Sparing or sharing? Differing approaches to managing agricultural and environmental spaces in England and Ontario

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ABSTRACT

The ability to balance agricultural production and environmental conservation in the face of increasing demand for food, fuel and fibre poses a major challenge for governments around the world. This challenge is explored in two areas of comparison: Ontario, Canada and England, UK in order to understand how each has balanced agriculture and environment in its land use policies. England and Ontario share similarities that suggest lessons and instruments may be transferrable to achieve similar land use objectives. Through the use of a thematic analysis of policy documentation, from each case study area, themes are identified demonstrating differences in approaches, and underlying policy preferences, associated with balancing agriculture and the environment. Specifically, results suggest that policymakers in Ontario hold a preference for land-sparing and leanings towards the productivist paradigm, whereas the land-sharing approach coupled with evidence of post-productivism is more common in England. The structural similarities of these cases provides insights into less tangible aspects of either context, such as policymaker preferences, where different approaches have emerged from a similar foundation. Moreover, as England transitions out of the EU, it may draw on the experiences of other jurisdictions in the design of a new suite of agri-environmental policies, with Ontario's approach providing one alternative. Overall, this paper contributes to our understanding of the manifestation of land-sparing/sharing and productivism/post-productivism in real world policy contexts and the relationship between both sets of concepts.

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1. Introduction

With a growing global population projected to surpass 9 billion people by 2050, and associated food demand anticipated to increase by between 70 and 100 per cent, food security has emerged as a land use challenge of particular importance (Bridge and Johnson, 2009; Defra, 2008; Evans, 2009; FAO, 2009; Godfray et al., 2010; UN, 2013). Increasing population and food demand, alongside numerous other land use trends, summarised by Smith et al. (2010), have created a "perfect storm" with various land uses competing for a finite land base (Sayer et al., 2013, p. 8349). From this, two land uses that have emerged as particularly challenging to manage are agricultural production and environmental

conservation, which have been described as being on a "collision course" (Sayer et al., 2013, p. 8349). These concerns have been reinforced by research findings pertaining to the land needs of a growing population, such as the estimate that as much as 1 billion hectares (ha) of land may need to be cleared globally by 2050 in order to accommodate increasing demand for agricultural production (Tilman et al., 2011).

The challenge of managing agricultural production and environmental conservation will take place at various scales and include a multitude of actors. This paper sets out to analyse the various land use policies that manage agricultural and environmental spaces within two jurisdictions: Ontario, Canada and England, United Kingdom. Ontario and England share many important characteristics such as their government structure, legal system, and culture/history, as well as similar land use planning traditions and associated property rights regimes. Hence, whilst there are notable differences across the two cases, they nevertheless share sufficient commonalities to render them similar enough instances of the same general phenomena to justify comparison, and allow

for useful insights into agri-environmental land use policy within the two jurisdictions.

Moreover, there is much that Ontario and England can learn from one another, particularly as they grapple with the same global challenges affecting land allocation. Comparison is particularly, though not exclusively, valuable for Ontario where England has experienced conflicts between urban, agricultural and environmental land uses for much longer than Ontario and thereby provides a preview of challenges that Ontario may face in the future, as well as potential solutions (Alterman, 1997, p. 220). On the other hand, as England transitions out of the European Union (EU), it may look towards the experiences of countries with similar foundations from which to build a new set of agri-environmental policies. Within the literature, the paper contributes a novel comparison, building from previous comparisons of agri-environmental and/or land use policy, such as between Norway and Australia (Bjørkhaug and Richards, 2008), New York State and England (Bills and Gross, 2005), and between the EU and the United States (Baylis et al., 2008).

This research found that despite similar planning traditions and property rights regimes, Ontario and England have a very different approach to managing agricultural and environmental spaces. Ontario's approach was more reflective of a land-sparing approach in which agricultural and environmental spaces were separated, whereas policy in England is predominantly aimed at integrating agricultural and environmental spaces (land-sharing). These different land management approaches appear to reflect distinct preferences among policymakers. Policy rhetoric in Ontario is geared towards productivism, i.e. a belief that arable land should be used primarily for production. On the other hand, discourse in England emphasises the multifunctional nature of arable land, a key indicator of a post-productivist agricultural paradigm.

This paper provides a valuable contribution to both the literature and practice of rural land use, by comparing and contrasting the policymaker preferences behind land use policy approaches in two comparable jurisdictions. The article contributes to a gap in the academic literature by grounding the theoretical land-sparing/land-sharing and productivist/post-productivist typologies within 'real-world' policy contexts. While substantial literature has grown around the concepts of land-sharing and land-sparing, there is currently limited understanding of its application within actual land use policy systems, particularly in developed countries. Where this concept has been explored in real-world cases it has mostly been in the developing world including Ghana and India (Phalan et al., 2011), Mexico (Gordon et al., 2007), Indonesia (Clough et al., 2011) and Argentina (Mastrangelo and Gavin, 2012). Research from developed countries, such as Australia (Dorrough et al., 2007), the UK (Hodgson et al., 2010), and the United States (Egan and Mortensen, 2012), to this point have taken a positivist, evaluative approach to assess the benefits of either management option. Instead, this research explored the manifestation of these approaches within land use policies in developed countries.

Our research sheds new insights relating to the relevance of productivist/post-productivist ideological frameworks for shaping the design of land use policies. This is particularly true in the Canadian context, where an empirical study of productivism/post-productivism has not yet been completed, even though it has been applied outside the UK in multiple jurisdictions including Australia (Argent, 2002; Holmes, 2002, 2006), Denmark (Kristensen, 2001; Kristensen et al., 2004) and Norway (Bjørkhaug and Richards, 2008). Furthermore, Mather et al. (2006) describe the linkage of post-productivism with land use as a "*field that is ripe for the further development of theory and especially theory on the*

fundamental drivers of change", yet little has been conducted on this linkage since their article was published in 2006 (Mather et al., 2006, p. 452).

This approach and its findings are novel within the academic literature. The concepts of land-sparing/land-sharing and productivism/post-productivism have rarely been explored in the Canadian context, representing a clear gap in our understanding of the application and wider transferability of these sets of concepts. Moreover, no literature was identified that explicitly notes the interconnection between the concepts of land-sparing/land-sharing and productivism/post-productivism, whilst this paper suggests there may be parallels and overlap between these two independent sets of literature that should be explored further.

Finally, the article has relevance for policy development in both contexts. The study found that different approaches to managing agricultural and environmental spaces have emerged from a similar government/legal structure in both Ontario and England, at least in part as a result of differing policymaker preferences. These findings support cautious efforts to share lessons and instruments between these jurisdictions, recognising the underlying differences that this research has identified. Similarly, the study supports further research on the transferability of agri-environmental policies between North America and Western Europe.

2. Methods

For the purposes of this paper, 'land use policy' is considered to comprise three sets of public policies with spatial implications for the use of arable land: planning policies, agricultural policies and environmental policies. This research also took a broad view of policy going beyond documents/statements labelled as 'policies' to include additional material listed in Table 1 (e.g. guidance material, legislation) which allowed for improved understanding of each government's policy preferences. Sources were compiled from current policies as of March 2015 and in certain circumstances we also drew on previous versions of policies to provide additional context. The full list of reviewed policies is provided in Table 1 with additional details provided in the Supplemental Materials.

The sources used for the analysis were identified by systematically reviewing government websites, reports and academic publications for mentioned policies, legislation and other related documentation. The original documents were then obtained from official government websites with particular effort to ensure the most recent version was obtained (e.g. not superseded).

The study used an inductive approach incorporating elements of grounded theory, whereby theory was developed through the research findings, rather than the testing of a hypothesis (Charmaz, 2014; Glaser and Strauss, 1967). This process also included a thorough literature review be completed after the initial thematic analysis. This allowed for the consolidation, and interpretation, of themes through the lens of concepts already well developed within the academic literature.

The research used a combination of semantic and latent approaches for analysing documents (Shaw et al., 2004). This included the description of overt and explicit information extracted from documents, the review of broader policy documentation including guidance material, and the analysis of ideology/discourse within documents in order to help understand the underlying reasons for documents and decisions (Shaw et al., 2004). The process for analysing the documentation was based upon the six phases of thematic analysis outlined by Braun and Clarke (2006, p. 87).

Documents were reviewed (read and re-read) and data items, semantic and latent, were identified where they were relevant for the original research objective, using a focused coding strategy