



# ACHIEVING CLIMATE AMBITION AND IMPLEMENTATION THROUGH LEGAL CHANGE

Draft Report



UNIVERSITY OF  
CAMBRIDGE



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Business, Energy  
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# **ACHIEVING CLIMATE AMBITION AND IMPLEMENTATION THROUGH LEGAL CHANGE**

## **Draft Report**

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# Achieving Climate Ambition and Implementation through Legal Change

## I. Introduction

In 2008, the United Kingdom (UK) became a leader in legislation and legal systems seeking to address the drivers of Climate Change and promote the reduction of greenhouse gas (GHG) emissions by adopting the Climate Change Act.<sup>1</sup> The Climate Change Act set the stage for the entrenchment of laws, rules and practices geared toward reductions of GHGs and responses to threats caused by climate change through the creation of governance systems at the national level.<sup>2</sup> It further laid the groundwork for the creation of policies that expanded with global and national understanding of the intricacies and elements of climate change across communities and sectors.<sup>3</sup>

Since the Climate Change Act was first adopted, the international community has seen a significant shift in its scientific knowledge relating to climate change, its drivers and potential offsets, and has developed an increasingly sophisticated legal and regulatory response.<sup>4</sup> This includes a number of potential avenues for the inclusion of investment as a key component to drive increases in ambition and achievements of emissions reduction targets, as well as for adaptation and mitigation efforts overall.<sup>5</sup> The UK has responded by incorporating these requirements into its laws and rules and creating innovative policies that can be seen as spurs to promoting ambition and investment. At the same time, other states have begun to enact laws and rules that create the foundation for achieving climate ambition and progressing toward net zero emissions, often using the UK Climate Change Act as a model.

This paper outlines the essential legal and regulatory provisions of the Climate Change Act and subsequent amendment before discussing the ways in which UK laws and policies intersect with and promote ambition and investment nationally and internationally. It then discusses other key states which have enacted laws and rules relating to climate ambition and net zero ambitions while also seeking to promote investment regimes and economies based on green growth.

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<sup>1</sup> Climate Change Act ch 27 (2008).

<sup>2</sup> Ibid.

<sup>3</sup> Ibid. See also HM Government, *UK Climate Change Risk Assessment 2017* (2017) 11, 14 – 17 (noting the various aspects of UK economy, societal and infrastructure facing peril as a result of climate change and associated impacts).

<sup>4</sup> See Paris Agreement on Climate Change (2015); Katowice Climate Package (2018); see also United Nations General Assembly, *Transforming our world: the 2030 Agenda for Sustainable Development*, A/RES/70/1 (2015).

<sup>5</sup> See Paris Agreement, *supra* note 4.

## II. UK Climate Change Act 2008 and Ambition

### UK Climate Change Act

The Climate Change Act (CCA) was adopted to allow for the establishment of a **legally binding target** for national GHG emissions reductions in the United Kingdom by 2050, create potential avenues of financial and other incentives for the reduction of consumption and require the Government to develop adaptation programmes in relation to climate change.<sup>6</sup> Originally, the CCA called for a GHG emissions reduction target of 80% of the 1990 baseline by 2050, although this was amended in 2019 to require net zero emissions by 2050, based on new information regarding the threats to the planet from GHGs and climate change as well as the capacities of the UK, including the devolved administrations, to make significant changes.<sup>7</sup>

An important element of the CCA is the requirement that carbon budgets be established for consecutive five-year periods in order to provide an understanding of consumers and industry needs in the UK and to ensure that progress toward emissions reductions is continuously implemented.<sup>8</sup> For investment purposes, the carbon budgeting system provides stability in the market forecast during the short-term. In making determinations regarding carbon budgeting and associated measures, the Secretary of State is required to consult with the Committee on Climate Change and the Devolved Administrations, while taking into account a number of factors, such as

- (c) economic circumstances, and in particular the likely impact of the decision on the economy and the competitiveness of particular sectors of the economy;
- (d) fiscal circumstances, and in particular the likely impact of the decision on taxation, public spending and public borrowing; . . . (f) energy policy, and in particular the likely impact of the decision on energy supplies and the carbon and energy intensity of the economy.<sup>9</sup>

Through the CCA, a new set of regulatory and oversight structures was created for the climate change sphere.<sup>10</sup> A critical element within this structure was and remains the Committee on Climate Change, tasked with providing advice on carbon budgeting, emissions and special topics such as aviation and shipping, as well as reporting on progress toward national carbon budgets and the 2050 target.<sup>11</sup> Importantly, the Committee on Climate Change was tasked with the duty to render advice or assistance to national entities for topics including climate change adaptation and any other issues that relate to climate change.<sup>12</sup> The CCA provides authority for the creation of sub-committees for the Committee on Climate Change,<sup>13</sup> and expressly requires the creation of an Adaptation Sub-Committee.<sup>14</sup>

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<sup>6</sup> Climate Change Act, *supra* note 1 at preamble.

<sup>7</sup> Climate Change Act, *supra* note 1 at sect. 1; Climate Change (Act (2008) amendment (2019)).

<sup>8</sup> Climate Change Act, *supra* note 1 at sect. 4, 5.

<sup>9</sup> *Ibid.* at sect. 10(2) (c), (d), (f).

<sup>10</sup> See generally *ibid.*

<sup>11</sup> *Ibid.* at sects. 33 – 36.

<sup>12</sup> *Ibid.* at sect. 38

<sup>13</sup> *Ibid.* at schedule 1, para. 15

<sup>14</sup> *Ibid.* at schedule 1, para. 16

## Ambition and Investment Promotion



As noted above, in 2019 the UK adopted legislation to increase its ambition for 2050 to net zero GHG. This was agreed to on the recommendation of the Committee on Climate Change and came in the aftermath of warnings of increasingly dire global warming impacts at the international level by the Intergovernmental Panel on Climate Change (IPCC).<sup>15</sup> In explaining its recommendation, the Committee on Climate Change emphasised the national and global impacts it would have, and highlighted that domestic industry and consumer choices, in everything from housing to transportation, would be faced

with the need to adapt in the future regardless the legal requirements.<sup>16</sup> In this way, the decision to require net zero emissions and the ambition elements of the Paris Agreement in the UK can be seen as offering the private sector and investors incentives to undertake modernisations and modifications necessary to remain viable in the short and long-term.

The Committee has highlighted that significant work has already been undertaken to reduce emissions and promote modernisation in fields such as low carbon energy, more energy efficient building construction, the use of electric cars, increases in carbon capture and sequestration systems, and agriculture-based emissions reductions.<sup>17</sup> However, it emphasised that these developments are insufficient to meet the full requirements of net zero emissions ambition. Instead, significant public sector assistance and private sector innovation, funding and investment will be needed to bring all aspects of the UK's economy and society into compliance with achievement of a net zero by 2050 target.<sup>18</sup>

The Committee has articulated a number of areas in which funding, growth and development will be necessary in order for the economy as a whole, and specific sectors, to achieve the emissions reductions levels needed for net zero emissions ambition.<sup>19</sup> For investment purposes, these areas will include the energy sector, growth and development of carbon capture and sequestration capacities and technologies, alteration in building and construction practices, and agricultural production and supply.<sup>20</sup> These sectors align with identified societal and consumer sector changes, including switching to renewable and non-carbon energy sources, reassessing food choices and consumption patterns,

<sup>15</sup> See Committee on Climate Change, *Net Zero: The UK's contribution to stopping global warming* (2019).

<sup>16</sup> *Ibid.* at 11 – 12.

<sup>17</sup> *Ibid.* at 12.

<sup>18</sup> *Ibid.* at 11 – 13.

<sup>19</sup> *Ibid.* at 23.

<sup>20</sup> *Ibid.* at 23 – 24.

encouraging electric cars and the use of public transportation, and construction or modification of homes to reduce emissions and maximize efficiency.<sup>21</sup>

Given the scale of modernisation and innovation needed to achieve the net zero emissions ambition standard by 2050, the Committee’s advice recognizes that flexibility will be needed in the public and private sector,<sup>22</sup> which could be seen as creating a space for investors to provide the capital needed to develop underfunded technologies. Overall, it is estimated that certain sectors, such as power and buildings, will see billions of pounds in additional investment by 2050.<sup>23</sup>

To sustain these levels of investment, the Committee has emphasised the need for the implementation of laws and policies that provide investors with information on risks and potential risks, notably climate risks, and information on how their investment activities impact the achievement targets for net zero emissions ambition.<sup>24</sup> At the same time, it noted the need to provide governmentally created incentives to industries to use more efficient energy sources and adopt measures that will assist in achieving net zero emissions.<sup>25</sup> These forms of incentives can provide security to investors as well as industries and encourage the development and implementation of innovations.

**“In the realm of carbon neutrality, we are at a unique moment in which countries, regardless their development status, have the opportunity to show climate leadership in their laws and governance frameworks by incentivizing national and local economies that are beyond carbon neutral, and actually carbon negative.”**

**Prof Marie-Claire Cordonier Segger**  
Executive Secretary, Climate Law and Governance Initiative  
Senior Director, CISDL

Further, the Committee’s advice for net zero emissions ambition achievement includes significant changes to and scaling up of emissions reductions in infrastructure at all levels.<sup>26</sup> These types of undertakings create opportunities for investors and can serve to bolster the development of private sector growth and development. Additionally, the Committee expressly noted the importance of green financing for the growth of the UK economy and the achievement of net zero emissions ambition.<sup>27</sup> In this vein, it indicated that the UK Green Finance Task Force is to serve a vital role in the generation of appropriate financial rules and regulations, as well as acting as a sounding board for investment opportunities.<sup>28</sup> Existing sources of funding for industrial-sector, such as the Industrial Energy Transformation Fund and the Industrial Strategy Challenge Fund, have been highlighted as previously effective decarbonization assistance funds that could be used in the future to provide funding and incentivization toward net zero emissions.<sup>29</sup>

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<sup>21</sup> See *ibid.* at 25.

<sup>22</sup> See *ibid.* at 26.

<sup>23</sup> *Ibid.* at 28.

<sup>24</sup> *Ibid.*

<sup>25</sup> *Ibid.* at 34.

<sup>26</sup> *Ibid.* at 176.

<sup>27</sup> *Ibid.* at 180.

<sup>28</sup> *Ibid.* The Task Force on Climate-Related Financial Disclosures has also been identified as a key factor in creating meaningful and lasting climate responsive industry and investment. See Committee on Climate Change, *Progress in preparing for climate change: 2019 Report to Parliament* (2019) 217.

<sup>29</sup> Committee on Climate Change, *Reducing UK emissions: 2019 Progress Report to Parliament* (2019) 57.

### III. International Encouragement of and Good Practices for Ambition

#### Paris Agreement and Katowice Outcomes

The Paris Agreement and Katowice Outcomes feature an array of mechanisms which can support countries in enhancing investment for climate adaptation and resilience, including those relating to promoting ambition in emissions reductions.<sup>30</sup> Article 2.1(c) of the Paris Agreement establishes strengthening the global response to climate change by making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development as a key objective. The other objectives are to limit global average temperature increase to well below 2-degrees,<sup>31</sup> and to increase nations' capacity to adapt to the adverse impacts of climate change.<sup>32</sup> The three goals are closely linked: realigning financial flows is a necessary prerequisite for limiting temperature increase and enhancing countries' capacity to adapt to climate change.<sup>33</sup>

In addition, the Paris Agreement's stock-taking mechanism serves to periodically inform Parties on whether the world is on track to meet the Agreement's targets of limiting global warming to less than 2-degrees.<sup>34</sup> The mechanism also facilitates ratcheting up of ambition by driving review of countries' Nationally Determined Contributions (NDCs), including revision of their ambition levels, implementation and investment plans, capacity and institution building, and preparation of decarbonisation plans.<sup>35</sup> The first Global Stocktake will take place in 2023 and is intended to result in revised and increasingly ambitious NDCs by 2025. Under the terms of the 2018 Katowice Outcomes, adopted during CoP24, a signal is sent to investors to take the opportunities outlined in countries' NDCs seriously, scaling up efforts to channel finance and investment flows in directions compatible with the Paris Agreement art. 2.1(c).<sup>36</sup>

Canada

**“At the international law level, efforts to promote ambition and address issues relating to carbon neutrality, or even carbon negativity are significant and evolving. This creates a significant space for national laws and regulations, often in the form of climate acts, which are crucial to making climate obligations legally binding, particularly in terms of implementation, enforceability and judicially reviewable.”**

**Prof Christina Voigt**, Professor  
University of Oslo, Member of the Paris  
Agreement Compliance Committee

<sup>30</sup> See Markus Gehring and Emily Morison, *Climate Law & Governance Innovations for Sustainable Investment – draft paper* (2019); EBRD and others, *Legal Assessment of Paris Agreement Implementation to Mobilize Investment in Climate Adaptation and Resilience: International Law Review & Recommendations for Pilot Countries – Draft Report* (“EBRD paper”).

<sup>31</sup> Paris Agreement, *supra* note 4 at art 2.1(a).

<sup>32</sup> Paris Agreement, *supra* note 4 at art 2.1(b).

<sup>33</sup> <https://www.odi.org/sites/odi.org.uk/files/resource-documents/12557.pdf>

<sup>34</sup> Paris Agreement art 14.

<sup>35</sup> EBRD paper; UNFCCC, Decision 9/CMA.1 - Further guidance in relation to the adaptation communication, including, inter alia, as a component of nationally determined contributions, referred to in Article 7, paragraphs 10 and 11, of the Paris Agreement (2018), available at: [https://unfccc.int/sites/default/files/resource/cma2018\\_3\\_add1\\_advance.pdf#page=23](https://unfccc.int/sites/default/files/resource/cma2018_3_add1_advance.pdf#page=23).

<sup>36</sup> EBRD paper.





Canada has demonstrated a commitment to the Paris Agreement in law and policy at the national and provincial levels, with several laws and regulatory systems presenting critical regimes for ambition and investment. Further, during the UNFCCC Conference of the Parties 25 in 2019 in Madrid, the Canadian government made a public commitment to introduce nationally binding legislation that would set 2050 as the target date for the country as a whole to achieve net-zero carbon emissions.

At the national level, in 2016 Canada implemented the Pan-Canadian Framework on Clean Growth and Climate Change: Canada’s Plan to Address Climate Change and Grow the Economy as a system to apply to at all sectors of government and society.<sup>37</sup> It is estimated that, if left unchecked, by 2050 climate change and associated impacts could cost Canada approximately \$21 – 43 billion CAD per year,<sup>38</sup> and evidence of the financial, societal and business costs of events associated with climate change has already been observed across the country.<sup>39</sup> At the same time, through the Pan-Canadian Framework, there is recognition that “acting on climate change will reduce risks and create new economic opportunities and good jobs for Canadians,” particularly in technology and related fields.<sup>40</sup>

With this in mind, the Pan-Canadian Framework is constructed in 4 policy pillars: 1) pricing carbon pollution, including carbon emissions taxation measures and cap-and-trade systems<sup>41</sup>; 2) complementary measures to further reduce emissions across the economy “by addressing market barriers where pricing alone is insufficient or not timely enough to reduce emissions in the pre-2030 timeframe”; 3) measures to adapt to the impacts of climate change and build resilience; and 4) actions to accelerate innovation, support clean technology, and create jobs.<sup>42</sup> Across these pillars, the Pan-Canadian Framework is geared toward fostering an integrated, cross-cutting and multi-sectoral strategy for addressing GHG and pollution reduction and fulfilling ambition targets for 2030 and 2050.<sup>43</sup>

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<sup>37</sup> Pan-Canadian Framework on Clean Growth and Climate Change: Canada’s Plan to Address Climate Change and Grow the Economy (2016).

<sup>38</sup> Ibid. at 1.

<sup>39</sup> Ibid.

<sup>40</sup> Ibid.

<sup>41</sup> Ibid. at 7.

<sup>42</sup> Ibid. at 2 – 3.

<sup>43</sup> Ibid. at 3.

In terms of emissions reduction and ambition targets, the Pan-Canadian Framework notes that electricity is the 4<sup>th</sup> largest source of emissions in Canada and establishes a multi-prong approach to addressing clean energy promotion.<sup>44</sup> Through the Pan-Canadian Framework, the need for investment in new, more efficient building and infrastructural capacities is emphasized, with a focus on incorporating net zero emissions standards for new residential buildings.<sup>45</sup> Low-carbon emissions targets are also deemed essential for industrial sectors within Canada to meet national and international ambition targets.<sup>46</sup> Further, governmental units at all levels are identified as key to achieving emissions reductions targets and promoting increases in ambition across Canada.<sup>47</sup>

Canada has also enacted the national Greenhouse Gas Pollution Pricing Act to provide a system of market regulation that seeks to promote emissions reductions and promote ambition.<sup>48</sup> The Act is separated into two topic areas, “a regulatory charge on fuel (fuel charge) and a regulatory trading system for large industry—the Output-Based Pricing System (OBPS).”<sup>49</sup> This Act creates a national system that also allows the provinces to opt-in, and the majority of provinces have chosen to do so.<sup>50</sup>

At the provincial level, a variety of avenues have been developed to lower emissions, promote ambition and encourage investment. For example, Ontario has eliminated the use of coal-generated power sources within its territory.<sup>51</sup> This is complimented by Alberta’s law requiring the phasing out of coal power and increasing renewable energy sources by 2030, which has a significant open bidding process for contracting and investment in renewable energy facilities.<sup>52</sup> In this vein, in 2017 Alberta implemented a carbon levy that has built-in incremental increases in pricing.<sup>53</sup> Through the Climate Leadership Plan, the province seeks to encourage investment and innovation in renewable energy technology

**“Canada provides a nuanced example in which strong national and sub-national governmental units have sought, and continue to seek, innovative methods to address the climate challenges they face and achieve net-zero emissions. It shows the feasibility of a governance framework that takes into account the various legal, societal and economic needs of provinces and provides latitude for the creation and implementation of policies tailored toward these needs while at the same time subject to an overarching mechanism of review and oversight.”**

**Dr. Alexandra Harrington**  
Fulbright Research Chair in Global Governance, Balsillie School of International Affairs  
Lead Counsel, Peace, Justice and Governance, CISDL

<sup>44</sup> Ibid. at 11.

<sup>45</sup> Ibid. at 15.

<sup>46</sup> Ibid. at 22.

<sup>47</sup> See *ibid.* at 24. Indeed, the Pan-Canadian Framework highlights at the province of British Columbia’s public sector has been carbon neutral since 2010. *Ibid.*

<sup>48</sup> Pan-Canadian Framework on Clean Growth and Climate Change – Second Annual Synthesis Report (2018).

<sup>49</sup> Pan-Canadian Framework on Clean Growth and Climate Change – Second Annual Synthesis Report (2018) at 2.

<sup>50</sup> *Ibid.*

<sup>51</sup> See Ontario, Ending Coal for Cleaner Air Act (2015).

<sup>52</sup> *Ibid.* at 56; Alberta Renewable Electricity Act (2016); Alberta Climate Change and Emissions Management Act (2017).

<sup>53</sup> *Ibid.*

creation, implementation and use, including for those generating new jobs in the renewable energy sector.<sup>54</sup> This Plan was given additional support through the 2017 Alberta Carbon Competitiveness Incentive Regulation.<sup>55</sup>



Similarly, Quebec has adopted the 2013 – 2020 Action Plan on Climate Change, which seeks to reduce the province’s emissions to 20% under 1990 levels by 2020 and sets a further target of 37.5 % by 2030.<sup>56</sup> It has also adopted a 2016 – 2030 Energy Policy which aims for significant reductions in petroleum use and increases in renewable energy generation and energy efficiency.<sup>57</sup> Further, both Quebec and Ontario created carbon trading systems in 2017, although Ontario subsequently revoked this legal regime in 2018.<sup>58</sup> Quebec has taken the additional step of establishing a cross-border cap-and-trade system with California.<sup>59</sup>

British Columbia has adopted a significant carbon taxation system, currently the most rigorous in the nation and throughout North America, which focuses primarily on the pollution practices of industrial emitters and seeks to promote shifts to renewable energy sources.<sup>60</sup> In 2017, the province enacted the Energy Step Code, which provides mechanisms for communities to opt-in to building targets and practices aimed at net zero emissions.<sup>61</sup>

Nova Scotia enacted legislation creating a cap-and-trade system within the province in 2018.<sup>62</sup> Subsequently, in October 2019, Nova Scotia adopted the Sustainable Development Goals Act.<sup>63</sup> The goals underpinning this Act center on the need to create renewable and green energy sources, the importance of adaptation and mitigation measures, the need to create an economy within the province that is at once inclusive and circular, and the need to promote and protect biodiversity and natural resources.<sup>64</sup> An essential element of the Act is the creation of phases for GHG emissions reductions, specifically requiring that these emissions be 10% below 1990 levels by 2020, 53% below 2005 levels by 2030, and net zero by 2050.<sup>65</sup> To implement and oversee the achievement of these benchmark, the

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<sup>54</sup> Ibid.

<sup>55</sup> Carbon Competitiveness Incentive Regulation, Alberta Regulation 255/2017 (2017).

<sup>56</sup> Ibid. at 61.

<sup>57</sup> Ibid.

<sup>58</sup> Pan-Canadian Framework on Climate Change – First Synthesis Report (2017) at 2; Pan-Canadian Framework Second Annual Synthesis Report, *supra* note 52 at 4.

<sup>59</sup> Pan-Canadian Framework Second Annual Synthesis Report, *supra* note 52 at 3.

<sup>60</sup> British Columbia Carbon Tax Act (2008); Carbon Tax Regulation, B.C. Reg. 180/2016; see also Pan-Canadian Framework First Synthesis Report, *supra* note 561 at 2.

<sup>61</sup> Ibid. at 8; British Columbia, Energy Step Code (2017).

<sup>62</sup> Pan-Canadian Framework Second Annual Synthesis Report, *supra* note 52 at 3.

<sup>63</sup> See Nova Scotia, An Act to Achieve Environmental Goals and Sustainable Prosperity, ch. 26 (2019).

<sup>64</sup> Ibid. at art. 6.

<sup>65</sup> Ibid. at art. 7.

Act requires the creation of a Climate Change Plan for Green Growth for the province by the end of 2020.<sup>66</sup>

## EU & US carbon trading systems

Like other climate policy instruments, carbon pricing is formally implemented through statutory law or sub-statutory ordinances/regulations and technical decrees. Market-based instruments such as carbon markets rely on a durable, long-term architecture to realize their full potential. Already economic theory – as most famously expressed by Ronald Coase in “The Problem of Social Cost” – has consistently declared the need for a robust legal framework with, for example, effective protection of property rights to allow such market-based instruments to function. Practical experience has borne this out – both the European and Californian carbon markets saw stagnant prices and heightened uncertainty among market participants, expressed through carbon prices that reflected doubts about the political durability of long-term stated policy objectives in terms of a discount from the mathematically estimated carbon price, which were largely resolved with the successful adoption, in formal legislation, of long-term policy objectives and market design elements.

In the EU, this has finally allowed carbon prices to reflect abatement in line with the EU’s 2030 goals, prompting a fivefold increase in the carbon price in less than two years. This serves as a visible example of how formal law, with the credibility and legitimacy it imparts, can be key to sending robust signals to economic actors. It also underscores why a robust legal architecture – which addresses all necessary governance issues, but at the same time does not seek to overregulate – will be critical to avoid uncertainty, undesirable practices and low uptake of cooperative approaches under Article 6 of the Paris Agreement.



<sup>66</sup> Ibid. at art. 8.

Additionally, the Comprehensive and Economic Trade Agreement (CETA) between Canada and the EU includes an article on ‘cooperation on environmental issues’, which provides that parties commit to cooperate in areas such as (among others), the environmental dimension of corporate social responsibility; ‘trade-related aspects of the current and future international climate change regime, as well as domestic climate policies and programmes relating to mitigation and adaptation, including issues relating to carbon markets, ways to address adverse effects of trade on climate, as well as means to promote energy efficiency and the development and deployment of low-carbon and other climate-friendly technologies’ and ‘trade and investment in environmental goods and services, including environmental and green technologies and practices; renewable energy; energy efficiency; and water use, conservation and treatment’.<sup>67</sup> As well as art 2.1(c), this provision furthers Paris Agreement provisions on adaptation, mainly encompassed in art 7, which calls for Parties to enhance adaptive capacity, strengthen resilience and reduce climate-change vulnerability.<sup>68</sup>

In December 2019, the European Union formally unveiled the European Green Deal, that seeks to “transform the EU into a fair and prosperous society, with a modern, resource-efficient and competitive economy where there are no net emissions of greenhouse gases in 2050 and where economic growth is decoupled from resource use.”<sup>69</sup> Thus, the EU has committed itself to the target of net zero emissions for all GHGs, extending beyond carbon neutrality. The European Green Deal seeks to address the environmental threats facing the region in the short and long-term including impacts on society and the economy. It has a particular focus on being “just and inclusive,” addressing the ramifications of transitioning to net zero on the current workforce and on public welfare.<sup>70</sup>

The European Green Deal emphasizes the inherent difficulties in meeting emissions reductions targets and that this “will require massive public investment and increased efforts to direct private capital towards climate and environmental action, while avoiding lock-in into unsustainable practices. The

**“There are five recent advances in Morocco that I would like to highlight as they intersect clearly with Climate Law. First, the reframing and restructuring of the renewable energy sector through the Moroccan Agency for Sustainable Energy (MASEN) for enhanced coordination. Second, the advances made around energy efficiency regulations. Third, the establishment of the National Commission for Sustainable Development. Fourth, the importance not to lose sight of the broader landscape as exemplified by the efforts made to enhance the Doing Business Ranking of Morocco. Finally, the critical levers of regional, south south and triangular cooperation as exemplified by the AAA, the Coalition for Sustainable Energy Access, and the African Youth Climate Hub Initiatives.”**

**Mr. Ayman Cherkaoui**, Coordinator  
Mohammed VI Foundation for  
Environmental Protection, CISDL Lead  
Counsel for Climate Change

<sup>67</sup> CETA 2016 art 24.12.

<sup>68</sup> Paris Agreement, *supra* note 4 at art 7(1).

<sup>69</sup> European Union, The European Green Deal: Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions, COM (2019) 640 (11.12.2019) 2.

<sup>70</sup> *Ibid.*

EU must be at the forefront of coordinating international efforts towards building a coherent financial system that supports sustainable solutions.<sup>71</sup> Included throughout the European Green Deal are various existing and to-be-created regulatory and oversight bodies, which reflect the complexity of specialisations and topics involved in generating and implementing a holistic policy for net zero emissions.<sup>72</sup> Further, the European Green Deal is expressly linked to existing international law regimes such as the UNFCCC and Paris Agreement and the Sustainable Development Goals.<sup>73</sup> Overall, the European Green Deal is intended to be an evolving policy that meets the changing needs and realities faced by the EU and its Member States as they work toward achieving net zero emissions and concomitant legal and regulatory changes.<sup>74</sup>

## Kingdom of Morocco

Morocco adopted the Paris Agreement in 2016 yet took pro-active climate change related legal measures well before this when it adopted framework law n°99.12 on the national charter for the environment and sustainable development in 2014. This national legal activity marked the beginning of a real integration of recognition and incorporation of environmental and climate risks as well as sustainability into Morocco's public policies.<sup>75</sup> Following the framework law, in 2015 the Moroccan Government adopted a further set of detailed legal texts of relevance to climate adaptation and resilience.<sup>76</sup>

In the renewable energy and energy efficiency sector, Morocco has established an advanced framework for liberalizing the investment capacities of consumers, industry and transport in the energy transition in 2009 through the implementation of Law 13.09 on renewable energies<sup>77</sup> and Law 47.09 on energy efficiency, seeking to give operators more freedom to manoeuvre in the production and consumption of energy from renewable sources.<sup>78</sup> In 2015, Morocco launched the implementing decree No. 2-15-772 on the opening of the medium-voltage market and Law 54-14 on self-generation to enable consumers producing power at rates greater than 300 MW to have unlimited generation capacity and access to the transmission network. In 2016, the regulatory arsenal was amended by Act 48-15 creating the Agence Nationale de la Régulation Électrique and Act 58-15, supplementing and amending Act 13-09, and opening a low-voltage market and the possibility of injection into the electricity grid.<sup>79</sup> Taken together, these laws allow Morocco multiple legal and regulatory systems for implementing the ambition goals of the Paris Agreement.

## Republic of South Korea

South Korea introduced its Framework Act on Low Carbon Green Growth in 2010, at a time when the country's CO<sub>2</sub> emissions were ranked the 7<sup>th</sup> highest globally, and per capita emissions far exceeded worldwide averages. The Act aims to promote development of the national economy by

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<sup>71</sup> Ibid.

<sup>72</sup> See generally *ibid.*

<sup>73</sup> Ibid. at 3 – 4.

<sup>74</sup> Ibid. at 3 – 5.

<sup>75</sup> EBRD paper.

<sup>76</sup> EBRD paper.

<sup>77</sup> The law is supported by Implementing Decree No. 2-10-578.

<sup>78</sup> EBRD paper; T Kousksou et al., 'Renewable energy potential and national policy directions for sustainable development in Morocco' (2015) 47 *Renewable and Sustainable Energy Reviews* 46.

<sup>79</sup> EBRD paper.

laying the necessary foundations for low carbon, green growth,<sup>80</sup> and has created a strong, comprehensive institutional framework for promoting green growth.<sup>81</sup>

The Act creates the legislative framework for mid and long-term emissions reduction targets, a carbon tax and the growth of new and renewable energies. With respect to investment, the Act declares that the government will support new green industries with potential for growth, including by establishing green investment companies which may be supported by the government. Under article 6, business entities are directed to expand their investment and employment in research and development of green technologies and green industries for the fulfillment of their social and ethical responsibilities for the environment. Under article 28, the Government commits to establishing and enforcing financial measures to facilitate the low carbon transition and green growth, including by encouraging private investment in projects for establishing infrastructure in these areas.<sup>82</sup> In addition, the Act provides for the formulation of a National Strategy for Low Carbon, Green Growth to specify Korea's targets and policies required to shift toward sustainable economic growth,<sup>83</sup> and a strategy for addressing climate change.<sup>84</sup> It also mandates the setting of concrete greenhouse gas emissions reduction targets, provides a legal framework for a cap and trade system, requires businesses to report on their emissions, and addresses other sustainable development issues including land use, low-carbon transport and buildings.<sup>85</sup>



## Ukraine

After ratification of the Paris Agreement, Ukraine adopted three key framework documents governing climate change actions, the Concept for Implementation of the State Policy on Climate Change until 2030,<sup>86</sup> the Action Plan to the Concept for Implementation of State Policy on Climate Change until 2030<sup>87</sup> and the Ukraine 2050 Low Emission Development Strategy.<sup>88</sup>

The Concept stimulates the creation and implementation of an internal system for

<sup>80</sup> Framework Act on Low Carbon Green Growth (Act no 9931, Jan 13, 2010) art 1.

<sup>81</sup> OECD Environmental Performance Reviews: Korea 2017 <https://www.oecd-ilibrary.org/sites/9789264268265-10-en/index.html?itemId=/content/component/9789264268265-10-en>

<sup>82</sup> Framework Act art 28(3).

<sup>83</sup> UNEP Compendium at 35.

<sup>84</sup> Framework Act, *supra* note 83 at art 3.

<sup>85</sup> UNEP Compendium at 37.

<sup>86</sup> Cabinet of Ministers of Ukraine, "Implementation of Public Policy on Climate Change for the Period Until 2030" (Kiev 7 December 2016) 932 <<http://zakon3.rada.gov.ua/laws/show/932-2016-%D1%80/paran8#n8>>, accessed 11 November 2019.

<sup>87</sup> Cabinet of Ministers of Ukraine, "Approving the Action Plan for Implementing Climate Change Policy for the Period Until 2030" (Kiev, 6 December 2017) 878 <<http://zakon3.rada.gov.ua/laws/show/878-2017-%D1%80>>, accessed 11 November 2019.

<sup>88</sup> Ministry of Energy and Environment of Ukraine, "Ukraine 2050 Low Emission Development Strategy" (Kiev November 2017) <[https://unfccc.int/sites/default/files/resource/Ukraine\\_LEDS\\_en.pdf](https://unfccc.int/sites/default/files/resource/Ukraine_LEDS_en.pdf)>, accessed 11 November 2019.

emission trading according to Directive 2003/87/EU, formation of the special authorized body on emission trading, establishment and operation of the system of monitoring, reporting and verification of the GHG emissions, and improvement of approaches to environmental taxation in terms of GHG emissions, including creation of a mechanism for targeted usage of revenues.<sup>89</sup> The Action Plan seeks the implementation of a Low Carbon Development Strategy for Ukraine, which would fix emissions reductions requirements to 66 – 69% below 1990 levels.<sup>90</sup> In addition to national measures, the Action Plan highlights the importance of developing climate change adaptation plans for the various regions within Ukraine, as well as individual cities and villages.<sup>91</sup> The Action Plan also promotes the development of proposals to create new financial instruments for public-private partnerships in climate change projects, particularly progressive financing mechanisms that seek to stimulate businesses in their responses to climate change.<sup>92</sup>

## IV. Conclusion

The UK's Climate Change Act of 2008 and the associated 2019 amendment, taken together, have generated a strong system for addressing the current and future state of climate change associated impacts at the national level. Indeed, the ability of the Climate Change Act to be used as the source of increasingly nuanced governmental and regulatory systems demonstrates the Act's durability, and the use of the 2019 amendment to codify the UK's commitment to the net zero emissions ambition highlights the ways in which climate change has emerged in law and science.

Against this backdrop, the extensive need for reform across all sectors of industry, economy, society and government in order to meet the benchmarks necessary to achieve net zero emissions by 2050 offers an opportunity for investment. The UK and Committee on Climate Change are clear that significant modernisations must be made and that public financing alone will not be sufficient to accomplish net zero emissions ambition. They also emphasise the potential for investments in markets that will be the location of technological and infrastructural innovation in the short and long-term.

Taken together, these lessons make a strong argument regarding the benefits of net zero emissions ambition for investors and investment in the UK context. Beyond this, the UK example, which has historically served as a model for climate change legislation, can be seen as offering a way for other countries to update their climate law regimes to include increased ambition and increased investment in achieving it. This is evident in the states profiled in this paper, which represent a spectrum of environmental and climate change related concerns as well as development statuses but are all connected through obligations undertaken through the Paris Agreement. Indeed, as global and national stocktaking measures evaluate the progress toward implementing increases in ambition and reductions in emissions, and recognize the critical role of investment promotion as part of this, the UK model has many lessons to offer the international community.

Further, the recent actions of the European Union in crafting the European Green Deal and a long-term, comprehensive and adaptable response to the need for net zero emissions demonstrates the importance of using the UK as a model. Additionally, pledges from the governments of Canada, Costa

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<sup>89</sup> See Ukraine Concept, *supra* note 89.

<sup>90</sup> See *ibid.*

<sup>91</sup> See *ibid.*

<sup>92</sup> See *ibid.*



Rica and Finland to bring about laws and frameworks for achieving carbon neutrality, and even carbon negativity, offer further avenues for the expansion of net zero emissions legal and governance systems in countries across the globe.

**“The impacts of creating laws and governance frameworks for carbon neutrality – and even carbon negativity – are at a critical juncture in terms of implementation at the national and sub-national levels. This highlights the necessity for legal capacity-building at all levels to ensure that the coming ‘capacity chasm’ in those trained in climate laws and impacts does not impede vital progress.”**

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