

# Introduction

It is, by now, beyond dispute that climate change presents the single greatest environmental challenge of our times. It is equally likely that this challenge will only be met by sustained and iterative cycles of global policy formation, administrative rule-making, regulatory action, and impact assessment. The second and third of these steps, broadly speaking, constitute the process of *policy implementation*. While the scholarly study of policy implementation is not new, it has yet to receive serious attention in the area of climate change regulation. The reasons for this are relatively simple.

First, the policy formation stage is still ongoing. As the recent meeting of the Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) in Dubai vividly demonstrates, major outstanding disagreements on the basic structure of global climate policy remain. Different countries have indeed embraced climate commitments to a different extent. In the last 20 years, the European Union has consistently followed an ambitious sustainable climate policy, centred on the emissions trading system under Directive 2003/87/EC, and the European Green Deal now sets the aim of carbon neutrality by 2050.<sup>1</sup> The same cannot be said of all countries, although there is currently a broad convergence on carbon neutrality by the United States, Japan, and the People's Republic of China (PRC) by 2060 at the latest.<sup>2</sup>

Second, public attention is only intermittently focused on climate policy per se. The climate problem, in all of its videogenic variations, is part of our everyday media experience. Everyone knows about climate change. Everybody wants something done about it. Everybody is frustrated by the lack of progress. But virtually nobody has turned their attention to what would happen tomorrow if a stunning diplomatic breakthrough swept away the political chaos and gave us a global policy agreement today.

Third, and perhaps most insidiously, neither the public, our politicians nor the media have ever been nearly as interested in the unglamorous details of policy implementation as they are (at least occasionally) with the stylised combat of policymaking. This general tendency is particularly noticeable and difficult to overcome when the policymaking arena in question is international. On that distant and obscure stage, only an emphasis on vivid colours of nationalism and personality seems able to sustain our attention for even a short time.

<sup>1</sup> European Commission, Communication to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions, The European Green Deal, COM(2019) 640 final, 11 December 2019.

<sup>2</sup> J. Murray, Which countries have committed to legally binding net zero carbon emissions?, NS Energy, 5 November 2020. [www.nsenenergybusiness.com/news/countries-net-zero-emissions](http://www.nsenenergybusiness.com/news/countries-net-zero-emissions); USA, International Climate Finance Plan, 7 January 2021; Our World in Data, Status of Net-Zero Carbon Emissions Targets. 2024. <https://ourworldindata.org/grapher/net-zero-targets>.

This volume explores the problem of divergence in climate policies and outlines prospects to establish effective enforcement mechanisms and achieve the sustainable development goals embedded in several international instruments; first and foremost, the UNFCCC. The book brings together the expertise of contributors from the areas of climatology, economics, politics, law, and cultural studies, and is divided into two parts, including: (1) a comparative analysis of key elements of climate policies in select countries on a regional basis; and (2) an assessment of the viability of climate policy implementation mechanisms and ways forward.

The first part of the volume commences with an analysis of the divergence between climate science and climate policy by Roberto Buizza, and continues with an assessment of select essential initiatives of the EU and other States aiming to achieve carbon neutrality by 2050–2060. Ilaria Conti, Nicolò Rossetto, Pierre Scholsser, and Stefano Verde show that the EU's policy for carbon pricing, electrification, clean molecules and sustainable finance make the EU the main testbed for measures steering capitalist economies towards carbon neutrality. Walter Baber demonstrates that reconciling the civil law and common law traditions that underpin the EU legal construct is essential to the implementation of the Green Deal and the achievement of carbon neutrality. Ottavio Quirico assesses the position of the EU *vis-à-vis* Russia as a major energy exporter and emitter of greenhouse gases, and argues that the current conflict in Ukraine discloses for the EU the possibility of diversifying energy sources, accelerating the green transition by invoking security of supply as a justification to abandon consolidated long-term energy contracts with Russian providers. According to Robert Bartlett, effective U.S. climate policies towards net zero emissions by 2050 are unlikely in the absence of a triggering event that coalesces a fragmented normative domestic landscape in U.S. politics. In the view of Pablo Cristóbal Jiménez Lobeira, partnerships with regions that have advanced more in the area of climate policies, notably the EU, are essential to advancing incipient climate policies in Latin America and the Caribbean. Wenting Cheng shows a progression in the PRC's policies towards a concrete greening of Belt and Road implementation measures, including guidance for key industries, life-cycle management of projects, and stopping the building of new coal-fired power stations, as the net zero carbon objective by 2060 became a domestic policy priority in 2020. According to Alexandria Feruglio and Aaron Tang, cooperative water policy and resource management is crucial to effective climate mitigation and adaptation in a divided political scenario in the Middle East and Northern Africa. A chapter by Joshua Woodyatt and Broneal Sarkosh-Nejad concludes the section by interrogating the focus of energy investment from the PRC and EU in Africa, in terms of both stated aims and actual outcomes, positing that much of the success of Africa's energy transition will depend on the PRC's sincerity about its domestic and international climate ambition.

The second part of the volume develops institutional design and focuses on singling out and overcoming essential governance problems that impede the achievement of sustainable greenhouse gas reduction targets, along the lines of the basic distinction between public actors (macro level) and private actors (micro level). Within this framework, Ottavio Quirico argues that overcoming the regulatory clash between the duty to make finance flows consistent with net zero carbon policies under the Paris Agreement and investment protection under the Energy Charter Treaty requires the implementation of a dual regulatory

track that may lead to excluding compensation in the case of expropriation of unsustainable investment. Assessing holistic approaches to digitalisation as a means to achieve climate neutrality, Ottavio Quirico and Walter Baber suggest a ‘learn-by-doing’ approach, setting a variety of real-world experiments across supply chains to test the viability of digital policies, in close collaboration with stakeholders. Patrizia Vigni focuses on the issue of carbon sequestration via the sea as a test case and pleads in favour of a cooperative approach, in the context of a radical rethinking of the law of the sea. Oran Young underscores the fundamental role of Arctic processes for the dynamics of the Earth’s climate, including ice-melting and hydrocarbon exploitation, and pleads for an improved role of the Arctic Council in addressing such challenges. Dealing with carbon border adjustment mechanisms, Ottavio Quirico envisages the possibility of approaching such tools as lawful *erga omnes contractantes* countermeasures under the auspices of the World Trade Organisation, and the twin General Agreement on Tariffs and Trade and General Agreement on Trade in Services. Radu Mares shows that the notion of ‘corporate social responsibility’ has evolved significantly in the light of climate change, which has led to the implementation of the new concept of ‘responsible business conduct’, involving a regulatory mix of legal obligations and market incentives. In the view of Alfredo Ferrante, achieving climate neutrality necessitates an extension of future ecolabelling schemes from non-food to food products, guaranteeing adequate consumer information. Underscoring a divide between the United States and the EU, Ivano Alogna, Natalie Arnould, and Alina Holzhausen plead in favour of a reconceptualisation of the doctrine of the separation of powers, allowing the judiciary to effectively adjust ineffective climate policies. In the light of the decision of the Hague District Court in *Milieudefensie v. Shell*, Andreas Höslí notes the growing role of private climate litigation in addressing climate change and the necessity of accelerating adjudication procedures and enforcing effective sanctions. Laura Magi, by contrast, focuses on public climate litigation and urges the International Court of Justice to provide a targeted advisory stance on the nature of the duty to curb carbon emissions via nationally determined contributions, its extraterritorial effects and implications for future generations. The section is concluded with a chapter from Katarzyna Williams, who shows that, besides scientific data, climate policies are fundamentally shaped by communication, advocating on this footing for new ways of conceptualising, understanding and imaging transformations and the green transition.

Overall, along the lines of an intensively interdisciplinary analysis, this volume identifies a set of discrepancies between climate policies on the global scale and outlines ways forward for key regulatory mechanisms to improve convergence among such policies. Amid fundamental divergences between different policy frameworks, efficient remedial and enforcement mechanisms emerge as a key tool to limit fragmentation and realign climate policies, with a view to carbon neutrality.

The volume is concluded by three different types of sources; a Bibliography, which includes academic sources; a section on Case Law, reporting the jurisprudence of domestic and international jurisdictions; and a section on Additional Documents, covering information sources from domestic and international institutions and bodies.

**Ottavio Quirico and Walter Baber**

