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Towards a cross-sectoral analysis of land use decision-making in Scotland

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ABSTRACT

This paper presents a cross-sectoral analysis of land use decision-making, undertaken to provide an evidence base for government policy development. Key informant interviews and a quantitative survey were conducted with land managers across Scotland. Analysis of current attitudes towards and priorities for land use was undertaken with private, public and charitable land managers from the farming, forestry, crofting, horticulture and non-commercial land use sectors. Five idealised types were identified: ecological land stewards, economic land stewards, multi-functionalists, community stewards and 'other'. Consistent attitudinal groups were found across land use sectors, and across Scotland's four geographic regions, suggesting that whereas attitudes and priorities are heterogeneous within specific sectors, similar attitudinal groupings can be identified across these sectors. Findings indicate the particular importance of community and social concern in attitudes and priorities for land use across all sectors. Study findings also demonstrate the professionalisation and formalisation of decision-making processes among large-scale public, private and charitable land managers, in contrast to a perceived lack of access for individual and household-level decision-makers.

1. Introduction

As governments seek to make better use of their land resources to meet national targets (e.g. food security, climate change and economic development), and develop policies which are appropriate for multiple land use purposes (e.g. national rural development plans, European Commission (2008) Energy Directive) it is increasingly important to understand the factors underlying land use decision-making in multiple sectors. However, research into actor influences on land use change (attitudes, motivations and objectives held by individuals and groups) has traditionally focused on single sectors, particularly farming, although a few articles address two sectors, most commonly farmers' approach to forestry (e.g. Emtage et al., 2001; Lloyd et al., 2008; Madsen, 2003; Mather, 1996). Neither is the range of landholding entities addressed, as emphasis is typically on private owners (Primdahl, 1999). While these focused research approaches are useful in informing policy development on specific issues (e.g. design of agri-environmental schemes), they do not provide a consistent foundation for cross-sectoral policy development (e.g. to address climate change, water management, infrastructure development). This paper presents an initial step in that direction.

The research presented in this paper was undertaken as part of the Scottish Government's Rural Land Use Study, commissioned in 2009. The overall purpose of the Land Use Study was:

> to provide an evidence base on the potential contributions of Scotland's rural land to delivering on the Scottish Government's purpose of sustainable economic growth, and to help in addressing major policy challenges across government and the wider public sector, such as climate change, ensuring food and energy security, and meeting housing and infrastructure needs in response to changing demographics (RERAD, 2008, p. 1)

The focus of the project from which this paper is drawn was to identify and analyse the drivers and decision-making strategies of the range of Scotland's rural land managers. The project went beyond the traditional emphasis on private land owners to include public and charitable land managers. This is particularly important given the amount of land controlled by public and charitable organisations in Scotland: for example, the Forestry Commission, a public body, is Scotland's largest land manager, responsible for 8.6% of Scotland's land (35% of Scotland's woodlands) (Scottish Executive, 2006); the National Trust for Scotland, a charitable organisation, is the third largest landowner in Scotland, managing about 1% (76 000 ha) (National Trust, 2009) of Scotland's land.

It was a specific request of the Scottish Government's Rural and Environment Research and Analysis Directorate (RERAD) that a typology of decision-makers be developed from primary data, and used to demonstrate patterns in attitudes and priorities of Scotland's land managers. The development of an idealised typology

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is a well-established means of identifying and describing differential response in landholders (Emtage et al., 2006; Garforth and Rehman, 2006; Whatmore, 1994). This has been a particularly popular approach in addressing questions related to agriculture. A review of the literature demonstrates at least a dozen separate typologies of farm and operator types (e.g. Barnes et al., 2009; Bohnet, 2008; Bowler et al., 1996; Darnhofer et al., 2005; Davies and Hodge, 2007; Garforth and Rehman, 2006; Gorton et al., 2008; Marsden et al., 1992; Morris and Potter, 1995; Salamon, 1985; Shucksmith and Herrmann, 2002; Van der Ploeg, 1994). Most commonly, these typologies are constructed by combining attitudes, values and beliefs with holding characteristics and business structure.

This abundance of literature on types of farm decision-making is not replicated in the other land use sectors. In comparison to the numerous farmer typologies, there are relatively few for foresters (European exceptions are Ingemarson et al., 2006; Madsen, 2003; Van Herzele and Van Gossum, 2009) and none specifically addressing the UK. There is also a growing literature on the role of owner attitudes and values in forestry decision-making (see for example Agbenyega et al., 2009; Church and Ravenscroft, 2008). Other land use sectors have undergone even less investigation. Only one typology was found of estate owners: Macgregor and Stockdale (1994) based their differentiation primarily on primary land use type. There are multiple typologies of perspectives on nature conservation, but these tend to be either developed from studies of the general public (e.g. Nijnik and Mather, 2008), or included within farming and forestry typologies (e.g. Darnhofer et al., 2005; Morris and Potter, 1995), and thus do not address entities such as NGOs whose primary purpose is conservation. Perhaps most significantly, there are no typologies at present which include multiple sectors in addressing land use decision-making.

This paper presents primary research which identifies patterns in attitudes and priorities of decision-makers acting in commercial and non-commercial land use sectors, and on land that is tenanted, owner occupied, and held by public bodies and by non-governmental organisations (NGOs). The primary purposes of the paper are to:

- Present a typology which encompasses the range of land managers in Scotland.
- To identify and describe patterns in the attitudes and priorities of Scotland's land managers.
- To provide insights into land managers' information access.
- To identify implications for the development of policy mechanisms.

The specific contribution of this paper is to make an initial step towards multi-sectoral research on attitudes and values in relation to land use. The inclusion of the full range of Scotland's land managers in a single study is a novel approach, and necessarily broad-ranging in terms of findings. The discussion thus emphasises the practical (policy-related) implications of these findings, and identifies several areas for further, more detailed research.

2. Methods

There are numerous possible methods to develop typologies of land managers. These include qualitative interviewing (e.g. Bohnet, 2008; Fish et al., 2003; Madsen, 2003; Sutherland, 2009), and quantitative survey based techniques (e.g. standardised face-to-face interviews: Bowler et al., 1996; Gorton et al., 2008; Morris and Potter, 1995; Nijnik et al., 2009; postal surveys: Herbohn et al., 2005; telephone surveys: Barnes et al., 2009). Some researchers also build on previous typologies (e.g. Bowler et al., 1996). In this study, a mixed methods approach was adopted, combining qualitative interviewing with a quantitative telephone survey. Mixed methods are commonly used in typology development, with qualitative work informing larger scale quantitative surveys (e.g. Van Herzele and Van Gossum, 2008; Shucksmith and Herrmann, 2002). Emtage et al. (2007, p. 483) argue that statistical approaches can provide breadth and generalisation of research, whereas qualitative methods can provide greater depth of understanding. In this case, a quantitative telephone survey was used to gain standardised responses from 600 land managers, complemented by the more detailed information gathered from 23 key informants through qualitative telephone interviews.

Developing a typology which can be used across sectors represents a challenge, in that the structural characteristics of land holdings (particularly scale and commodities produced) often used in typology development, are also often sector or ownership type specific (e.g. crofts (small agricultural holdings held subject to the Crofting Acts) are typically much smaller than farms or commercial forests). Including these characteristics in the typology would have resulted in types which largely reflected sectors or legal structures, and therefore would not fit with research purposes. It was therefore decided to focus this study on the attitudes and priorities of land managers. The construction of the typologies presented here therefore involved a number of components. These are outlined below.

2.1. Identification of survey topics

In order to design the question guide for the qualitative interviews and the questionnaire for the quantitative survey, a wide range of possible attitudes and priorities were identified, based on a literature review. Gasson and Errington (1993) (based on Gasson, 1973) provide a list of different kinds of farming objectives. A given farmer could be expected to identify several of the following types of objectives: instrumental (e.g. maximising or making a satisfactory income, securing income for the future, increasing net worth), intrinsic (enjoying the work itself – e.g. outdoor life, purposeful activity, value in hard work, independence), social (e.g. belonging to the farming community, prestige as a good farmer, continuing the family tradition), spending more time with family and personal (e.g. self-fulfilment and personal growth).

In addition to these, a number of other possible attitudes or priorities for land use were drawn from the literature. Gorton et al. (2008) and Ingemarson et al. (2006) identified a primary focus on production as important distinguishing characteristics in their typologies of farmers and foresters respectively; the persistent orientation of farmers towards 'production' has formed a significant component of recent literature on post-productivism (Wilson, 2007). 'Diversification' (the adoption of alternatives to primary production and off-farm employment) as a farming strategy has been used by Bowler et al. (1996), Gorton et al. (2008) and Shucksmith and Herrmann (2002) in their differentiation of farming types. 'Environmental considerations' became a more explicit part of typology work as agricultural policy began to incorporate the enhancement of public goods and to provide voluntary environmental measures (Brodt et al., 2006; Davies and Hodge, 2007). Van Herzele and Van Gossum (2009) also identified 'ecologists' in their typology of foresters in Belgium. These possible attitudes and priorities were used to inform the question guide used in qualitative research, and statements used in the quantitative survey.

There were a number of possible classification features which were not used in typology development. These were primarily the physical and business characteristics of the enterprises operated by the individuals surveyed. For example, Shucksmith and Herrmann (2002) included farm structural characteristics (e.g. acreage) and behavioural variables (e.g. change in farm size, investment indices)