

Book reviews

Distributional Choices in EU Climate Change Law and Policy: Towards a Principled Approach

By Javier de Cendra de Larragán

The Hague: Kluwer Law International, 2010, 560 pp. incl. index, £108, ISBN 978-9041133373.

Now is indeed an interesting time to consider the treatment of distributional issues (effort-sharing) in EU climate change policy. It remains a fraught issue in the current implementation phase of the European Union's 2008 Climate and Energy Package, as shown, for example, in *Poland v. Commission* (T-370/11), an ECJ case on the European Union's benchmarking decision on the allocation of free allowances to industry (Decision 2011/278/EU). Distributional issues will also come to the fore in the policy-design phase around longer-term EU climate targets. The Commission is currently preparing an impact assessment, member state by member state, to follow the "roadmap" for moving to a competitive low-carbon economy by 2050. At the same time, international agreement on the principles of substantive and legal differentiation with regard to national commitments seems a long way off. How the EU's top-down, principle-based, regime of effort-sharing will continue to develop in this context is an open question.

Javier de Cendra de Larragán's impressive work, *Distributional Choices in EU Climate Change Law and Policy: Towards a Principled Approach*, is therefore a timely contribution to the field. As the title suggests, de Larragán's objective is to derive guiding legal principles from the body of international and EU legal scholarship and practice. He then qualitatively "tests" the practice of climate change policy in the EU against these principles, in particular those policies with an explicitly redistributive aspect.

Despite de Larragán's aspiration to bring rigorous legal thinking to effort-sharing in EU policy, his approach may be criticized for its apparent subjectivity. His comprehensiveness in covering the *full* extent of EU climate policy appears, in the end, as an obstacle to a thoroughly reasoned and nuanced analysis of a given policy's conformity with the suite of guiding legal principles. One is tempted to cite Pascal: "Je n'ai fait celle-ci plus longue que parce que je n'ai pas eu le loisir de la faire plus courte" (I made this very long because I did not have the time to make it short). But that, I will argue, would be unfair.

De Larragán ties his analysis to the overarching principle of *proportionality*, that is, law defined as a search for the “rational proportion across three dimensions: in the relation between ends and means, in the distribution between benefits and burdens and in the participation of interested stakeholders in the decision-making process” (p. 99). For those interested in effort-sharing in EU climate policy, the second axis of the proportionality principle (viz. proportionality in the distribution between benefits and burdens) is arguably the crux.

De Larragán’s argument could have benefitted from a more restrictive definition of “distributional choices”. It may be questioned to what extent issues of intergenerational distribution are currently amenable to legal analysis: scientific and economic uncertainties, subjective choices regarding discount rates, and puzzles about the rights of future generations combine to make it extremely difficult to advance the analysis beyond rule-of-thumb socio-political accords, such as the 2 °C objective. These various factors can guide policy; it is another thing to translate them into actionable (in both senses of the word) legal norms. The recent Durban outcome is wholly silent on the issue of equity, suggesting that any explicit international policy on effort-sharing is unlikely to emerge soon. It seems unlikely that states could agree to useful formulas or principles on effort-sharing to replace the status quo of a decentralized calculus of national interest taking place within a loose international normative framework.

The difficulty of redistribution within agreements involving a large number of participants may suggest that the national or regional framework is a more apposite unit of analysis. The construction of national or regional climate policies so as to incorporate widely heterogeneous jurisdictions and stakeholders remains crucial for policy success. In this respect, too, the EU’s experience is broadly useful.

De Larragán carries out an impressive survey of the articulation and application of principles within the body of EU environmental law which inform the design and implementation of EU policies. These include the principle of sustainable development; the precautionary principle; the polluter-pays principle; the principle of efficiency and cost-effectiveness; and the principle of common but differentiated responsibilities. However, a close examination of their actual application within EU climate policies serves to highlight the conflicting criteria that the legislative and judicial branches have faced.

Two examples illustrate the point and highlight the added value that a more restricted approach, with a deeper focus on the actual design and impacts of explicit distributional choices with EU domestic climate policy, might have offered. The first example relates to the negotiations around the national allocation plans (NAPs) in Phase II of the ETS. Annex III of the ETS directive (Directive 2003/87/EC) states that NAPs must be consistent with members states’ targets under the burden-sharing agreement (BSA) for the EU-15, or the Kyoto Protocol for member states that were not members of the EU at the time Kyoto was negotiated. Annex III also sets down as a criterion the technical potential for emission reductions. These correspond roughly to the CBDR principle as enshrined in the Kyoto Protocol/BSA and the principle of cost efficiency.

Inevitably, member states proposed NAPs well above both their most recently verified emissions and the pre-financial-crisis model projections for emissions in Phase II. The excess was more than 60 per cent in the case of the Central and Eastern European (CEE) member states. The Commission imposed particularly dramatic cuts to the latter's NAPs. However, closer examination shows that the originally proposed CEE NAPs were, in fact, reasonable. They were not, however, in line with the principle of cost efficiency as defined by the technical potential for emission reductions, nor with an efficient ETS (i.e. one with a sufficiently strong price signal). In cutting back the NAPs, the Commission applied the criteria of technical potential for emission reductions uniformly across member states, but effectively ignored the criteria of compatibility with CBDR as enshrined in the Kyoto Protocol/BSA. Interestingly, this point seems not to have arisen in the legal challenges to NAPs, which have succeeded instead on the basis of a breach of competence by the Commission. This case is an actual example of the difficulty of implementing conflicting principles across heterogeneous countries and overlapping regulatory regimes (Kyoto Protocol targets for the CEE member states, burden-sharing agreement for the EU-15, and the ETS across all EU member states).

The second example comes from the negotiations around the 2008 Climate and Energy Package (CEP). De Larragán rightly notes that the outcome was an enormously complex package of distributional measures across policy instruments (ETS, non-ETS, renewables), the distributional consequences of which remain unclear (p. 459). Indeed, in the impact assessment for the CEP, the trade in renewables was envisaged as a major distributional mechanism, facilitating a reduction in overall compliance costs from 0.433 to -0.274 per cent of GDP for CEE member states, for example. However, during the legislative process, effective trading mechanisms for renewable energy were removed from the package, as member states such as Germany were keen to preserve control over their renewable-energy industries, and all were keen to preserve control over national energy matters.

This raises important questions, including the relationship between the Commission's ex ante impact assessment and the subsequent legislative process. It also underscores the multiple trade-offs that policymakers face, in this case, in particular, between equity and subsidiarity, but also between the comprehensiveness and complexity of the proposed policy package and its transparency, equity, and actual relation to the enacted reality. In the current economic climate, the inefficiencies and inequities of asking a diffuse and politically weak constituency, i.e. ratepayers, to pay for solar PV in Northern Europe may become increasingly debated. It is a shame to see such topical issues not discussed with more focus in de Larragán's very catholic account. They highlight the conflicting legal principles that confront policymakers—it is the difference that law can make in such "grey" situations that is of real interest.

Ultimately, the value of de Larragán's book becomes clear when it is placed in its historical context. Climate change and sustainable development are relatively recent fields for the development of legal norms, even in the European Union. Social mores will (hopefully) change

in the corresponding direction with time. But anchoring and rendering meaningful normative principles of climate protection and sustainable development within legislative and judicial systems is an enormously important field for academic research and policy practice. De Larragán's book is an innovative and comprehensive attempt to understand the European Union's still nascent legal approach on the very crux of the matter: distributing highly uncertain benefits and burdens across very heterogeneous jurisdictions and constituencies, including present and future generations, via enormously complex and uncertain policy packages.

If anything, de Larragán's account underscores how far society is from a principled legislative and judicial approach to such a "wicked" challenge. One might wonder, however, to what extent this is the failure of the legislative and judicial system per se, as opposed to the much broader system of social mores and power relations. These define the good of the society and the individual, of which the law is ultimately the means.

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Carbon Capture and Storage: Emerging Legal and Regulatory Issues

Edited by Ian Havercroft, Richard Macrory and Richard B. Stewart

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£65.00, ISBN 978-1-84113-268-6.

CCS technology is seen by many as an essential method for keeping climate warming to an acceptable level. At a time when energy supply from carbon-neutral sources is still modest and worldwide carbon-dioxide emissions continue to rise, CCS technology which separates CO₂ from fossil-fuel sources and prevents the CO₂ from reaching the atmosphere offers a promising solution for clean-energy production. However, a number of questions still remain unresolved, including the risks to humans and the environment from the long-term underground storage of CO₂, as well as appropriate risk-sharing mechanisms. The existing uncertainties cause an ambiguous or even critical public perception, which may block the further development of CCS. To mention one example, CCS development has come to a standstill in Germany, with the only pilot project shut down after the states refused to agree to the federal draft CCS Act because of heavy public opposition.

The editors of the book under review have compiled a comprehensive work which covers most aspects of CCS, ranging from its scientific and technical framework to the regulatory regime for CCS in general; and from the transportation and underground storage of CO₂ to the status of CCS in emerging economies and its public perception. Aside from

this compelling coverage, all chapters have been written by experts and decision-makers in the field of CCS, who, through their practical experience, are able to provide insights into details that can make a decisive difference to any practitioner. This also holds true of the editors themselves, who are well-regarded academics in the field of environmental law: Ian Havercroft is senior legal advisor at the Global Carbon Capture and Storage Institute in Canberra, Australia, and has worked at the Carbon Capture Legal Programme at University College London. Richard Macrory is a professor of environmental law at UCL, where he is the director of the CCL Programme. Richard B. Stewart formulated the US government's position on the Rio Climate Convention and conducts important research on climate finance.

Part One of the book considers the scientific and technical context of CCS, an understanding of which is essential to answering the legal questions that arise. In Chapter 1, Stuart Hazeldine, professor of geology at the University of Edinburgh, provides the necessary insights into the geological circumstances for the underground storage and injection of CO₂, including an analysis of the risk of accidents. While convincing in its content, considering the immense public concern about the risks from the underground storage of CO₂, the discussion on accident risk seems too brief. In Chapter 2, Norman Shilling of General Electric explains the different CCS technologies. Shilling underlines that the necessary technology for CCS (including transport and storage) already exists in other applications, so that it only needs to be applied within the new context of CO₂. In his view, the main barriers to the implementation of CCS technology are not technological but relate to uncertainty about the course of future legislation.

Part Two turns to the regulatory regime for the capture of CO₂ in general, starting with a description of the legal frameworks in Canada and the United States. Henry Krupa of Macmillan LLP explains that, with a suitable geology and a wealth of transferable technology experience (e.g. from enhanced oil recovery or acid-gas disposal activities), conditions for CCS in Canada are generally favourable. However, with regard to the legal regime, Krupa notes that CCS legislation has so far been developed inconsistently across Canada due to its federal structure, which has caused gaps in the statutory rules on a number of key questions.

Next, in Chapter 4, Les LoBaugh of Brownstein Hyatt Farber Schreck takes a closer look at the hurdles for CCS under US law, focusing on the situation in California. His contribution covers the interesting question of ownership relating to pore space for the storage of CO₂, as well as challenges resulting from multiple ownership of the potential storage sites. In Chapter 5, Robert Nordhaus, a lawyer at Van Ness Feldman, turns to the possible regulatory and financial incentives for CCS when assessing how CCS fits in with conventional command-and-control programmes of GHG regulation, cap-and-trade programmes, and carbon taxes. As a last chapter in this part, Martina Doppelhammer of the European Commission's Directorate-General for Climate Action gives an overview of the European CCS Directive as "the first comprehensive legal framework for the management of environmental risks related to carbon capture and storage worldwide", and also describes the EU funding programme for CCS.

Part Three continues with the technical process of CCS and sets out legal considerations for the transportation of CO₂. Martha Roggenkamp and Avelien Haan-Kamminga of the Groningen Centre of Energy Law, in Chapter 7, argue that, as the EU CCS Directive has only a few provisions on the piped transportation of the liquefied CO₂, legal issues will need to be resolved at the level of the EU member states. In order to minimize the differences in the national regimes, Roggenkamp and Haan-Kamminga propose that CO₂ pipelines should be qualified as “reversed upstream pipelines” so that national petroleum or mining law would apply. Yet another issue to be resolved is that not all countries that might use CCS technology in the future will have their own underground storage sites. Christian Bugge of the University of Oslo assesses the legal implications of transboundary transport of CO₂. In the next chapter, Lawrence Wolfe of Holland and Hart LLP starts off by noting that with only 3,600 miles of CO₂ pipeline in the United States (compared to 500,000 miles of pipeline for natural gas), massive investments in CO₂ pipeline systems will be necessary for a utility-scale use of CCS. In his review of the current CO₂ transportation and regulatory system in the United States, Wolfe comes to the conclusion that there is a lack of comprehensive regulation at the federal level so that the developer of a multi-state CO₂ pipeline will have to deal mainly with state and local governments.

One of the most pressing questions of CCS technology, namely the long-term storage of CO₂, is covered in a comprehensive Part Four. In the first chapter in this part, Chiara Armeni of the UCL CCL Programme describes the legal barriers for CCS under applicable international marine law, as well as how the main international agreements (in particular the London Protocol and the OSPAR Convention) have been amended in the past in order to allow for the disposal of CO₂ under the seabed. Australia, as a coal-intensive economy, has taken a strong lead in advocating the development of CCS worldwide, and already has legislation for both onshore and offshore storage of CO₂. In Chapter 11, Meredith Gibbs of Blake Dawson gives an overview of the Australian regulation of CO₂ storage, with a particular focus on long-term liability issues and competing interests for the areas needed for underground storage, e.g. from the petroleum industry. Chris Clarke of UCL then reflects more widely on long-term liability issues, concluding that, unless all parties commit to share the long-term responsibilities for tackling climate change, there is unlikely ever to be a “clean break” from liability risks for operating entities and their legal successors. Part Four concludes with Jared Snyder, of the New York State Department of Environmental Conservation, who examines the obstacles to establishing a comprehensive regulatory framework for CCS in the United States.

Part Five covers the important topic of how CCS has been implemented in emerging economies to date. It focuses on the two economies that have a particularly strong carbon output: India and China. Lavanya Rajamani of the Centre for Political Research in New Delhi explains why India has remained skeptical towards CCS so far. In her opinion, with only limited benefits for local environmental quality, economic development, energy security, and poverty reduction, CCS technology may gain ground in India only if the international community provides sufficient financial and technological incentives. In Chapter 15, Qiuyan Zhao of

Beijing Normal University gives an overview of China's emerging regulatory framework for CCS, as well as current demonstration projects and research efforts. Taking account of the fact that implementation of CCS will, particularly in emerging economies, depend on sufficient finance, Paul Zakkour of Carbon Counts assesses "carbon finance" options for CCS.

Part Six turns to the public perception of CCS. According to Peta Ashworth and Craig Cormick of the Australian Commonwealth Scientific and Industrial Research Organisation, the predominant concerns of the public include, next to the fear of leakage and the effects of CCS on groundwater, a fundamental resistance to ongoing combustion of fossil fuels. Ashworth and Cormick draw parallels with other new technologies, in particular nanotechnology. In the next chapter, Sarah Forbes and colleagues from the World Resources Institute provide suggestions to stakeholders, including regulators and project developers, on how to productively engage local communities. In doing so, they outline potential shortfalls of existing public-participation rules, in particular those tied to Environmental Impact Assessments. Part Six closes with a chapter by Meyric Lewis and Ned Westaway of Francis Taylor Building, who outline the current rules for public participation in CCS planning in the United Kingdom and examine their adequacy. Like the preceding chapter, Meyric and Westaway conclude that there are significant uncertainties as to whether existing public-participation rules will be sufficient to avoid massive public controversy in permitting procedures.

The book closes with a chapter by Ian Havercroft and Richard Macrory, who emphasize the importance of developing effective legal and regulatory structures in order to reconcile the large number of scientific, technological, economic, and moral questions involved. Havercroft and Macrory underline the rising scientific and technological confidence in CCS, while at the same time pointing to the number of questions and risks—in particular relating to finance and long-term liability—which have yet to be resolved. In order to establish a comprehensive legal CCS framework, the authors suggest that a close look at pre-existing models of regulation would be helpful, and that greater collaboration between regulators from around the world is needed to benefit from knowledge transfer and to speed up the legislative process.

The collection is highly valuable not only for those who are already involved in CCS and the business side of climate change, but also for those who are interested in gaining a first overview. It provides a comprehensive account of the topics that still need to be debated and resolved on the way to implementing CCS, as well as the status of CCS in several countries, including emerging economies. It also conveys the practical knowledge and experience of people who are closely involved in the development and implementation of the technology, and as such it offers enough depth and detail to be a useful guide to CCS practitioners.

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Crucial Issues in Climate Change and the Kyoto Protocol: Asia and the World

Edited by Kheng-Lian Koh, Lin-Heng Lye and Jolene Lin

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£83.00, ISBN 978-981-4277-52-5.

In tandem with the growing recognition and acceptance of climate change in the international community, the law in this field has developed immensely over the past decade. There is now a vast literature dedicated to the analysis of the legal challenges associated with climate change and to the scrutiny of the governing international regime. The present offering however, is unique in its approach, focusing on such issues from a geographical perspective. In a departure from the norm, this volume tackles some of the key challenges relating to climate change strategies in Asian nations, both developed and developing. It is commonly recognized that developing countries are most vulnerable to climate change and that areas of Asia have already witnessed some of the most severe climate impacts, with attendant economic effects in southern regions. Nonetheless, there is a paucity of literature devoted to these issues. *Crucial Issues in Climate Change and the Kyoto Protocol: Asia and the World*, aims to fill this “lacuna” (p. vii) with its in-depth analysis of climate change in the eastern continent.

Of course, a regional study on Asia far exceeds a mere analysis from a developing-country perspective. Recognizing the socio-economic diversity of the region, this work offers an interesting overview of the key challenges facing both Asia’s developing nations and its thriving economies of Japan and Singapore. The comparison paints a vivid picture of the various aspects of climate change mitigation and adaptation strategies at a national level and highlights the disparity between the approaches and requirements in developed and developing countries.

The volume is logically organized into parts, which the editors call themes: *Setting the Stage; Clean Development Mechanism; Emissions Trading in the European Union and Asia; and Effective Implementation of the Kyoto Protocol in Asia*. The first three parts could be described as a comprehensive treatment of some of the key issues under the Kyoto Protocol with an Asian “twist”, and all sixteen chapters making up the book are laced with valuable, practical, national examples. The true extent of the Asian focus is fully apparent, however, under the final theme, with chapters on specific jurisdictions and on the social, economic, and legal challenges of addressing climate change in their current and proposed national management strategies. This is a particularly effective means of engaging with such a broad topic.

As the first theme’s name suggests, *Setting the Stage* provides an essential interdisciplinary overview, focusing on the science of climate change and progress on the international stage. Much of the information conveyed in these initial chapters could be considered general background material, and therefore offers little in addition to the extensive literature currently available. To a reader tackling this topic for the first time, however, the detailed contributions by Nicholas Robinson and Jeff Obbard, in particular, will prove thought-provoking and insightful.

One of the main shortcomings of the text is the period in which it was written. This is particularly apparent in the first theme, which critiques the rather slow pace of legal development on the international stage. Being a compilation of conference papers from 2007, there are obvious gaps in the time line of progress to date. Advice on how states should prepare for the Bali COP (p. 21) was largely irrelevant at the time of publication.

With an overwhelming 81 per cent of CDM projects registered in Asia and the Pacific at the time of writing, the focus of Part 2 of the book (the CDM theme) is essential. Each of its four chapters offer valuable insights into national legislation governing CDM projects in the region and provide useful case studies on specific CDM ventures, with a particularly fruitful chapter dedicated to China's CDM activity. As a consequence of the book being compiled as a collection of essays, there is some repetition of fundamental points. This shortcoming is felt particularly in the coverage of the CDM.

Streck and Lin's critical analysis of the CDM process ('Making Markets Work – A Review of CDM Performance and the Need for Reform') is particularly worthwhile. This chapter comprehensively covers the practical aspects of CDM functioning, analyses the CDM's performance, and pinpoints key areas for reform. Focusing on strengthening the rule of law within the Kyoto Protocol's system of regulation, the authors critique its transparency, independence, and certainty, charting a path to reform in a post-2012 regime. A particularly interesting aspect of the chapter is the discussion of private-entity rights. A thought-provoking comparative study aptly highlights the challenges posed in the interaction of international public bodies and private parties.

Beatty and Williams' exemplary offering ('Trends in Carbon Trading: Practical Lessons') provides a practical guide to carbon trading. The chapter encompasses the key regulatory issues in both compliance and voluntary markets and provides an analysis of the legal status of carbon credits in a number of countries in Asia. However, because of the wealth of subsequent experience with the EU ETS, the chapter has been rendered somewhat out of date.

The fourth and final theme (*Effective Implementation of the Kyoto Protocol in Asia*) addresses the manner in which international law has trickled down into national law and policy. It provides the reader with detailed knowledge of national strategies in Japan and Singapore, as well as a chilling account of the importance of action on the threat to human security in the Himalayas. Significant emphasis is placed on investment in developing countries by way of the Kyoto Protocol's flexible mechanisms as well as via national energy strategies. Gunawansa's analysis ('The Kyoto Protocol and Beyond: A South Asian Perspective') highlights the fact that a lack of investor confidence has a negative impact on effective Protocol implementation in Asia, because of the political, financial, and institutional risk coupled with the strict regulation of foreign investment in several countries. The concerns raised are particularly interesting because of recent trends in reform of investment-promotion laws in the region and the relaxation of restrictions on foreign investment and ownership.

As a result of the significant post-Bali developments, parts of the volume—like its coverage of the regime governing forestry mitigation strategies—are only of historical interest. While Streck's concluding chapter ('Protecting Forests to Mitigate Global Climate Change') is successful in highlighting Asia's vital role in forestry strategies, it now does little more than provide a useful backdrop to current developments. Significant progress has been made since Copenhagen on REDD. Particularly important is the increasing focus on the role Asia will play in REDD, with a number of pilot projects already in place throughout the region. Indonesia is a key player in this global strategy and is home to the world's first REDD-specific national legislation.

Asia is the world's most populous region and home to one of the leading global carbon emitters. It also contains some of the world's most extensive carbon sinks and is host to thousands of small islands which will be most susceptible to the disastrous natural consequences of climate change. A study dedicated to Asia is therefore a vital addition to current literature on the international climate regime. Overall, the editors have successfully navigated some of the most pressing issues in the current international regime with valuable insights into the national mitigation and adaptation strategies in this diverse region. Despite the inevitable weaknesses arising from a lack of currency, *Crucial Issues in Climate Change and the Kyoto Protocol: Asia and the World* is an excellent book which maintains a delicate balance between critical analysis and practical lessons and will prove to be useful to legal practitioners and academics alike.

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