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Analysis

Property rights in UK uplands and the implications for policy and management

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ABSTRACT

Rural areas are subject to changing and often competing demands. Where agricultural production was once paramount, it now competes with other ecosystem services such as carbon storage, rural amenity, and wildlife habitat. If rural areas are to be managed to produce this broad range of goods and services, then more diverse and complex management regimes are needed. This paper explores the literature on property rights before using a 'property rights bundle' approach in the UK uplands to (1) examine the distribution of property rights between stakeholders in a multi-resource system and (2) evaluate the effect of state intervention on the redistribution of property rights and the resulting management regimes. Private land owners were found to be the dominant type of property rights holder and private property the dominant management regime in the uplands of the UK. Government intervention has also created private-state regimes for some public goods such as biodiversity but common property management is still in its infancy with regards to ecosystem services and few stakeholders have claimant rights over resources. As a result, many stakeholders are unable to influence management to produce the goods that they want. A property rights perspective highlights that single management regimes alone are unlikely to manage land sustainably for both private and public goods. Instead, a complex mix of private, private-state and common property regimes are found to be emerging in this multi-resource system. These mixed management regimes have the potential to produce sustainable outcomes but only if the appropriate management regime is matched to each resource, if links are developed between each regime to deal with conflict and if mixed management is adaptable enough to cope with new and changing demands.

1. Introduction

Rural areas are subject to changing and often competing demands (Munton, 1995). Where agricultural production was once paramount, producing food is now in competition with demands for other ecosystem services such as amenity, environmental protection, water quality and carbon storage (Hubacek et al., 2009). In the past, resources were generally managed on an individual basis and landscapes were simplified to produce a small number of commodities such as timber or food (Sandberg, 2007). But today, we want rural areas to produce a range of ecosystem services. As such, more diverse and complex environments are needed that are also resilient to external shocks such as climate change (Holling, 1973). Such diverse and complex environments will also need more diverse and complex management regimes to deal with multiple users requiring a variety of goods and services and the inevitable trade-offs that will have to be made between them. However, in systems where land has both multiple uses and users, who should have rights to make decisions about how that land is managed? For example, should land use be shaped by a relatively small number of property rights holders (mainly based on land ownership), even if this marginalises groups who are significantly affected by the decisions that are made? In light of this tension, the purpose of this paper is to:

1. Provide a theoretical review of the literature dealing with property rights and regimes. In particular, we explore the property rights literature centred around Ostrom's seminal typology of different property rights holders and the rights that each has with regard to different ecosystem services.
2. Explore and refine Ostrom's typology using empirical data drawn from interviews in three study sites in the UK Uplands.[1] The UK Uplands are a relevant place to explore these issues because they are in demand as both agricultural landscapes (that produce mostly sheep and opportunities for hunting game birds), as well as being a store for carbon, an important source of potable water for Britain's cities, and a sought after space for rural recreation.

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2. Theory and Literature on Property Rights and Regimes

Property rights have been central to debates in the literature on the governance of natural resources (Bromley, 1991; Grafton, 2000; Ostrom, 1990). Schlager and Ostrom (1992) define property rights as 'authorised actions' pertaining to a resource. Authorisation comes from recognition by the wider community either through de jure rights, which are codified in law; or through de facto rights, which are informal rights embedded in cultural norms (Bromley, 1991; Munton, 1995). If property rights are secure and recognised, then it is argued that they create incentives for people to invest in the long-term productivity of resources and that land use should be more efficient and sustainable. For example, research has shown that secure land tenure is necessary for soil conservation measures in very different contexts from British Columbia (Fraser, 2004) to Kenya (Kabubo-Mariara, 2007). This research is supported by the conclusion of Praneetvatakul et al. that "…insecure land tenure may result in reduced incentives to improve land productivity" (2001: 103). Similarly, research conducted in China suggests that ambiguous property rights create incentives that encourage short-term planning and the "irresponsible use of land resources" (Hu, 1997: 175). This literature is summarized by Grafton who argues, "property rights are fundamental to understanding the problems associated with the exploitation of the environment" (2000: 504). Without clear and enforceable property rights the tendency can be towards over-use and ultimately the 'tragedy of the commons' (Hardin, 1968).

However, the tragedy that Hardin described was the result of an open access regime, a particular type of regime without any recognised or enforced property rights, where each user acts to maximise their individual benefit whilst sharing the costs with others (Hardin, 1968). The reality is that common property, state property and private property regimes are all used to manage land, all of which have different types of rights associated with them. Common property regimes are characterised by shared rights where rules determine access, use and management by each rights holder. They tend to develop where production values per unit area are low, where variability in resource availability is high and where there are low returns from intensification (Ostrom, 2000). When rights and duties are adequately enforced, then open access and degradation are not inevitable as Hardin suggested (Cousins, 2000; Dietz et al., 2002). State property regimes occur when rights and responsibilities are vested in the state. These regimes can manage resources for the common good, but if the state does not adequately enforce its rights they can end up de facto open access or private property (Gluck, 2002). Private property regimes result when all rights are held by an individual or organisation (Musole, 2009).

Private property regimes are often advocated as a way of encouraging long-term investment in resource improvement because they internalise both costs and benefits (Demsetz, 1967, 2002). Nowak (1983) and Schertz and Waunderlich (1981) present research findings that link incentives for "best management" to property regime and argue that farmers who work on land they own are more likely to adopt best management practices earlier than farmers who work on land they rent. In addition, Soule et al. (2000) found that for corn producers in the US, land owners were more likely to adopt long-term soil conservation practices than those who rent. This was also found to be the case for farmers in British Columbia (Fraser, 2004). In these cases, land ownership and the nature of the goods in question (e.g. soil quality) allowed farmers to invest now for potential future returns. Soil quality can be considered a private good and private property rights make it possible to exclude others so that farmers can obtain the full benefit of their investment.

However, individual interests may not always be compatible with environmental protection (Lawrence, 2000; Sandberg, 2007) and private property can lead to resource depletion. For example, if the profits gained from investment are too low, if the length of time to realise the benefits from investment are too long, or if the potential returns are uncertain, then it can become rational for private property holders to degrade resources (Acheson, 2006). In addition, some goods, such as biodiversity, recreational amenity or water quality, are either common pool resources (subtractable and non-exclusive) or public goods (non-subtractable and non-exclusive) where the benefits are shared. These goods are often produced as a by-product of private production and consumption, but can be consumed without having to pay a price for them (Gluck, 2002). When this is the case, there are few incentives for land owners to produce or maintain them. For example, researchers found that rangeland owners in Texas were less likely to manage their land in order to maintain ecosystem services that were public goods because they did not feel it was their responsibility to provide them (Kreuter et al., 2006).

Although such beneficial goods and services can occur as external effects of private production and consumption, their lack of a price does not mean that they have no value. Instead they have social value, such as the protection against natural hazards, like flooding or avalanches, provided by mountain forests (Gluck, 2002). But if private property rights holders have complete autonomy in decision-making in what Hurley et al. (2002) call 'exclusive dominion,' then it is unlikely that public goods will be produced or maintained. In such cases, intervention is needed to recognise the rights of those who consume and benefit from common property or public goods produced by private land. Such interventions often create different rights holders with different sets of rights. Scholars working in political science, therefore, tend to discuss 'bundles of property rights' that are distributed between different rights holders (Hurley et al., 2002; Schlager and Ostrom, 1992). In this way, rights are separate and can be distributed between multiple stakeholders to reflect multiple values (Hurley et al., 2002) and multiple goods and services. Five property rights have been identified with respect to natural resources (Ostrom, 2000; Schlager and Ostrom, 1992). These are:

1. *Access*. These allow individuals the right to access resources for non-subtractive uses.
2. *Withdrawal*. Individuals with these rights can capture resource units from a resource.
3. *Management*. Rights of management allow individuals to make improvements and decisions regarding resource allocation.
4. *Exclusion*. Individuals can decide who should be allowed access, withdrawal or management rights.
5. *Alienation*. Rights to a resource can be sold or transferred.

Not all stakeholders are entitled to all these rights, rather different 'bundles of property rights' are distributed between different rights holders (Table 1). The combination in which these property rights are held by different rights holders forms a more sophisticated approach to understanding and exploring the ways in which property regimes influence resource management for both private and public goods.

To date, however, there has been little research carried out to empirically evaluate this 'bundles of property rights' approach. While many cite the typology of Schlager and Ostrom (1992) as a useful heuristic, few use it as a basis for analysis (Ahmed et al., 2008). It has

Table 1
Bundles of rights (vertical axis) associated with different property rights holders (horizontal axis).
(Schlager and Ostrom, 1992).

	Owner	Proprietor	Claimant	Authorised user	Authorised entrant
Access	X	X	X	X	X
Withdrawal	X	X	X	X	
Management	X	X	X		
Exclusion	X	X			
Alienation	X				