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Private agri-food governance and greenhouse gas abatement: Constructing a corporate carbon economy

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ABSTRACT

Private sector actors are playing an increasingly significant role in the definition and governance of 'sustainable' agri-food practices. Yet, to date little attention has been paid by social scientists to how greenhouse gas (GHG) emissions are addressed as part of private agri-food governance arrangements. This paper examines how private actors within agri-food supply chains respond to emerging pressure for measures to reduce GHG emissions from agriculture. Drawing upon the Anglo-Foucauldian governmentality literature, we introduce the notion of the *corporate carbon economy* to conceptualise the practical techniques that enable private agri-food actors to make GHG emissions thinkable and governable in the context of existing market, regulatory, and supply chain pressures. Using a case study of the Australian dairy industry, we argue that private agri-food actors utilise a range of techniques that enable them to respond to existing government environmental regulations, balance current market pressures with future supply chain requirements, and demonstrate improved eco-efficiency along food supply chains. These techniques – which include environmental self-assessment instruments, tools for measuring GHG emissions, and sustainability reporting – have little direct relevance to the 'international climate regime' of carbon trading, and carbon markets more broadly, yet individually and in combination they are crucial in enacting an alternative regime of GHG governance. In concluding, we contend that the growing use of sustainability metrics by international food companies is likely to have the most powerful implications for GHG governance in the agri-food sector, with potentially far-reaching consequences for how future action on climate change is rendered thinkable and practicable.

1. Introduction

It is widely recognised that globalising processes – including the emergence of a global economy, international regulatory bodies, and transnational corporations – as well as the growing dominance of neoliberal rationalities, are contributing to fundamental changes in agri-food regulation in which the state is no longer the predominant actor. As state capacities are re-ordered, and governance organised at a supra-national scale, private sector actors are emerging as particularly powerful in agri-food governance, becoming 'rule setters rather than rule takers' (Fuchs et al., 2011, p. 354). Indeed, as Busch and Bain (2004, p. 322) argue, 'private rules, practices and institutions ... are now at the center of transforming social, political, and economic relations throughout the global agrifood system'. In recent years, the influence of such rules, practices and institutions has extended to the transformation of *environmental* relations. International food companies are increasingly setting the global agenda on sustainable agriculture (e.g., Clapp and Fuchs, 2009; Loconto and Fouilleux, 2014), taking 'pivotal roles in terms of rule-making, monitoring, compliance, and enforcement' (Fuchs et al., 2011, p. 353). This is evident in the use of standards, certification and metrics aimed at minimising risk along supply chains, presenting to customers a responsible corporate image and/or responding to government, non-government organisation and community concerns regarding the environmental and social sustainability of goods and practices (e.g., Freidberg, 2013; Gunningham, 2009; Gunningham et al., 2004; Tallontire, 2007). However, other than the recent work of Freidberg (2013, 2014), there has been relatively little attention to how greenhouse gas (GHG) emissions – a well-recognised and growing threat to global agricultural sustainability (Angelo, 2010) – are addressed as part of private agri-food governance arrangements.

In this paper, we examine how private actors within agri-food supply chains respond to emerging pressure for measures to reduce GHG emissions from agriculture. The private sector has

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had a crucial, yet little acknowledged, influence on 'the design and implementation of climate governance mechanisms' (Lemos and Agrawal, 2006, p. 316). While governments and international governmental organisations remain the most important actors in global climate governance, private actors have been instrumental in transforming climate change and GHG emissions into a calculable business risk through techniques such as governance by disclosure (Pattberg, 2012) and life cycle assessment (LCA) (Freidberg, 2013). Such techniques are being embraced by the corporate sector since they align comfortably with the corporate framing of sustainability as improved (eco)efficiency (Freidberg, 2014). Yet, it is important to acknowledge that private sector actors are subject to multiple pressures – economic, social, environmental and regulatory – in the calculation of risk. While these multifaceted pressures can provide incentives to address environmental concerns, tensions between the various pressures 'may pull firms in different directions' (Gunningham et al., 2004, p. 329). We introduce the notion of the *corporate carbon economy* to conceptualise how private sector actors seek to address GHG emissions in the context of these multiple pressures. In doing so, we build on the burgeoning social science literature on the 'carbon economy'. Much of this literature focuses on state-based emissions trading systems and 'the buying and selling of offsets through United Nations-controlled "compliance" markets ... as well as through "voluntary" markets' (Boyd et al., 2011, p. 601; see also Boykoff et al., 2009; Goodman and Boyd, 2011). The notion of the corporate carbon economy contributes to this body of literature through an analysis of how private sector actors 'deploy strategic capacities, create alternative "mentalities" of rule, and render the issue of climate change "practical"' (Okereke et al., 2009, p. 73).

The paper investigates the construction of a corporate carbon economy focusing on the Australian agri-food sector, and concentrating specifically on the dairy industry. Agriculture in Australia provides an interesting context for two key reasons. First, the agriculture sector has developed in a markedly different direction to countries in Europe and North America due to the importance of exports of primary products – largely bulk commodities – to the country's economy, and Australia's strong commitment to neoliberal policy directions and especially trade liberalisation. This has resulted in the emergence of a form of highly productive agriculture shaped by neoliberalist policy directions, which has been labelled 'competitive productivism' (Dibden and Cocklin, 2005). The capacity of the Australian government to respond to environmental issues (including GHG emissions) has been constrained by its free trade position and opposition to payment of subsidies, including payment of agri-environmental incentives. At the same time, as price takers, Australian farmers are constrained in managing 'resources for which there are no direct and immediate productivity benefits' (Lockie, 2009, p. 422).

Second, policies to deal with emissions from agriculture and land management are highly contentious and frameworks for investment in climate action are unstable. The agricultural sector in Australia accounts for a substantial proportion of the nation's GHG emissions. Indeed, it is the second largest source (after stationary energy), with 15.9% of the total in 2010; livestock production is particularly damaging, with methane from sheep and cattle comprising 10.7% of total GHG emissions (CSIRO, 2012). Yet, agriculture was excluded from the price on carbon introduced by the previous Australian Labor government in July 2012. Carbon pricing has been repealed by the current Coalition government, elected in September 2013, and opportunities to receive funding for farm-based carbon-reduction activities under a new Direct Action scheme are likely to be limited (see Section 4).

We are particularly interested in the tools used by the Australian dairy industry in addressing GHG emissions and making these workable in the face of existing market and supply-chain pressures. This industry has been active in efforts to improve its environmental image in recognition that it may eventually have to account for the adverse environmental impacts of intensive dairy farming (Higgins et al., 2010) as well as addressing the significant contribution to total agricultural emissions made by dairy cattle.[1] Compared to the neighbouring New Zealand (NZ) dairy industry, Australia exports a far smaller proportion of their dairy products (38% in 2013/14 compared to 95% in NZ (Dairy Australia, 2014a)), and is less exposed than the NZ industry to carbon sensitive European markets.[2] Nonetheless, there is growing pressure from upstream supply chain actors on Australian dairy processors to verify the sustainability of their products and supply chains (Dairy Australia, 2014b). As we discuss in this paper, this is leading to the development of various instruments and metrics that seek to position the Australian dairy industry to respond to those pressures.

In the following section of the paper we outline briefly the literature on the 'carbon economy', focusing particularly on how the growing role of private sector actors in international climate governance is theorised. This more recent work – which focuses on the techniques through which GHG abatement is rendered thinkable and practicable – is used to develop our theoretical contribution, the notion of the corporate carbon economy. We then provide an overview of the methods, sampling techniques and analytical techniques underpinning our case study of the Australian dairy industry. This is followed by a discussion of how Australian governments have sought to govern GHG emissions from Australia agriculture, and the current lack of incentives at a national level for farmers and agricultural industries to address GHG emissions. Discussion of the policy environment establishes the context for our dairy industry case study, in which we elaborate on the different techniques that have enabled dairy processors and upstream supply chain actors to make GHG abatement workable with existing objectives, market demand, and supply chain pressures. Finally, in the concluding section, we consider how these techniques – individually as well as collectively – contribute to an emerging corporate carbon economy.

2. Climate governance, private sector actors, and the carbon economy

Global warming, and human-induced climate change more broadly, is an area of growing interest for social scientists. Given the carbon dependence of contemporary industrial economies, the development of policy responses and mechanisms for reducing GHG emissions, and their capacity to contribute to a more sustainable future, have received much scholarly attention (e.g., Bailey and Wilson, 2009; Bailey et al., 2011; Goodman and Boyd, 2011; While et al., 2010). In particular, increased critical scrutiny is being given to the 'carbon economy', which, broadly defined, includes 'any measure that seeks to assign commodity values and create markets for greenhouse-gas emissions' (Bailey and Wilson, 2009, p. 2324). The commodification of emissions and development of markets for carbon abatement is based on the assumption that climate change is an outcome of market failure, a consequence of which GHG emissions and their environmental impacts have been externalised in the quest for economic growth. Such failure is claimed to be best addressed through market mechanisms aimed at internalising emissions as part of economic calculations (Redclift, 2009). In this sense, the use of market mechanisms for carbon abatement may be conceptualised as a form of 'nature's

[1] Emissions from cattle consist primarily of enteric methane, which has 21 times the global warming potential of carbon dioxide (Dairy Australia, 2007a; DCCEE, 2010).

[2] In NZ the issue of 'food miles' has led to a focus on LCA as a means to demonstrate that NZ produce is less carbon-intensive than European produce (Saunders and Barber, 2007).