Book writing workshop

Deliverable 1.6

Harriet A. Bulkeley

31 May 2019

Introduction and aim

Date: 25 March 2019
Location: PBL, the Hague
Attendees: Harriet A. Bulkeley, Lars J. Nilsson, Johannes Stripple, Bregje van Veelen, Mariësse van Sluisveld, Agni Kalfagianni, Ekaterina Chertkovskaya

The aim of the workshop was to use initial analysis emerging from the case studies (WP3) to develop the outline book proposal and potential content of some indicative chapters. We discussed the overall approach and agreed that the suggestion of the development of a short book for the Cambridge Elements Series on Earth Systems Governance (Cambridge University Press) was an appropriate format and publisher. This choice also offers possibilities for developing associated online content.

The rest of the document includes the provisional structure of the book, the timeline and the proposal that has been submitted to the publisher.

Provisional structure of the book

From the notes taken at the meeting, the following proposed structure for each chapter is suggested (4000 words).

Introduction
Nature/structure of the sector/value chain approach, carbon significance, governance context, position of decarbonisation as a discourse (vs. other environmental drivers)

Visions
What visions for future decarbonisation are articulated for this sector/parts of this sector? These visions may be found in formal scenarios and roadmaps, cultural discourses, campaigns etc. How do they relate, compete? What is the role of these visions in shaping what the 'problem' is and how it can be addressed? Which parts of the value chain are included and which are neglected, why?

Realities
How are visions of decarbonised futures being realised through specific innovations/initiatives (actually existing decarbonisation)? Depending on the case study material, this may be comparative between cases which require very different political/material interventions (e.g. plastic supermarket vs. plastic clothes) or using cases to illustrate the dynamics of particular visions/narratives (e.g. techno fix vs. consumer demand). This should be analytical/present an argument rather than be descriptive – e.g. we might want to explain our comparisons through the different experience of the inertia-innovation dynamic, materialities, power-agency etc.

Prospects
What are the 'realpolitik' of these interventions, and how does this shape their capacity to mainstream, scale up, gain momentum as part of different pathways? What are the conditions that conflict with visions and real innovations on the ground, to prevent their take up? Can we see

particular choices or conflicts between pathways? What is their promise in terms of delivering to 2050 targets for decarbonisation?

Some initial analysis we discussed together included the following brief points, captured in table form.

Sector	Visions	Realities	Prospects
Meat	Technofix vs. demand management are dominant; multiple different ideas of how demand management could be achieved – e.g. short supply chains, substitute etc. Lots of actors promoting diverse discourses/visions.	Multiple interventions struggle Existing structures due to patterns of production & cow culture	Key question is whether pathways are in harmony or may conflict
Plastic	Plenty of visions, taking place at different parts of the value chain – this radically shapes which kinds of plastic are problematised, for whom	Interesting material and political economy shifts happening through particular sites (e.g. supermarket) and products (e.g. clothes) – yet have little overall effect on the logic and carbon of the sector. Overarching political economies of petro-plastic remain unchanged.	Will the revolution not be carbonised? Importance of other environmental concerns around plastic may have more of an impact
Steel	Strong low carbon focus in this sector unlike others, visions are strongly technical in focus with more limited demand side visions – invisibility of steel consumption futures? where these are present they are as emblematic demonstrations (e.g. wooden skyscraper)	Focus on the technical innovation pathway – but even this is not going to be enough (strong level of belief and optimism in this vision, but elephant in the room is this is not enough to achieve change needed by 2050); plenty of challenges from geography and materiality, especially around recycling, qualities of steel, its magnetism etc. Innovations in demand are shaped also by logics of inertia in construction sector.	Pathways for steel are pathways for other forms of high carbon consumption – embodied energy in buildings through cement, but also locking in energy use in glass-steel-concrete buildings. We might want to draw attention to interactive effects

Timeline

May 2019 – Book Proposal Submitted
June-July 2019 – finalization of chapter content and author teams
August - October 2019 – first drafts of chapters
October 2019 – chapters presented to the REINVENT consortium for peer review and second author workshop to discuss and develop drafts

November – December 2019 – final draft chapters prepared
January 2019 – manuscript submitted to the publisher for peer review

Book proposal (submitted)

Proposed Elements Title: Decarbonising Economies

Author(s): *(please include full name, title, institutional affiliation, full postal address, and email address for each author)*

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Synopsis *(max. 1000 words):*
For a quarter of a century, the problem of mitigating climate change has been portrayed as a matter of pollution control: of reducing the level of greenhouse gases emitted to the atmosphere at the "end of pipe." This view has now given way to recognition that fundamental transformations are required in order to decarbonise society: to radically reduce carbon in our economies and everyday lives. This shift in perspective has profound implications for the social sciences and their contribution towards addressing this complex challenge. It requires that we move beyond analysis of the institutions that have specifically addressed climate change to engage with the manifold ways in which carbon is (and is not) being governed *across* and *through* the economy.

If carbon is a fundamental element of the socio-technical systems through which economies are organized and political societies and everyday practices are constituted, so too is its governance necessarily articulated through multiple economic realms, forms of agency and sites of intervention. *Decarbonizing Economies* sets out to discover how some of the most difficult and diverse areas of our contemporary economy are coming to grapple with this challenge. Tracing how visions and possibilities for low carbon futures in areas of the economy which are currently tied into the production of significant levels of greenhouse gas emissions – steel, paper, plastic, meat and milk – are emerging, this book provides critical insights into what it will take to decarbonize our economy

towards the goals we need to achieve by 2050. It examines the innovation dynamics and governance initiatives that are emerging in order to invest in alternatives, shift production processes and alter consumption patterns across these economic domains and considers their impacts and implications for realizing low carbon futures and sustainable development goals.

Based on an interdisciplinary investigation of future visions, scenarios, and case-studies of low carbon innovation taking place in these economic domains, *Decarbonizing Economies* analyses the ways in which questions of agency, power, geography and materiality shape the conditions of possibility for a low carbon future. It explores how and why the challenge of changing our economies are variously ascribed to a lack of finance, a lack of technology, a lack of policy and a lack of public engagement, and shows how the realities constraining change are more fundamentally tied to the inertia of our existing high carbon society and limited visions for what a future low carbon world might become. Through showcasing the first seeds of innovation that are seeking to enable transformative change, and the processes through which these are evolving, *Decarbonizing Economies* will also chart a course for future research and policy action towards our climate goals.

Proposed table of contents *(please indicate, if possible, the approximate word count per chapter, keeping in mind the permitted total of 20,000 – 30,000 word maximum):*

Introduction (2k): (a) the challenge of transition, or undoing a high-carbon society – the importance of the energy-intensive sectors in decarbonising the economy; (b) scenarios and visions for low carbon futures in an energy-intensive world – what does the future look like and how do we get there? (c) transition realities – what do we know and where are the gaps in our understanding? Bringing in questions of power, agency, and politics (d) outline of the book

Steel (4k) – (a) Introduction – the challenge of decarbonizing a global economy in local places; (b) Visions – technical fixes and the potential for new steel futures; (c) Realities – a race to the top – changing economies of steel consumption?; (d) Prospects – where might key levers of change emerge and where are the limits to decarbonisation?

Plastic (4k) (a) Introduction – plastic fantastic or how the materiality of multiple forms shapes the decarbonization challenge; (b) Visions - enter the bioplastic economy and a plastic free world; (c) Realities of going plastic free – nascent innovations attempting to remove plastic from the economy; (d) Prospects – where are new agents of change emerging and how are power dynamics limiting the potential for decarbonisation?

Paper (4k) (a) Introduction – where next in a sector of multiple transitions; (b) Visions – a paper-based economy and its implications for land-use; (c) Realities – the emergence of innovative paper (its plastic) vs. doing without paper (again), is demand reduction always the solution? (d) Prospects – how are transitions in the paper economy going to shape the prospects for plastic (and steel) ... is there enough land for a bio-based economy?

Meat (4k) (a) Introduction – meat as the new climate problem; (b) Visions – protein revolutions and laboratory meat, which are the most fantastical futures; (b) Realities – changing meat production vs. changing diets for the planet ... where does the agency for change really lie; (d) Realities – can the climate agenda drive a new food revolution?

Milk (4k) (a) Introduction – milk as the invisible enemy (b) a lack of imagination – where are the visions of milk's futures?; (c) Realities – (il)liquid economies – changing production chains from liquid milk in Europe to dried milk across the world and the emergence of multiple milks; (d) Prospects – can Western diets go diary free?

Finance (4k) (a) Introduction – climate finance and finance for climate; (b) Visions – the promise of overcoming the finance gap; (c) Realities – innovative finance & new agents of change and the limitation of making finance 'green'; (d) Prospects – where will finance for decarbonisation come from?

Conclusions (2k) From Visions to Realities – can we decarbonise the high carbon economy?

Novelty and contribution *(150 – 200 words):*

Decarbonising Economies intends to make a substantial contribution to the debate on how to move towards a low carbon society by focusing on sectors of the economy which have traditionally remained outside the purview of those social science approaches which have sought to understand the political economies and governance challenges of such transitions. It will bring a new set of questions concerning agency, power, materiality and geography into debates concerning the politics of low carbon transitions, and open up new agendas for work on earth system governance.

Market positioning and need *(150 – 200 words):*

There is to date no such book which demonstrates how high carbon economies are locked into patterns of production and consumption of these energy-intensive goods and which signals the importance of transitions in these domains for achieving low carbon futures. The book will make a strong compliment to existing literature on transitions in the energy and mobility arenas, whilst also offering a novel set of conceptual arguments based in political sciences and political geography that seek to add value to our understanding of the dynamics of how such transitions are governed.

Author bios *(150 – 200 words each):*

Professor Lars J. Nilsson has 30 years of experience in the fields of energy efficiency and renewable energy, energy and transport systems, as well as energy and climate policy analysis. Recent research has been on different aspects of low carbon transition policy strategies and governance in the context of multi-objective strategies for sustainable development. He is currently coordinating the EU-H2020 project REINVENT (Realising Innovation in Transitions for Decarbonisation). He teaches

on climate science and politics, energy policy and governance at the Faculty of Engineering, Lund University.

Professor Harriet A. Bulkeley holds joint appointments as Professor in the Department of Geography, Durham University, and at the Copernicus Institute, Utrecht University. Her research focuses on environmental governance and the politics of climate change, energy and sustainable cities. She has published 8 books, several edited collections and over 60 papers, including *Accomplishing Climate Governance* (CUP 2016). Harriet currently Co-ordinates the H2020 NATURVATION project examining the role of urban innovation with nature based solutions for sustainable development and is a co-investigator on the H2020 REINVENT project examining the political and financial challenges of decarbonisation.

Dr Johannes Stripple is Associate Professor at the Department of Political Science, Lund University. His research focuses on the cultural politics of climate change and decarbonisation, and has led projects examining low carbon transitions in Sweden and the European Union, and the role of the arts in developing new imaginaries of climate futures. He is editor (with Bulkeley) of *Governing the Climate* (CUP, 2016), and (with Bulkeley & Paterson) *A Cultural Politics of Climate Change* (CUP 2017). He is co-investigator on the H2020 REINVENT project examining the political and financial challenges of decarbonisation.

Dr Bregje van Veelen is a researcher at the Department of Geography, Durham University, where she works on the REINVENT project examining the governance of decarbonisation efforts in 'hard to reach' sectors, such as plastics and agriculture. Prior to this Bregje completed her PhD at the University of Edinburgh, where her research focused on the governance of community renewable energy projects.

Dr Agni Kalfagianni is Associate Professor of Transnational Sustainability Governance at the Copernicus Institute of Sustainable Development. She specializes in the effectiveness, legitimacy, and ethical and justice considerations of private and transnational forms of governance in the sustainability domain. She is coordinating lead author of the 2018-2028 science plan of the Earth System Governance project and co-founder of the international Planetary Justice Taskforce. She is a co-investigator on the H2020 REINVENT project examining the political and financial challenges of decarbonisation.

Dr Mariësse van Sluisveld, is a researcher at PBL Netherlands Environmental Assessment Agency and Utrecht University. She specialises in applying model validation techniques to integrated assessment modelling and developing scenarios for the decarbonisation of the energy-intensive sectors of the economy.

Timeline *(please identify when your manuscript will be ready for submission to peer review):*

- June-July 2019 – finalization of chapter content and author teams
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Suggested reviewers *(please mention 3-4 potential reviewers, including institutional affiliation and email)*

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