises Climate Ambition and Proposes 55% cut in Emissions by 2030 (Sept. 17, 2020). The Commission will review, and where necessary propose to revise, by June 2021, all relevant policy instruments to achieve the additional emission reductions. *Id.*

become climate neutral by 2050 will become legally binding.⁷⁹ However, the 2030 Framework lacks an independent climate committee⁸⁰ and does not set short-term carbon budgets or five year targets, although the subsequent adjustments to the European ETS may effectively create a similar ratcheting effect.⁸¹

Kenya, another country that has hosted a COP (COP 12 in Nairobi), adopted its Climate Change Act in 2016.⁸² The Act establishes a National Climate Change Council, appointed by the President,⁸³ to oversee government implementation of the National Climate Change Action Plan, which is to be reviewed and updated every five years.⁸⁴ It also establishes a Climate Change Director to act as the lead agency for climate change⁸⁵ and a Climate Change Fund under its national treasury.⁸⁶ However, the full impact of the law has yet to be felt, with the Council yet to be established or meet, due in part to lack of political will to comply with the provision.⁸⁷ The Climate Change Fund only received its initial capital in the

79. See, e.g., Council Conclusions 22/20, *supra* note 55, at 5. It is remarkable that EU took this ambitious step in parallel to negotiations for the EU to further raise its 2030 target.

80. See ALINA AVERCHENKOVA & LARA LAZARO, THE DESIGN OF AN INDEPENDENT EXPERT ADVISORY MECHANISM UNDER THE EUROPEAN CLIMATE LAW: WHAT ARE THE OPTIONS? 8 (Sept. 2020), https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2020/09/GRI_The-design-of-an-expert-advisory-mechanism-under-the-European-Climate-Law_What-are-the-options.pdf [<https://perma.cc/3MNS-3LU3>]. Additionally, Dr. Nils Meyer-Ohlendorf, International and European Governance Senior Fellow at the Ecologic Institute, noted that 17 EU Member States have or are planning to have an independent climate council. Florence School of Regulation, *The Vienna Forum on European Energy Law – Webinar 2*, YouTube, at 50:33 (Nov. 23, 2020), https://www.youtube.com/watch?v=AKP5zUAeLg8&ab_channel=FlorenceSchoolofRegulation [<https://perma.cc/9RRX-AVV6>].

81. *EU Emissions Trading System (EU ETS)*, EUROPEAN COMM'N, https://ec.europa.eu/clima/policies/ets_en [<https://perma.cc/7XM2-RV2P>] (“To achieve a climate-neutral EU by 2050 and the intermediate target of an at least 55% net reduction in greenhouse gas emissions by 2030, the Commission is proposing to revise and possibly expand the scope of the EU ETS.”).

82. The Climate Change Act, No. 11 (2016) KENYA GAZETTE SUPPLEMENT No. 68.

83. *Id.* § 5.

84. *Id.* §§ 6, 13(8).

85. *Id.* § 9.

86. *Id.* § 25.

87. Clarice Wambua, *The Kenya Climate Change Act 2016: Emerging Lessons from a Pioneer Law*, 13 CARBON & CLIMATE L. REV. 257, 266 (2019).

2018/2019 fiscal year due to draft regulations leaving appropriations solely to the discretion of Parliament.⁸⁸

Japan's 1998 Act on Promotion of Global Warming Countermeasures is one of two climate laws.⁸⁹ It refers to its emission reduction obligations under the Kyoto Protocol⁹⁰ and establishes a Headquarters for the Prevention of Global Warming Countermeasures, chaired by the Prime Minister.⁹¹ The Act was revised upon Japan's adoption of the Paris Agreement and the 2016 Plan for Global Warming Countermeasures,⁹² which will be further revised to include its commitment to reach zero emissions by 2050.⁹³ It is a framework that is updated by targets, rather than targets updated by the framework, but has so far proven effective due to strong leadership and political will.

Similarly, South Korea will update its Framework Act on Law Carbon Green Growth again. The Framework Act creates a legislative framework for mid- and long-term emission reduction targets and requires the government to administer national climate

88. *Id.* at 268.

89. Chikyū ondan ka taisaku no suishin nikansuru hōritsu [Act on Promotion of Global Warming Countermeasures], Law No. 117 of 1998, *translated in* (Japanese Law Translation [JLT DS]), <http://www.japaneselawtranslation.go.jp/law/detail/?id=97&vm=04&re=2&new=1> [https://perma.cc/3B4S-USGF] (Japan). The other climate law is the Enerugī no shiyō no gōri katō nikansuru hōritsu [Act on the Rationalization etc. of Energy Use], Law No. 49 of 1979, *translated in* (Japanese Law Translation [JLT DS]), <http://www.japaneselawtranslation.go.jp/law/detail/?id=3579&vm=04&re=02&new=1> [https://perma.cc/D8XY-8UT7] (Japan).

90. Chikyū ondan ka taisaku no suishin nikansuru hōritsu [Act on Promotion of Global Warming Countermeasures], Law No. 117 of 1998, arts. 8–9.

91. *Id.* arts. 10–19; *Act on Promotion of Global Warming Countermeasures (Law No. 107 of 1998)*, GRANTHAM RSCH. INST. ON CLIMATE CHANGE & ENV'T, <https://climate-laws.org/geographies/japan/laws/act-on-promotion-of-global-warming-countermeasures-law-no-107-of-1998> [https://perma.cc/C6FB-UXR8].

92. See JAPAN MINISTRY OF ENV'T, OVERVIEW OF THE PLAN FOR GLOBAL WARMING COUNTERMEASURES (May 2016), <https://www.env.go.jp/press/files/en/676.pdf> [https://perma.cc/DR3V-NZUH]; Osamu Sawaji, *Japan's "Plan for Global Warming Countermeasures"*, GOV'T OF JAPAN (Sept. 2016), https://www.gov-online.go.jp/eng/publicity/book/hlj/html/201609/201609_01_en.html [https://perma.cc/Q37F-7VZD].

93. McCurry, *supra* note 72; Press Release, Mie Asaoka, President, Japan to Amend Act on the Promotion of Global Warming Countermeasures: Kiko Network Urges Government to Legislate 2050 Net Zero Target and Include a Process to Raise Ambition (Jan. 22, 2021), https://www.kiconet.org/wp/wp-content/uploads/2021/02/PR_Act-on-the-Promotion-of-Global-Warming-Countermeasures.pdf [https://perma.cc/J9YN-5LM8].

strategies with five-year plans over a twenty-year period.⁹⁴ Subsequently, the 2016 enforcement decree updated the Green Growth law to reflect 2030 targets,⁹⁵ and the law will be updated further to reflect its recently announced 2050 climate neutrality target.⁹⁶

Do these other countries meet enough of the criteria to qualify as the most robust and ambitious types of climate framework laws? Governments establish climate laws to give political heft to climate actions, raise the visibility of climate change, and to focus, guide, and review government action in the short-, medium-, and/or long-term. What seems more important, however, than ticking off a box matching each of the criteria for a robust climate framework law is that some combination of those elements effectively work together in tandem with, or in spite of, political will. The empowerment of an expert body as well as making the executive government publicly accountable has a significant value beyond merely embedding a target in law. It helps ensure government effectiveness,⁹⁷ accountability, and the durability of climate action over time.

94. Framework Act on Law Carbon Green Growth, art. 40 (S. Kor.), *translated in* Korea Legislation Research Institute's online database, https://elaw.klri.re.kr/eng_service/lawView.do?hseq=49999&lang=ENG [<https://perma.cc/7ES9-UUF2>].

95. See Enforcement Decree of the Framework Act on Low Carbon, Green Growth, *amended by* Enforcement Decree No. 29617, Mar. 12, 2019, art. 25 (S. Kor.), *translated in* Korea Legislation Research Institute's online database, https://elaw.klri.re.kr/eng_service/lawView.do?hseq=50004&lang=ENG [<https://perma.cc/CVZ7-DG6G>] (article 25 was amended by Presidential Decree No. 27180 on May 24, 2016 to include a target for greenhouse gas emission reductions by 2030).

96. Sarah George, *Net-zero by 2050: South Korea to Enshrine New Climate Target in Law*, EDIE (Oct. 28, 2020), <https://www.edie.net/news/11/Net-zero-by-2050-South-Korea-to-enshrine-new-climate-target-in-law/#:~:text=South%20Korean%20President%20Moon%20Jae,of%20the%20UK%20and%20Japan.&text=China%2C%20the%20world's%20largest%20emitter,achieve%20carbon%20neutrality%20by%202060> [<https://perma.cc/K8DH-MRD8>].

97. ANDREAS RÜDINGER ET AL., TOWARDS PARIS-COMPATIBLE CLIMATE GOVERNANCE FRAMEWORKS 12 (June 2018), <https://www.iddri.org/sites/default/files/PDF/Publications/Catalogue%20Iddri/Etude/201806-ST0418-paris%20compatible%20gov%20frameworks.pdf> [<https://perma.cc/B958-J2R2>].

V. LEARNING FROM CLIMATE FRAMEWORK LAWS

What lessons can be learned from these exemplary climate framework laws? As might be expected, those adopted most recently may have few lessons on effectiveness to share, such as New Zealand and Denmark's newer frameworks.⁹⁸ Nevertheless, legal scholars have examined some of these climate framework laws' shortcomings and their overall benefits may outweigh the risks of addressing climate change at such a high level.

A. Lessons Learned

Grantham Research Institute on Climate Change and the Environment, in examining the effectiveness of the UK's framework law over its first decade, found that its Climate Change Act improved the political debate on climate change, in part by establishing an agreed empirical evidence base.⁹⁹ The Act helped preserve the political consensus on climate action and long-term ambition despite political and economic turbulence.¹⁰⁰ It has helped grow the UK's international standing on climate change.¹⁰¹ Finally, it was a major driver in radically transforming the country's power sector.¹⁰²

The Institute similarly found that Mexico's GLCC laid important institutional foundations that have helped mainstream the climate change agenda across the government.¹⁰³ The GLCC has strengthened political continuity, highlighting updates to the Law to

98. While not within the scope of this article, it may also be worth noting that Denmark also has a movement to include climate change in its constitution, which could open a parallel process to its climate law to hold the government accountable. *See, e.g.*, Vi ønsker en Grøn Grundlov [We Want a Green Constitution], DEN GRØNNE GRUNDLOV [GREEN CONSTITUTION], <https://grongrundlov.dk> [<https://perma.cc/SY8B-PHUR>].

99. SAM FANKHAUSER ET AL., 10 YEARS OF THE UK CLIMATE CHANGE ACT 3 (2018), https://www.lse.ac.uk/GranthamInstitute/wp-content/uploads/2018/03/10-Years-of-the-UK-Climate-Change-Act_Fankhauser-et-al.pdf [<https://perma.cc/FR69-CH6T>].

100. *Id.*

101. *Id.*

102. *Id.*

103. ALINA AVERCHENKOVA & SANDRA L. GUZMAN, MEXICO'S GENERAL LAW ON CLIMATE CHANGE: SUCCESSES AND CHALLENGES 4 (Nov. 2018), https://www.lse.ac.uk/GranthamInstitute/wp-content/uploads/2018/11/Policy_brief_Mexico%E2%80%99s-General-Law-on-Climate-Change-Successes-and-challenges_8pp_AverchenkovaGuzman-2.pdf [<https://perma.cc/VGH9-5VKZ>].

maintain consistency with international commitments.¹⁰⁴ By raising political awareness and recognition of climate change and the benefits of a low-carbon transition, the quality of the political debate has improved.¹⁰⁵ Finally, the Law has advanced Mexico's low-carbon energy transition by facilitating energy reforms and aided the negotiation of an energy transition law.¹⁰⁶

In New Zealand, the 2017 Ardern government inaugurated a phase of rapid policy development, with the climate law drawing especially on UK and EU examples. The recent October 2020 election looks likely to maintain the political momentum that established the law, with James Shaw continuing as New Zealand's climate change minister, maintaining his place in the Prime Minister's cabinet, and gaining the role of associate environment minister.¹⁰⁷ Senior researcher David Hall credits the law with the suspension of offshore oil and gas permits as a potentially major but disputed achievement as well as the decision to split targets for CO₂ and methane, which means that agricultural methane is treated separately.¹⁰⁸ He says that "[i]f the science behind the decision eventually informs the international accounting of greenhouse gases, it will have major ramifications for developing countries whose economies also rely heavily on agriculture."¹⁰⁹

B. Challenges and Shortcomings

In its assessment of the UK's Climate Change Act, the Grantham Research Institute on Climate Change and the

104. *Id.*

105. *Id.*

106. *Id.*

107. Rebecca Falconer, *New Zealand Greens Accept PM Jacinda Ardern's "Cooperation Agreement" Offer*, AXIOS (Nov. 1, 2020), <https://www.axios.com/new-zealand-greens-jacinda-ardern-cooperation-deal-0e915acb-9058-4817-92c5-82a2f219ebfc.html> [<https://perma.cc/JL3J-XFZX>].

108. David Hall, *Ardern's Government and Climate Policy: Despite a Zero-Carbon Law, is New Zealand Merely a Follower Rather than a Leader?*, THE CONVERSATION (Oct. 4, 2020), <https://theconversation.com/arderns-government-and-climate-policy-despite-a-zero-carbon-law-is-new-zealand-merely-a-follower-rather-than-a-leader-146402> [<https://perma.cc/RWC9-NG4L>]; Press Release, Jacinda Ardern, Prime Minister, Planning for the Future – No New Offshore Oil and Gas Exploration Permits (Apr. 12, 2018), <https://www.beehive.govt.nz/release/planning-future-no-new-offshore-oil-and-gas-exploration-permits> [<https://perma.cc/SBY2-46XS>].

109. Hall, *supra* note 108.

Environment noted that while there were no outright failures, some of the expectations of lawmakers have not been fully met.¹¹⁰ They note that the Act on its own is not sufficiently investible; the carbon policies stemming from the Act provide less long-term clarity than investors desire.¹¹¹ There is concern that without stronger enforcement, there may be insufficient protection against backsliding once pressure has to be placed on sectors that will be more difficult to decarbonize.¹¹² Government buy-in is uneven across departments, and there has been more adaptation planning than adaptation action.¹¹³

The Grantham Research Institute on Climate Change and the Environment has also noted some challenges for Mexico's GLCC, which relate to its design, institutional and financial capacity, and political will.¹¹⁴ The law defines general responsibilities without setting sufficiently clear mandates or implementation guidelines, making coordination and implementation challenging without specific goals and stronger coordination among ministries.¹¹⁵ Its accountability mechanisms are weak—the law has no independent body to enforce accountability, nor does it establish sanctions for non-compliance.¹¹⁶ The law has further been ineffective in allocating public sources to implement climate policy and the Climate Change Fund has received little funding.¹¹⁷ Finally, they identify gaps in political commitment and leadership, as significant disagreements on how to take climate action continue and opposition from fossil-fuel intensive companies slow implementation.¹¹⁸

Despite its recent passage, there is some early criticism of New Zealand's Zero Carbon law. One is that, despite the law, the government's climate actions still are not going far enough and will not produce immediate emission reductions towards its 2030 target under the Paris Agreement.¹¹⁹

110. FANKHAUSER ET AL., *supra* note 99, at 3.

111. *Id.*

112. *Id.* at 3–4.

113. *Id.* at 4.

114. AVERCHENKOVA & GUZMAN, *supra* note 103, at 5.

115. *Id.*

116. *Id.*

117. *Id.*

118. *Id.*

119. Hall, *supra* note 108.

C. Risks

Countries considering developing and implementing climate framework laws do so not without risks. As evidenced in some of the cases mentioned, it takes enormous effort and preparation to lay the groundwork for an effective and comprehensive climate framework law. A shift in political will may mean that law never gets off the ground. In other cases, it may be more effective to add to or combine existing laws to create the necessary framework.

If mid- or long-term targets are embedded into the climate law without a way to review or revise them other than by passing a new law, the targets risks being outdated quickly in the fast-moving global discussions and negotiations to limit global warming. This situation further risks locking in ambition over the long-term, particularly if political will shifts or leadership changes. Additionally, while making emission reduction and other climate targets legally binding raises their profile and gives them greater political gravitas, it also can create legal causes of action for not achieving them. Embedding targets in law opens governments to the risk of litigation for not acting or doing enough to meet them, as will be discussed Part VII.

D. Benefits

In most cases, the expectations of the gains incurred by climate framework laws are met in practice. Climate framework laws provide for a raft of benefits that include nationwide policy coherence, focused, more effective government action, and greater accountability. First, the creation of an organizational structure and formal mandates for climate-specific responsibilities can create the kind of institutional capacity that enables both executive government and the ministries, agencies, and departments that support them to better align existing policies with the overarching targets or replacement altogether with those fit for purpose. The effective engagement of government agencies at all levels can achieve, even if over time, the kind of buy-in necessary for a whole-of-government approach to climate action, particularly given the need to effect data-intensive research and reporting. By creating one

internally consistent act, a climate framework law can increase efficiency and lower administrative costs.¹²⁰

Climate framework laws can enable better greenhouse gas data management. That one cannot manage what one does not measure is at the heart of emission reduction efforts, but elides the intensiveness of the measurement, reporting verification (MRV) processes that underpin them.¹²¹ For countries, developed countries in particular, the capacity to generate this data at the national level has grown over decades given the obligations under UNFCCC reporting processes.¹²² For developing countries who historically have had less capacity, generating this data and complying with the technical requirements of international reporting and review has been challenging, particularly when they must wait on international funding to hire often one-off, outside consultants to aid with reporting. Climate framework laws, in setting out mandates for data collection and for entities and departments to share relevant information with one another, and by increasing domestic expertise and capacity, greatly facilitate the ability to produce better quality greenhouse gas emissions inventory reports and understand the carbon intensity of specific sectors.

These types of laws create the mid- to long-term stability and vision that policymakers and markets need to take climate action and transition to a low carbon economy. This is one of the key goals and markers of such a law: durability. However, a climate plan alone, a legally binding 2050 target alone, or the executive authority to manage such a pathway alone may not provide for stability, as noted earlier. In many jurisdictions, executive rulemakings will not bind future governments, leaving them vulnerable to amendment or repeal by the next administration.¹²³ Moreover, an executive order

120. Mehling & Rawlins, *supra* note 5, at 20.

121. MRV generally refers to the process of measuring and collecting data on greenhouse gas emissions or mitigation actions before compiling and reporting this information to a requesting program or entity, and then subjecting the reported data to a third-party review and verification. IETA, GREENHOUSE GAS MEASUREMENT, REPORTING AND VERIFICATION (MRV) (Mar. 2015), <https://www.ieta.org/resources/Resources/101s/ghg-mrv-apr2015.pdf> [<https://perma.cc/SC8S-9ADT>].

122. *See, e.g.*, JENNIFER HUANG, UNFCCC CLIMATE TRANSPARENCY: LESSONS LEARNED 2 (Nov. 2016), <https://www.c2es.org/site/assets/uploads/2016/11/unfccc-climate-transparency-lessons-learned.pdf> [<https://perma.cc/HB8U-CBWX>].

123. Mehling & Rawlins, *supra* note 5, at 3, 19.

alone may indicate that climate policy has not acquired widespread political support for legislative enactment.¹²⁴

But, combining all or some of these elements, a binding long-term target, particularly in combination with shorter mid-term targets or rolling carbon budgets, executive branch authority to take action on climate, and/or some process by which targets can be updated or reassessed, can generate greater capacity to define a legal structure that survives elections and holds future governments accountable. In turn, this lends the law political weight and visibility, both domestically and internationally. It legitimizes climate action both among constituents, but also among international peers; it provides an important signal about the earnestness of climate action.¹²⁵

Finally, it turns out that climate laws produce real greenhouse gas emission reductions. A 2020, study by Shaikh Eskander and Sam Fankhauser, two scholars associated with the Grantham Research Institute on Climate Change and the Environment, examined climate laws passed from 1999 to 2016. It indicates that, in countries with a strong rule of law, each new climate law can reduce annual carbon dioxide (CO₂) emissions per unit of gross domestic product by 0.78 percent nationally in the first three years and by 1.79 percent in year four and beyond.¹²⁶ In 2016, current climate laws were associated with an annual reduction in global CO₂ emissions of 5.9 GtCO₂.¹²⁷ From 1999 to 2016, cumulative CO₂ emissions savings amount to 38 GtCO₂—about one year's worth of global CO₂ output.¹²⁸

While the study does not differentiate climate framework laws as defined in this article and would not take into account laws passed after 2016, perhaps future studies might be able to demonstrate whether and by how much climate framework laws are likely to produce even greater emission reductions, given their stability and ambition over time. The study did demonstrate, however, that

124. *Id.* at 3–4; Alina Averchenkova et al., *Introduction*, in *TRENDS IN CLIMATE CHANGE LEGISLATION* 1, 4–5 (Alina Averchenkova et al. eds., 2017).

125. Mehling & Rawlins, *supra* note 5, at 20.

126. Eskander & Fankhauser, *supra* note 11, at 752.

127. *Id.* at 755.

128. *Id.*

legislative acts were more effective drivers of emission reductions than executive orders.¹²⁹

Additionally, for countries with climate framework laws or strong climate framework policies, such laws and policies provided unexpected benefits in 2020. They have enabled some countries to quickly respond to the novel coronavirus pandemic and resulting economic fallout by providing a blueprint for a recovery and stimulus plan that is both sustainable and consistent with long-term climate ambition. For instance, the EU's Green Deal provided ready-made plans tailored for a "green" recovery. On May 27, 2020 the European Commission agreed to NextGenerationEU, an economic recovery package and fund developed in line with the objectives of the Green Deal that will be used to accelerate Europe's green and digital transition.¹³⁰

VI. CLIMATE FRAMEWORK LAWS AND THE UN FRAMEWORK CONVENTION ON CLIMATE CHANGE

As Michael Mehling has noted, watershed developments in international climate diplomacy have generally been accompanied by an increase in legislative activity.¹³¹ These developments are the entry into force of the Kyoto Protocol in 2005, the climate summits in Copenhagen and Cancún in 2009 and 2010, and the adoption of the Paris Agreement in 2015. However, the Grantham Research

129. *Id.* at 753–755.

130. European Commission Press Release IP/20/940, Europe's Moment: Repair and Prepare for the Next Generation (May 27, 2020), https://ec.europa.eu/commission/presscorner/detail/en/ip_20_940 [<https://perma.cc/ZYS8-27KV>]; European Commission, *The EU Budget Powering the Recovery Plan for Europe*, at 2 (May 27, 2020), https://ec.europa.eu/info/sites/info/files/factsheet_1_en.pdf [<https://perma.cc/LR76-VH2Z>]; Zsolt Darvas & Bruegel, *Having the Cake, but Slicing it Differently: How is the Grand EU Recover Fund Allocated?*, Bruegel (July 23, 2020), <https://www.bruegel.org/2020/07/having-the-cake-how-eu-recovery-fund/> [<https://perma.cc/S3DK-NFXV>].

131. Mehling & Rawlins, *supra* note 5, at 5; Gabriela Iacobuta et al., *National Climate Change Mitigation Legislation, Strategy and Targets: A Global Update*, 18 CLIMATE POLICY 1114, 1130 (2018); see also Sam Fankhauser et al., *Do International Factors Influence the Passage of Climate Change Legislation?*, 16 CLIMATE POLICY, 318, 319 (2016) (arguing that the propensity to pass climate legislation increases with the number of climate laws passed by others, with the assumption of global leadership roles, e.g., hosting international climate conferences, can increase domestic support and lead to further climate legislation).

Institute on Climate Change and the Environment cautions that it is difficult to “discern an impact of external factors, such as international climate negotiations, on national climate legislation.”¹³² Their data reveals that global legislative activity peaked around 2009-2014 and that the legislative impact of the Paris Agreement appears limited.¹³³ Some experts say that climate framework laws, like that of Mexico, instead reflect a “trend in which individual states and countries, frustrated with stalled United Nations climate agreements, have begun implementing their own emissions regulations.”¹³⁴

How might the Paris Agreement influence countries that may legislate their international climate targets or their climate policies more broadly? Its unique hybridization of top-down (internationally binding) obligations and bottom-up (nationally determined) targets create a system meant to ratchet up ambition and action over the long term.¹³⁵ In the next few years, the global climate community will finally shift the more than two-decade-old climate negotiation process into one that focuses primarily on the implementation of climate commitments.¹³⁶

The Paris Agreement has a number of features that may influence how countries adapt, improve, or create new domestic processes in order to comply with its obligations. All parties to the Agreement are required to maintain a nationally determined contribution (NDC) that outlines their self-defined mitigation goals.¹³⁷ They are legally obligated to pursue domestic measures with the aim of achieving those goals.¹³⁸ Every five years, they must update or communicate a new NDC.¹³⁹

132. Eskander et al., *supra* note 4, at 57.

133. *Id.* at 57, 69.

134. Vance, *supra* note 28.

135. See JENNIFER HUANG, A BRIEF GUIDE TO THE PARIS AGREEMENT AND ‘RULEBOOK’ 1 (June 2019), <https://www.c2es.org/document/a-brief-guide-to-the-paris-agreement-and-rulebook> [<https://perma.cc/HB6F-FXNT>].

136. See, e.g., Jennifer Huang, *The Future of COPs After Madrid*, CTR. FOR CLIMATE & ENERGY SOLS. (Jan. 30, 2020), <https://www.c2es.org/2020/01/the-future-of-cops-after-madrid> [<https://perma.cc/7FY5-NLWC>].

137. Paris Agreement to the United Nations Framework Convention on Climate Change, Dec. 12, 2015, T.I.A.S. No. 16-1104 [hereinafter Paris Agreement].

138. However, achievement of the target is not a legal obligation. Paris Agreement, art. 4.2.

139. *Id.* art. 14.

The Agreement reaffirms the UNFCCC goal of keeping average warming below two degrees Celsius while pursuing efforts to limit the temperature increase even further to 1.5 degrees Celsius.¹⁴⁰ It articulates two long-term emission goals: first, a peaking of emissions as soon as possible (recognizing it will take longer for developing countries); second, a goal of net greenhouse gas neutrality in the second half of this century.¹⁴¹ In line with these aims, the Paris Agreement encourages parties to develop and communicate “long-term low greenhouse gas emission development strategies.”¹⁴²

The Paris Agreement also establishes an enhanced transparency framework that covers reporting and review of information on parties’ emissions, mitigation efforts, and support provided or received.¹⁴³ It requires developed countries (and encourages other countries providing support) to report in their biennial transparency reports on the support for developing countries they have provided or mobilized.¹⁴⁴ Developing countries should provide information on financial, technology transfer and capacity-building support needed and received.¹⁴⁵

To promote rising ambition, the Agreement created a new mechanism—a “global stocktake”—to assess collective progress toward meeting the agreement’s long-term goals.¹⁴⁶ Parties will then submit new NDCs, “informed by the outcomes of the global stocktake.”¹⁴⁷ Article six of the Paris Agreement recognizes that parties may cooperate voluntarily in the implementation of their NDCs, in order to allow for “higher ambition . . . and to promote sustainable development and environmental integrity.”¹⁴⁸ Legal scholars Michal Nachmany and Emily Mangan believe that legislative implementation of the Paris Agreement is far from

140. *Id.* art. 2.

141. *Id.* art. 4.

142. *Id.*

143. *Id.* art. 13.

144. *Id.*

145. *Id.*

146. *Id.* art. 14.

147. *Id.* art. 4.

148. *Id.* art. 6. The rules guiding this mechanism have yet to be adopted but parties still anticipate its use.

complete, given that few NDC emission pledges are matched by legislated national emissions targets.¹⁴⁹

However, perhaps the most significant impact of the Paris Agreement has been on the ambition of new laws.¹⁵⁰ The passage of legally binding, mid-century climate neutrality goals indicates that governments are responding to the long-term nature of the climate crisis, with some of the climate framework laws explicitly mentioning the Paris Agreement's long-term goals. For example, New Zealand's Zero Carbon amendment creates a framework by which the country can develop and implement clear and stable climate change policies that "contribute to the global effort under the Paris Agreement to limit the global average temperature increase to 1.5° Celsius above preindustrial levels."¹⁵¹ Denmark's Climate Act declares that its government must work to achieve "the Paris Agreement's target of limiting global temperature rise to 1.5 degrees."¹⁵² Its interim targets must take into account the Paris Agreement and be no less ambitious than the most recently set target, mirroring the Paris Agreement principle of "no backsliding" and progression.¹⁵³

While a major motivation for adopting a climate framework laws is the political weight and visibility it affords to climate change¹⁵⁴ or the prestige of demonstrating international climate leadership, combining the functional elements of a climate framework law in such a way that they generally echo that of the Paris process provides for significant domestic and international benefits. Although not a legal obligation by the Paris Agreement, the increasing legal or aspirational adoption of long-term low greenhouse gas emission development strategies (which in many cases have been "net zero" or climate neutrality goals to be achieved by 2050) has led to countries

149. MICHAL NACHMANY & EMILY MANGAN, POLICY BRIEF: ALIGNING NATIONAL AND INTERNATIONAL CLIMATE TARGETS 3 (Oct. 2018), <https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2018/10/Aligning-national-and-international-climate-targets-1.pdf> [<https://perma.cc/3SMU-RVGW>]; Eskander et al., *supra* note 4, at 58.

150. Eskander et al., *supra* note 4, at 57–58. Several countries, including Sweden (2017), France (2019), New Zealand (2019) and the UK (2019) have passed acts to put into law an economy-wide net-zero emissions target (a balance between emissions and their removal from the atmosphere) in line with the Paris objectives. *Id.* at 58.

151. Climate Change Response (Zero Carbon) Amendment Act 2019, s 3 (N.Z.).

152. Lov nr. 965, art. 1, af 26.6.2020 om klimal (Den.).

153. *See id.*

154. Mehling & Rawlins, *supra* note 5, at 19.

working backwards to understand where their interim NDCs ought to align with a net zero pathway. Looking at the broader context of their climate action and thinking about sectoral long-term strategies has helped countries understand how they can make their NDCs clearer and more ambitious than they might otherwise have.¹⁵⁵ Another notable trend has been the number of countries that have submitted official long-term decarbonization strategies and, within a year or two, have embedded a more ambitious climate neutrality target in law.¹⁵⁶

Governments will also need to take into account information from the global stocktake in their target-setting process. The review processes and climate change committees tasked with assessing new science and updating or realigning the ambition of interim targets in climate framework laws make this work pro forma and ostensibly provide for greater accountability over time.

As noted earlier, climate framework laws can support more robust and effective greenhouse gas and sectoral data management.¹⁵⁷ Under the Paris Agreement's enhanced transparency framework, developing countries will be required to report on their climate action every two years, which is a change in frequency with significant capacity implications.¹⁵⁸ In addition, the new financial reporting requirements may require further or additional coordination between ministries. For countries with climate framework laws, particularly those that may manage climate funds tracking financial flows, finding, tracking, and reporting this data becomes easier, and making it public provides for

155. See CHIARA FALDUTO & MARCIA ROCHA, ALIGNING SHORT-TERM CLIMATE ACTION WITH LONG-TERM CLIMATE GOALS 10, 13–17 (May 2020), <https://www.oecd-ilibrary.org/docserver/7c980fce-en.pdf?expires=1616621302&id=id&accname=guest&checksum=7150CEADF7C17CE8270A23F8737823E8> [<https://perma.cc/HBX2-GFHF>].

156. *Id.* at 14. Examples include France and Germany, whose governments have recently put forth carbon neutrality commitments. *Id.* at 15, 17–18, 40.

157. HUANG, *supra* note 122, at 2.

158. Formerly, developing countries were required to report every four years for NCs and every 2 years for biennial update reports (BURs), with least developed country Parties and small island developing States submitting at their own discretion, though in practice not all developing countries have regularly been submitting BURs. See *Biennial Update Report Submissions from Non-Annex I Parties*, UNITED NATIONS CLIMATE CHANGE, <https://cop23.unfccc.int/BURs> [<https://perma.cc/DD6U-2Z8V>].

greater accountability to constituents and the international community.

Acknowledging the urgent need for short-term climate action, Nachmany and Mangan focus on whether a party's NDC target has been matched by legislated national emission targets.¹⁵⁹ However, in some instances, this may over credit the effectiveness of short-term climate legislation, which may not last beyond its five or ten years, be out of sync with a mid-century net zero pathway, lock in ambition without a process for its updating, or meaningfully relate to its subsequent NDC if it also not linked to a climate neutrality goal. Climate framework laws are notable for their ability to provide practical functions that echo Paris processes designed to ensure the appropriate amount of short-term ambition in the context of 2050 climate neutrality, with regular accountability so that climate action is durable over the long-term.

VII. CLIMATE LITIGATION AND CLIMATE FRAMEWORK LAWS

The increase in litigation against governments for failing to act sufficiently on climate change raises the question of whether climate laws or even legally binding NDC targets are sufficient to demonstrate adequate climate action. In the *Urgenda* case, the Netherlands' emissions reduction target, despite its legality and the government's ongoing efforts to achieve it, was deemed insufficient.¹⁶⁰ The Urgenda Foundation, a Dutch environmental group, and 900 Dutch citizens sued the Dutch government, claiming that the government's existing commitment to reduce emissions by seventeen percent below 1990 levels by 2020 did not meet its fair contribution toward the UNFCCC goal of keeping global temperature increase below two degrees Celsius.¹⁶¹ The case ultimately went to the Dutch Supreme Court, which upheld the ruling requiring the government to limit greenhouse gas emissions

159. See NACHMANY & MANGAN, *supra* note 149, at 5.

160. HR 20 december 2019, NJ 2020, 19/00135 m.nt. (Stichting Urgenda/Nederlandse Staat) (Neth.) (upholding the lower court's finding that "the State's policy regarding greenhouse gas reduction is obviously not meeting the requirements . . . to take suitable measures to protect the residents of the Netherlands from dangerous climate change").

161. See *id.* (arguing instead that a reduction in greenhouse gas emissions of 25–40% compared to 1990 emissions is necessary in order to maintain the prospect of achieving a two-degree Celsius target).

to twenty-five percent below 1990 levels by 2020.¹⁶² Similar cases have been launched in other countries.¹⁶³

At the other end of the spectrum, Brazil is facing several lawsuits for not implementing its National Policy on Climate Change, a climate change framework that develops Brazil's climate action plans, manages Brazil's Climate Fund, and is tasked with meeting its obligations under the UNFCCC.¹⁶⁴ A climate skeptic who has portrayed environmental concerns as a threat to national sovereignty, President Jair Bolsonaro, elected in 2018, brought about an abrupt shift in Brazil's environmental agenda, having since demoted his climate policy ministry¹⁶⁵ and militarized environmental forces around the Amazon rainforest.¹⁶⁶

As a result, four political parties have brought a case against the government, which reached a Supreme Court hearing in September 2020. They allege that the government's inaction regarding the Climate Fund is a violation of constitutional and international obligations.¹⁶⁷ Additionally, on November 11, 2020, an NGO coalition brought an action against the Brazilian government to the Federal Supreme Court for failing to execute the primary national

162. *Id.* (holding that the State must reduce greenhouse gas emissions by 25% by the end of 2020 compared to 1990).

163. Climate youth lawsuits have been launched in the U.S., Canada, Colombia, and South Korea for violations of their constitutional rights, with several proving successful. See UNEP, GLOBAL CLIMATE LITIGATION REPORT: 2020 STATUS REVIEW 13–17 (2020), <https://wedocs.unep.org/bitstream/handle/20.500.11822/34818/GCLR.pdf?sequence=1&isAllowed=y> [<https://perma.cc/A867-2SVP>].

164. Maria Antonia Tigre, *Brazil's First Climate Case to Reach the Supreme Court*, OPINIO JURIS (Oct. 13, 2020), <http://opiniojuris.org/2020/10/13/brazils-first-climate-case-to-reach-the-supreme-court/> [<https://perma.cc/2Z86-3GWW>]; Astrid Milena Bernal, *ADPF708 / Climate Fund. What to Expect from Brazil's First Public Hearing on Climate Policy?*, GLOB. NETWORK FOR HUMAN RTS. & ENV'T (Sept. 22, 2020), <https://gnhre.org/2020/09/22/adpf708-climate-fund-what-to-expect-from-brazils-first-public-hearing-on-climate-policy> [<https://perma.cc/M8DE-CY4S>].

165. Megan Darby, *Brazil Downgrades Climate Diplomacy in Bolsonaro Shake-up*, CLIMATE HOME NEWS (Jan. 15, 2019, 3:16 PM), <https://www.climatechangenews.com/2019/01/15/brazil-downgrades-climate-diplomacy-bolsonaro-shake> [<https://perma.cc/MP5Y-EQ3Q>].

166. Jan Rocha, *Brazil's Bolsonaro Creates Amazon Council and Environmental Police Force*, MONGABAY (Jan. 24, 2020), <https://news.mongabay.com/2020/01/brazils-bolsonaro-creates-amazon-council-and-environmental-police-force> [<https://perma.cc/68SR-EEYT>].

167. Tigre, *supra* note 164.

deforestation policy.¹⁶⁸ These cases demonstrate the dangers that a change in political leadership can have on even established climate laws without additional safeguards.

So how do countries with climate framework laws, which embed ambitious emission reduction targets and transformative policies into law, fare in terms of climate litigation? The UK's Climate Change Act has been challenged in a number of recent cases. To start, in 2018, Plan B, an environmental charity and eleven citizens impacted by climate change filed a lawsuit against the Secretary of State for Business, Energy, and Industrial Strategy.¹⁶⁹ They alleged that the Secretary of State violated the Climate Change Act by failing to revise the 2050 carbon reduction target in light of new international law and scientific developments.¹⁷⁰ Ultimately, the High Court and Court of Appeal denied all grounds for judicial review and a subsequent appeal, finding that officials exercised proper discretion and understanding of the Paris Agreement and climate-related advice.¹⁷¹

Next, in 2019, Claire Stephenson challenged a section of the UK's National Planning Policy Framework that promoted fracking, claiming, in part, that it ran afoul of the UK's commitment to reduce greenhouse gas emissions under the Climate Change Act of 2008, claims that the court rejected.¹⁷² Then, in March 2020, a UK court of appeal said that plans to expand Heathrow Airport were unlawful because they failed to take into account the Paris Agreement.¹⁷³ The

168. CHRISTIAN BRAGA, EXECUTIVE SUMMARY: ORGANISATIONS TAKE BRAZILIAN GOVERNMENT TO THE SUPREME COURT OVER DEFORESTATION AND HUMAN RIGHTS ABUSES 3 (2020), https://www.conectas.org/wp/wp-content/uploads/2020/11/67697233-executive-summary-english_adpf.pdf [<https://perma.cc/CW82-JP7X>].

169. Plan B Earth and Others v. Sec'y of State for Bus., Energy, and Indus. Strategy [2019] AC (Eng.).

170. *Id.*

171. *Id.*

172. Claire Stephenson v. Sec'y of State for Hous. and Communities and Local Gov't [2019] EWHC 519 (appeal taken from Eng.), http://blogs2.law.columbia.edu/climate-change-litigation/wp-content/uploads/sites/16/non-us-case-documents/2019/20190306_2019-EWHC-519-Admin_judgment.pdf [<https://perma.cc/LLR4-UG3H>].

173. Plan B Earth v. Sec'y of State for Transp. and Heathrow Airport Ltd. [2020] EWCA Civ 214 (appeal taken from Eng.); Jocelyn Timperley, *Could Heathrow Airport Expansion Ruling Set a Climate Precedent?*, CHINA DIALOGUE (Mar. 10, 2020), <https://chinadialogue.net/en/climate/11906-could-heathrow-airport-expansion-ruling-set-a-climate-precedent> [<https://perma.cc/X9RJ-TEUH>] ("The

case is particularly significant because the Paris Agreement does not form part of UK law or was incorporated into the Climate Change Act, meaning that the Paris Agreement should have been considered on its own account.

Finally, on May 18, 2020, three plaintiffs sought judicial review of the British government's 2011 energy national policy statements on the ground that they must be reevaluated in light of the amendment to the Climate Change Act's mid-century climate neutrality target, the Paris Agreement, the IPCC special report on 1.5 degrees of warming, the UK Parliament's climate emergency declaration, and the UK's departure from the European Union.¹⁷⁴ An amended summons was filed in June 2020.¹⁷⁵

Mexico is also facing a legal challenge. In September 2020, fifteen young people filed a federal suit against the Mexican government, requesting that the Mexican government issue regulations and public policies under the General Law on Climate Change and Mexican Constitution.¹⁷⁶ They claim that there are no regulations or public policies to implement the law.¹⁷⁷

Whether or not a climate target is embedded in law, citizens are interested in the effectiveness of their government's climate action and the fulfillment of its obligations under the Paris Agreement. When that target provides a legal cause of action, citizens can more easily take their claims to court. These early cases suggest that it may not be easy to prevail, but the government is nevertheless forced to illustrate that it is undertaking specific efforts to achieve its targets in accordance with the law. The government may be able to bring greater evidence to bear on its behalf when the broader legal framework that constitutes most climate framework laws address not just a short-term emission reduction target, but a wider economic and societal transformation to a low-carbon society that the Paris Agreement demands.

government said it would not appeal the ruling, although Heathrow airport itself said it will take it to the Supreme Court, the UK's highest court of appeal.”)

174. *Vince et al. v. Sec'y of State for Bus., Energy and Indus. Strategy* [2020] EWHC (Admin).

175. *Id.*

176. *Jóvenes v. Gobierno de México* [Youth v. Government of Mexico], Juzgado de Distrito [JD] Sept. 2020, page 1–9 (Mex.).

177. *Id.*

VIII. THE FUTURE FOR CLIMATE FRAMEWORK LAWS

With more and more countries setting net zero targets, the trend in adopting climate framework laws seems likely to continue.¹⁷⁸ The Netherlands and Germany have recently passed climate laws, though neither of them features independent climate committees or rolling carbon budgets. The Netherlands passed its Climate Act in July 2019.¹⁷⁹ The Act sets legally binding greenhouse gas emission reduction targets of forty-nine percent below 1990 levels by 2030 and 95 percent below 1990 levels by 2050, along with provisions for developing an implementation plan, measuring progress, and monitoring compliance and accountability.¹⁸⁰ Germany passed its “Klimaschutzgesetz,” or climate protection “package,” in December 2019. The package consists of a policy program of measures, including a “Climate Action Programme 2030” and a Climate Protection Act.¹⁸¹ The Act provides for a fifty-five percent reduction in greenhouse gas emissions below 1990 levels by 2030 and greenhouse gas neutrality by 2050.¹⁸²

178. See Shaikh Eskander, Sam Fankhauser & Joana Setzer, *Can Climate Change Legislation Keep its Momentum*, PRINCIPLES FOR RESPONSIBLE INV. (Sept. 11, 2020), <https://www.unpri.org/pri-blogs/can-climate-change-legislation-keep-its-momentum/6417.article> [<https://perma.cc/H7LP-GUDN>].

179. Houdende een kader voor het ontwikkelen van beleid gericht op onomkeerbaar en stapsgewijs terugdringen van de Nederlandse emissies van broeikasgassen teneinde wereldwijde opwarming van de aarde en de verandering van het klimaat te beperken (Klimaatwet) 2 juli 2019, Stb. 2019 (Neth.); *Klimaatwet aangenomen door Eerste Kamer [Climate law passed by the Senate]*, EERSTE KAMER DER STATEN-GENERAAL [SENATE OF THE NETHERLANDS] (May 18, 2019), https://www.eerstekamer.nl/nieuws/20190528/klimaatwet_aangenomen_door_eerste [<https://perma.cc/QF3V-CHWY>].

180. Klimaatwet 2 juli 2019, Stb. 2019, art. 2 (Neth.).

181. Bundes-Klimaschutzgesetz [KSG] [Federal Climate Change Act], Dec. 12, 2019, Bundesgesetzblatt [BGBL I] at 2513 (Ger.), *translated in* https://www.gesetze-im-internet.de/englisch_ksg/englisch_ksg.html [<https://perma.cc/C9US-YKDC>]; Kerstine Appunn & Julian Wettengel, *Germany's Climate Action Law*, CLEAN ENERGY WIRE (Aug. 12, 2020, 2:15 PM), <https://www.cleanenergywire.org/factsheets/germanys-climate-action-law-begins-take-shape> [<https://perma.cc/3LT6-8S8T>]; Melissa Eddy, *Germany Passes Climate-Protection Law to Ensure 2030 Goals*, N.Y. TIMES (Nov. 15, 2019), <https://www.nytimes.com/2019/11/15/world/europe/germany-climate-law.html> [<https://perma.cc/87X5-M9EK>].

182. Bundes-Klimaschutzgesetz [KSG] [Federal Climate Change Act], Dec. 12, 2019, [BGBL I] at §§ 1, 3 (Ger.).

Fiji and Chile have proposed climate framework laws similar to those of the UK and New Zealand.¹⁸³ In August 2019, Fiji presented a bill for a Climate Change Act to parliament and planned to present a final draft in May 2020.¹⁸⁴ The Act sets out a plan for Fiji to achieve net zero carbon emissions by 2050, establishes a National Climate Change Coordination Committee, manages its MRV processes, introduces a carbon crediting scheme, and designates thirty percent of Fiji's waters a marine protected area by 2030.¹⁸⁵ In January 2020, the Chilean government submitted a bill to Congress for a climate framework law that will transform Chile's implementation of climate change action.¹⁸⁶ The law enables the Environment Ministry to regulate greenhouse gas emissions for the first time.¹⁸⁷ It features a Long-Term Climate Strategy that sets national targets, including carbon neutrality by 2050, and mitigation adaptation goals for each sector that must be met within ten years.¹⁸⁸ It reforms the Ministerial Council for Sustainability to give it new powers, and it will produce a National Climate Change Action Report and Regional Climate Change Action Plans.¹⁸⁹ The law will also create incentives for environmental donations that can be earmarked for the Environmental Protection Fund for environmental projects.¹⁹⁰

183. Fiji and Chile are two countries that have also hosted COPs: COP 23 and COP 25, respectively. *Live from COP23: Behind the Scenes in Bonn*, SUSTAINABLE DEV. GOALS, <https://www.un.org/sustainabledevelopment/blog/2017/11/cop23-liveblog/> [<https://perma.cc/QDL3-EZ2D>]; *UN Climate Change – December 2019*, U.N. CLIMATE CHANGE (Dec. 11, 2019), <https://unfccc.int/cop25> [<https://perma.cc/MBX8-LQQ4>].

184. *Fiji Proposes New Climate Change Laws*, RNZ (Aug. 7, 2019, 4:35 PM), <https://www.rnz.co.nz/international/pacific-news/396178/fiji-proposes-new-climate-change-laws> [<https://perma.cc/53M9-L7WN>]; Lena Reece, *Climate Change Bill to Be Tabled in Parliament in May*, FBC NEWS (Feb. 19, 2020, 6:45 AM), <https://www.fbcnews.com.fj/news/parliament/climate-change-bill-to-be-tabled-in-parliament-in-may> [<https://perma.cc/MZL8-P5U6>].

185. Climate Change Bill 2019, cl. 13, 35, 46, 85 (Fiji).

186. Press Release, Gov't of Chile, *The Gov't Unveils Climate Change Bill Designed to Decrease the Negative Impacts of Climate Change in Chile* (Jan. 10, 2020), <https://www.gob.cl/en/news/government-unveils-climate-change-bill-designed-decrease-negative-impacts-climate-change-chile/#:~:text=The%20initiative%20seeks%20to%20make,to%20promote%20climate%20action%20projects.&text=This%20will%20make%20Chile%20the,law%20based%20on%20that%20target.>

187. *Id.*

188. *Id.*

189. *Id.*

190. *Id.*

The urgency of effective climate action in both the near- and long-term and the relative success of climate framework laws have provoked calls for a climate law in countries like Canada¹⁹¹ and Australia.¹⁹² At the time of writing, both countries proposed to embed their 2050 climate neutrality targets in law. In November 2020, Prime Minister Justin Trudeau presented a bill that would commit Canada to cut its emissions to net zero by 2050 and set five-year targets from 2030 to meet the goal.¹⁹³ The proposed Canadian Net-Zero Emissions Accountability Act would require every department and federal corporation to include climate risks in their planning and sets up an independent body to advise the government on how to achieve the net zero goal.¹⁹⁴ “If passed, future governments would have to report regularly on progress towards meeting the goals.”¹⁹⁵ However, the bill does not set out how the government will reduce emissions in the short-term nor does it propose a new 2030 target.¹⁹⁶ Given that the legislation indicates that it could take up to a year and a half for Canada to adopt a new 2030 target, it is unlikely that Canada will enhance its 2030 NDC in 2020, when countries were expected to submit their new or enhanced NDCs under the Paris Agreement.¹⁹⁷

191. See Julia Croome, *Canada Needs a World-Class Climate Law*, POL’Y OPTIONS (Sept. 9, 2020), <https://policyoptions.irpp.org/magazines/september-2020/canada-needs-a-world-class-climate-law> [<https://perma.cc/ETW3-CH6L>].

192. See Anna Skarbek et al., *The UK Has a National Climate Change Act – Why Don’t We?*, THE CONVERSATION (May 15, 2019, 2:27 AM), <https://theconversation.com/the-uk-has-a-national-climate-change-act-why-dont-we-115230> [<https://perma.cc/PX6Q-3B4K>].

193. Chloé Farand, *Canada Sets Out to Enshrine 2050 Net Zero Emissions Goal in Law*, CLIMATE HOME NEWS (Nov. 20, 2020, 12:24 PM), <https://www.climatechangenews.com/2020/11/20/canada-sets-enshrine-2050-net-zero-emissions-goal-law/#:~:text=Canada%20sets%20out%20to%20enshrine%202050%20net%20zero%20emissions%20goal%20in%20law,Published%20on%2020&text=Prime%20Minister%20Justin%20Trudeau%20has,tar%20to%20meet%20the%20goal.&text=If%20passed%2C%20future%20governments%20would,progress%20towards%20meeting%20the%20goals> [<https://perma.cc/ET3V-7L6X>].

194. *Id.*

195. *Id.*

196. *Id.*

197. *Id.*

Also, in November 2020, two bills were submitted to Australia's Parliament that would mandate a net zero 2050 goal.¹⁹⁸ The legislation would also "establish an independent Climate Change Commission to advise the prime minister and Parliament on emissions budgets and reduction strategies."¹⁹⁹ Further, "the commission would be required to prepare national climate change risk assessments and low emission technology statements."²⁰⁰ Because the proposed legislation does not come from the governing coalition, it must first go through a committee inquiry and public comment period before the legislator can request Parliamentary hearings and press for a vote. The biggest obstacle is that Prime Minister Scott Morrison remains reluctant to adopt ambitious emissions reduction targets, despite growing international pressure.²⁰¹

The election of President Joe Biden has heightened hopes for ambitious U.S. leadership on climate action. The U.S. came close to passing a climate law in 2010, when the Senate failed to pass the Waxman-Markey bill that would have adopted American Clean Energy and Security Act.²⁰² The Act would have established a cap-and-trade plan similar to that of the EU Emission Trading Scheme.²⁰³ Without it, federal efforts to reduce greenhouse gas emissions and improve energy efficiency have mostly been managed under the Clean Air Act²⁰⁴ and the Energy Policy Act.²⁰⁵ With Congress largely unwilling to take expansive bipartisan climate action, proactive administrations have resorted to passing standards or executive orders to reduce greenhouse gas emissions only to have them tied up in litigation or repealed by the next administration.²⁰⁶

198. Nathaniel Gronewold, *She Won Bronze at the Olympics. Now She's a Climate Champ*, E&E NEWS (Nov. 13, 2020), <https://www.eenews.net/stories/1063718417> [<https://perma.cc/BL74-GSS9>].

199. *Id.*

200. *Id.*

201. *Id.*

202. Amanda Reilly & Kevin Bogardus, *7 Years Later, Failed Waxman-Markey Bill Still Makes Waves*, E&E NEWS (June 27, 2016), <https://www.eenews.net/stories/1060039422> [<https://perma.cc/85LH-VNAB>].

203. *Id.*

204. 42 U.S.C. §§ 7401–7671.

205. 42 U.S.C. § 13389.

206. *See, e.g., What is the Clean Power Plan?*, UNION OF CONCERNED SCIENTISTS, <https://www.ucsusa.org/resources/clean-power-plan> [<https://perma.cc/8SQJ-8BFB>] (Mar. 24, 2021).

On his first day in office, Biden had the U.S. rejoin the Paris Agreement and promised to ensure that the U.S. reaches net zero emissions by 2050.²⁰⁷ He also appointed former Secretary of State John Kerry as the Special Presidential Envoy for Climate Change, who will participate, for the first time, on the National Security Council.²⁰⁸ He also appointed his domestic counterpart, the first White House National Climate Advisor and former Environmental Protection Agency Administrator, Gina McCarthy, in December 2020.²⁰⁹

Reentry into the Paris Agreement, however, requires a credible NDC—not just a target number, but also climate legislation and policies by which to achieve that target. A commitment to climate neutrality requires even more ambitious legislation. However, with a strong likelihood of a Republican majority Senate, the robust climate legislation hoped for seems unlikely. A conservative dominated Supreme Court has further raised questions about how narrowly it could read the U.S. Environmental Protection Agency's obligation to regulate greenhouse gas emissions²¹⁰ or even whether that legal basis under the Clean Air Act could be overturned.²¹¹

207. *The Biden Plan for a Clean Energy Revolution and Environmental Justice*, BIDEN HARRIS, <https://joebiden.com/climate-plan> [<https://perma.cc/HL96-XHJY>].

208. Ben Geman, *Unpacking Joe Biden's Decision to Tap John Kerry as His Climate Envoy*, AXIOS, https://www.axios.com/biden-john-kerry-climate-envoy-c8f09519-41b1-439a-8b88-f4ddd1f5b2e0.html?utm_source=twitter&utm_medium=social&utm_campaign=organic&utm_content=1100 [<https://perma.cc/6UY8-S4EW>] (Nov. 23, 2020).

209. Jennifer Ludden, *Biden Announces Climate Team, Including 1st-Ever National Climate Adviser*, NPR (Dec. 20, 2020), <https://www.npr.org/2020/12/20/948315477/climate-czar> [<https://perma.cc/26YD-RZZH>].

210. Jean Chemnick, *High Court in Trump Mold Could Undercut Key Law for Climate*, E&E NEWS (Oct. 2, 2020), <https://www.eenews.net/stories/1063715303> [<https://perma.cc/4R4Q-X8FB>].

211. Dino Grandoni, *The Energy 202: Landmark Supreme Court Climate Ruling More Vulnerable than Ever with Ginsburg's Death*, WASH. POST (Sept. 23, 2020, 8:02 AM), <https://www.washingtonpost.com/politics/2020/09/23/energy-202-landmark-supreme-court-climate-ruling-more-vulnerable-than-ever-with-ginsburg-death> [<https://perma.cc/5FXU-E4QE>].

Neither the U.S.'s first NDC²¹² nor its long-term low emission development strategy²¹³ were enacted into law, and both were abandoned by the Trump administration long before the formal withdrawal of the U.S. from the Paris Agreement. A new NDC, mid-century target, and Special Presidential Envoy for Climate and climate committee could just as easily be discarded by a new administration as it was by the Trump administration.

A U.S. climate framework law would alleviate, if not avoid, many of these questions. A law that consolidated authority for climate action would provide for stability in staff and expertise, as well as provide clear mandates for various departments. It would provide a climate lens for other government functions, like trade policy and financial investments, that would help reduce policies and actions that would conflict with or undermine U.S. climate goals. A legally binding mid-century net zero target and at least one interim target matching the U.S. NDC objective would make it harder for a future administration to escape the obligation to achieve them. An independent climate change committee would provide additional accountability, regularly monitoring new scientific and technological developments with implications for agreed targets and policies and maintaining pressure on the executive to implement them. Such a law would mean that climate action was no longer a political question and provide for a cause of action in a court system where plaintiffs have otherwise had difficulty demonstrating standing, causation, or an addressable harm. A functional climate framework would provide a clear channel for most climate litigation, particularly that which would confront the government for underperformance of its duties.

The U.S. does not lack the resources and capacity to make this transformational change; for now, it is a matter of political will.²¹⁴

212. U.N. Framework Convention on Climate Change: U.S.A. First NDC Submission (Mar. 9, 2016), <https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/United%20States%20of%20America%20First/U.S.A.%20First%20NDC%20Submission.pdf> [https://perma.cc/EDD4-P2LL].

213. THE WHITE HOUSE, UNITED STATES MID-CENTURY STRATEGY FOR DEEP DECARBONIZATION (Nov. 2016), https://unfccc.int/files/focus/long-term_strategies/application/pdf/mid_century_strategy_report-final_red.pdf [https://perma.cc/T8S6-8P4Q].

214. Colleen de Bellefonds, *Denmark Floats a Possible Model for Climate Policy*, U.S. NEWS & WORLD REP. (Jan. 7, 2020, 7:00 AM),

The focus on climate in the Biden-Harris campaign was historic, but Americans will have to continue to fight for the support needed for climate action. Most Americans do support climate action, but many have been misinformed about its costs and consequences.²¹⁵

A Biden administration could think about establishing pieces of a future climate framework law structure that could be built on or pulled together by law in a future administration with a more supportive Congress. One possibility is an independent climate commission that could later be reformed to fit within the climate framework law. One candidate could be the *We Are Still In* coalition, a collective of American institutions that have remained committed to ambitious climate action despite the withdrawal of federal leadership.²¹⁶ Its diverse range of stakeholders and expertise, which include academic, indigenous, faith, and business leadership, would be suited for the advisory role.²¹⁷

Other countries with comparable politics and policy structures for addressing climate change face similar challenges. One of the commonalities through the UK, Mexican, New Zealand, and Danish examples was that political leadership capitalized on moments of widespread support for ambitious climate action, buoyed perhaps by key moments in the climate negotiations. With no further climate treaties to be adopted, it is possible, but not guaranteed, that increasingly devastating climate change impacts may begin to generate the necessary concern and collective will to act on climate. More optimistically, it is possible that climate framework laws that effectively demonstrate that economic growth and emission reductions are not mutually exclusive, that help to more and more cheaply achieve those emissions reductions, and that provide jobs and resilience, will make adopting these laws more attractive.

<https://www.usnews.com/news/best-countries/articles/2020-01-07/denmarks-aggressive-new-climate-law-blazes-path-for-developed-countries>.

215. Isabelle Gerretsen, *5 Ways Climate Issues Played Out in the US Election*, CLIMATE HOME NEWS (Nov. 5, 2020, 5:42 PM), <https://www.climatechangenews.com/2020/11/05/5-ways-climate-issues-played-us-election> [<https://perma.cc/625N-QKDF>].

216. See WE ARE STILL IN, <https://www.wearestillin.com> [<https://perma.cc/4R8C-6AFQ>]. Now, AMERICA IS ALL IN, <https://www.americaisallin.com/> [<https://perma.cc/X7BG-FVJJ>].

217. WE ARE STILL IN, *supra* note 216.

IX. CONCLUSION

Unfortunately, having a few climate policies or embedding climate targets into law do not in themselves hold future leadership to climate action. The uptick in climate framework laws is encouraging given that it makes it significantly harder for future leadership to roll back climate ambition, particularly where citizens can access litigation as a tool to enlist the courts to ensure the effectiveness of those laws.

In many ways, it may seem daunting to establish a climate framework law. For some countries, an additional law could cohere existing pieces of climate legislation, while in others it would be necessary to create the structure element by element. For many, the cost to achieve a target like climate neutrality by 2050 seems economically formidable. However, in November 2020, the chief executive of the UK's Committee on Climate Change found that reaching net zero carbon emissions in the UK is likely to be much easier and cheaper than previously thought. The chief executive noted that, “[o]verall, the cost is surprisingly low—it’s cheaper than even we thought last year when we made our assessments,” and that “[n]et zero is relatively low-cost across the economy.”²¹⁸ The quick pace of declining costs in renewable energy in the last decade have put solar and wind at a lower cost than fossil fuels around the world, encouraging a global boom in clean power.²¹⁹ In many cases, this means the future costs of climate action are being overestimated.

Climate framework laws could be even more robust. Several countries have used their climate framework laws to launch or govern their emissions trading systems. One unique feature of the Danish climate law is that it provides for public participation through a citizens’ council that provides feedback when developing climate policy.²²⁰ While some climate framework laws have addressed adaptation, it may also be worthwhile to consider what an

218. Fiona Harvey, *Reaching UK Net Zero Target Cheaper Than We Thought, Says Climate Adviser*, THE GUARDIAN (Nov. 12, 2020, 2:00 AM), <https://www.theguardian.com/environment/2020/nov/12/reaching-uk-net-zero-target-cheaper-than-we-thought-says-climate-adviser> [https://perma.cc/23H4-29BC].

219. *Id.*

220. Lov nr. 965, art. 3, af 26.6.2020 om klimal (Den.); Jocelyn Timperley, *The Law That Could Make Climate Change Illegal*, BBC (July 7, 2020), <https://www.bbc.com/future/article/20200706-the-law-that-could-make-climate-change-illegal> [https://perma.cc/S6AL-GGG2].

equally robust framework might look like for a country with relatively little emissions but significant adaptive needs.²²¹ Depending on how effective the EU's Just Transition Fund proves to be in practice, it may offer itself as one example of a mechanism to ensure environmental justice and to aid specific communities or regions that will be substantially impacted by the transition to a low carbon economy.

For now, the establishment of these laws, their contribution to real greenhouse gas emissions, and their role as drivers for long-term transformation are remarkable achievements. They can provide long-term stability for climate action, taking the reins out of the hands of a particular leader or party and placing them in the shared power of the executive branch, the courts, and the public. They further promise to provide powerful examples of how to effectively drive the necessary economic and social transformation required to safeguard human life in the face of climate change and its impacts.

221. Cf. Nina Hall & Åsa Persson, *Global Climate Adaptation Governance: Why is it Not Legally Binding?*, 24 EUR. J. INT'L RELS. 540 (2018) (observing that despite a growing number of attempts under the UNFCCC to govern states' adaptation actions, this nominal increase does not correspond to a high legalization of rules and commitments; instead, adaptation governance under the UNFCCC is characterized by low obligation as well as low precision - these initiatives are not particularly constraining on states).