Centre for Environment and Society Research
Working Paper series no. 15

Protected areas: origins, criticisms and contemporary issues for outdoor recreation

Jenny Smith

Protected areas: origins, criticisms and contemporary issues for outdoor recreation

Jenny Smith
Formerly of the Birmingham School of the Built Environment,
Birmingham City University

Working Paper Series, no. 15
2013

ISBN 978-1-904839-65-1

Published by
Birmingham City University
Centre for Environment and Society Research
Faculty of Technology, Engineering and the Environment
City Centre campus, Millennium Point, Curzon Street, Birmingham, B4 7XG, UK

CONTENTS

Abstract

This paper presents a wide-ranging literature review on the interplay between protected areas and outdoor recreation. Following a brief explanation of the origins of protected areas and the escalation of their designation around the globe, it highlights a range of criticisms relating to the process of protected area designation and how this has impacted upon their overall effectiveness in conserving our most valuable habitats, species and landscapes. Whilst there is a particular focus on the British context, international examples are used to allow critical reflections on the global nature and status of protected areas as a means of conservation management in contemporary society. It is noted that whilst many authors offer valid, criticisms of protected area policy, few deny their importance as a means of protecting our most valuable habitats and landscapes. In contemporary society the growth in outdoor recreation, especially of 'adventure activities' such as mountain biking, has placed additional pressure on designated areas and brought the management of such areas into question.

Key words: protected areas, landscape conservation, habitat conservation, adventure activities

Acknowledgements

This work was supervised by Professor Alister Scott and Professor Peter Larkham, and prepared for publication by Peter Larkham.

Protected areas: origins, criticisms and contemporary issues for outdoor recreation

Jenny Smith

Formerly of the Birmingham School of the Built Environment, Birmingham City University, Millennium Point, Curzon Street, Birmingham, B4 7XG

Introduction

Following a brief explanation of the origins of protected areas and the escalation of their designation around the globe, this review highlights a range of criticisms relating to the process of protected area designation and how this has impacted upon their overall effectiveness in conserving our most valuable habitats, species and landscapes (MacEwen and MacEwen, 1982; Selman, 2009; Bishop and Phillips, 2004; Phillips, 2009). Whilst there is a particular focus on the British context, international examples are used to allow critical reflections on the global nature and status of protected areas as a means of conservation management in contemporary society. It is noted that whilst many authors offer valid, criticisms of protected area policy, few deny their importance as a means of protecting our most valuable habitats and landscapes (Phillips, 2009; Selman, 2009). In contemporary society the growth in outdoor recreation, especially of 'adventure activities' such as mountain biking, has placed additional pressure on designated areas and brought the management of such areas into question.

The protection of areas

The concept of the protected area is principally to ensure that ecological diversity, valued habitats and landscapes are identified, protected from harmful activities and adequately maintained and conserved for future generations. The International Union for the Conservation of Nature (IUCN), the world's oldest and largest global environmental network, defines a protected area as "a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values" (IUCN, 2010). Designation is used within environmental planning and management to focus limited financial and institutional resources on key sites and areas, so that appropriate mechanisms are put in place to safeguard habitats, species and landscapes considered to be of value to society (Chape *et al.*, 2005; Selman 2009; Stoll-Kleemann, 2001).

While designation is used in urban, rural and marine settings, this commentary focuses particularly on the UK context of areas designated for their landscape and/or biodiversity value such as National Parks, Areas of Outstanding Natural Beauty (ANOBs), Sites of Special Scientific Interest (SSSIs), Special Areas of Conservation (SACs) and local nature reserves etc. Designation usually stems from a series of drivers occurring at the international, national or local levels and broadly involves identifying candidate sites, selecting them on the basis of criteria assessment, designating boundaries (usually based on legal administrative instruments), notifying stakeholders and protecting such areas with the use of regulatory controls, plan

policies, incentives and promotional material (Selman, 2009).[1] Whilst the drivers of designation can be supranational organisations (e.g. the United Nations identifies sites of global significance such as world heritage and RAMSAR[2] sites), the implementation of designation and subsequent site management almost always occurs via a national, regional or local government body or specialist authority, often in a top-down fashion (Selman, 2009). This, however, is now changing, with an emergence of community-driven designations in some areas (see Mackenzie 2004, 2006) and the localism agenda.

Protected areas have long been the most effective and widespread measure for conserving our most valuable, delicate and threatened habitats, species and landscapes (Hamin, 2002; Lewis, 1996; MacEwen and MacEwen, 1982; Phillips, 2009; Powell *et al*., 2002; Selman, 2009). They are important tourist attractions, help define national identity (Lewis, 1996) and occupy a special place in the affections of the public and in the minds of scientists (Clark and Clarke, 2011; MacEwen and MacEwen, 1982; Phillips, 2009). Despite this, biodiversity is still almost uniformly in steady decline (Butchart *et al*., 2010; Stolton and Dudley, 1999).

The origins of protection

The protection of sites with spiritual or symbolic significance stretches back millennia, (Selman, 2009). Europe has had protected areas for centuries in the form of royal hunting grounds and forest reserves (Hamin, 2002; Zupancic-Vicar ,1997), yet arguably the modern approach to protected areas stems from the creation of National Parks in the USA during the late-nineteenth century (Selman, 2009) which was based on protecting 'wilderness' areas and wild landscapes from inappropriate human intervention (Phillips, 1998).

The original aims of designation often focused on exclusion of people and activities as they were seen to be incompatible with the maximum levels of wildlife isolation. However, whilst this is still the case for the most remote and highly protected areas across the globe, there is now a general recognition that the profound influence of humans on virtually all our planet's ecosystems means that protected areas, established to maintain a certain *status quo*, will usually require active management, that involves and acknowledges the needs and interests of local stakeholders (Bishop and Philips, 2004; Harmon, 2007; Harrison and Burgess, 2000; MacEwen and MacEwen, 1982; Phillips, 1998; Selman, 2009; Walker and Fortmann, 2003; Zupancic-Vicar, 1997).

Modern reasoning behind the need for protection of landscapes and habitats stems from a strand of theoretical arguments based around human selfishness towards common pool resources, most notably Hardin's (1968) 'Tragedy of the Commons' that argues that individuals with access to shared public goods will always act to maximise their own personal gain which, when done collectively, will result in

---

[1] Means of designation include *incentives* to land owners and managers to create and / or maintain features of conservation value, and grants to authorities and organisations to provide for education, public enjoyment and similar; *regulatory devices* such as stricter land use planning controls, operational restrictions, enhanced impact assessment requirements and penalties or fines for damaging protected features; and *promotional and consultative devices* such as visitor information, environmental education and agricultural skills training (see Collins *et al*., 2003).

[2] Sites identified under the provisions of the Convention on Wetlands of International Importance, signed in Ramsar in 1971.

degradation of that resource (Hardin, 1968; Olstrom *et al*., 1999). Coupled with a recognition that both the individual and collective actions of a modernising industrial society were threatening our most valued environments in a way never seen before, (see Clough Williams-Ellis's *On trust for the nation*, 1947), in the UK this fuelled a movement to preserve specific landscapes for 'appropriate' forms of countryside recreation (Curry, 1994).

The significance of human influence upon the natural world has also been recognised at the global scale. In addition to protecting natural heritage, since 1992, the World Heritage Convention of the United Nations Educational, Scientific and Cultural Organization (UNESCO), has also sought to protect areas where significant interactions between people and the natural environment have created 'cultural landscapes' (UNESCO, 2011).

Escalation of designations and lack of clarity

There has been a rapid and worldwide growth in nationally-designated protected areas. Increasing human populations, globalisation and development pressure has fuelled an ongoing political desire for land protection, resulting a tenfold increase in the number of protected areas the world since *c.* 1970.[3] In the UK alone the area of land and sea which is protected for nature conservation purposes increased from 2.3 million ha to 3.5 million ha between 1996 and 2008 (Selman, 2009, p. S145).

The variety of protected landscapes is also growing, and increasing international attention is being paid to the protection of landscapes generally, as well as culturally sensitive, ecologically important, and/or highly aesthetic rural areas (Scott and Shannon, 2007). Indeed, the complexity and number of protected area categories has increased so rapidly over the past two decades that the IUCN, which was created to achieve a co-ordinated approach to the differing concepts of protected areas (Stoll-Kleemann, 2001), now has classified six differing management categories of protected landscape ranging from strictly protected wilderness to traditionally managed natural resource areas (Table 1). Even within these six broad categories there is a huge diversity (Selman, 2009). For example, although the UK relies heavily on category V landscapes which are maintained for multiple uses and are subject to more intensive pressures, they include a variety of statutory and non statutory designation responses (Hamin, 2002; Scott and Shannon, 2007).

Within the UK there is no single system of countryside planning but rather a number of separate systems and initiatives that emerged as *ad hoc* policy responses to different issues that have arisen over time (Bishop and Phillips, 2004). In Europe itself the picture is no more clear, although most protected areas fall under IUCN category V,[4] some countries have only national-level protected areas, others have

---

[3] By 1999 over 13 million square kilometres of the world's surface carried some kind of official protective designation (Stolton and Dudley, 1999); and by 2003 this had increased to 18.8 million (Chape *et al*., 2003).

[4] Most UK, and indeed European, protected areas fall under Category V (Protected Landscape/Seascape) which is defined as "a protected area where the interaction of people and nature over time has produced an area of distinct character with significant ecological, biological, cultural and scenic value. Safeguarding the integrity of this interaction is vital to protecting and sustaining the area" (Phillips and Brown, 2007, p. 1) and comprise important cultural landscapes which remain largely in private ownership, including the UK National Parks (Selman, 2009).

Table 1. IUCN protected area management categories

CATEGORY Ia:	Strict Nature Reserve: protected area managed mainly for science
Definition	Area of land and/or sea possessing some outstanding or representative ecosystems, geological or physiological features and/or species, available primarily for scientific research and/or environmental monitoring.
CATEGORY Ib	Wilderness Area: protected area managed mainly for wilderness protection
Definition	Large area of unmodified or slightly modified land, and/or sea, retaining its natural character and influence, without permanent or significant habitation, which is protected and managed so as to preserve its natural condition.
CATEGORY II	National Park: protected area managed mainly for ecosystem protection and recreation
Definition	Natural area of land and/or sea, designated to (a) protect the ecological integrity of one or more ecosystems for present and future generations, (b) exclude exploitation or occupation inimical to the purposes of designation of the area and (c) provide a foundation for spiritual, scientific, educational, recreational and visitor opportunities, all of which must be environmentally and culturally compatible.
CATEGORY III	Natural Monument: protected area managed mainly for conservation of specific natural features
Definition	Area containing one, or more, specific natural or natural/cultural feature which is of outstanding or unique value because of its inherent rarity, representative or aesthetic qualities or cultural significance.
CATEGORY IV	Habitat/Species Management Area: protected area managed mainly for conservation through management intervention
Definition	Area of land and/or sea subject to active intervention for management purposes so as to ensure the maintenance of habitats and/or to meet the requirements of specific species.
CATEGORY V	Protected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation and recreation
Definition	Area of land, with coast and sea as appropriate, where the interaction of people and nature over time has produced an area of distinct character with significant aesthetic, ecological and/or cultural value, and often with high biological diversity. Safeguarding the integrity of this traditional interaction is vital to the protection, maintenance and evolution of such an area.
CATEGORY VI	Managed Resource Protected Area: protected area managed mainly for the sustainable use of natural ecosystems
Definition	Area containing predominantly unmodified natural systems, managed to ensure long term protection and maintenance of biological diversity, while providing at the same time a sustainable flow of natural products and services to meet community needs.

Source: http://www.unep-wcmc.org/protected_areas/categories/index.html [accessed 1/5/2011].

only regional and local designations whilst several, like the UK, France and Italy have both nationally-, regionally- and locally-managed protected landscapes managed by an array of different voluntary, public and private sector organisations for varying purposes (Bishop, *et al*., 1995; Fairbrass and Jordan 2002; Hamin, 2002; Prendergast *et al*., 1999).

This plethora of designations (the Joint Nature Conservation Committee (JNCC)[5] lists 29 different types of designation in England alone), amidst a complex and dynamic system of governance both within the UK and globally, creates significant challenges for effective management because the abundance of designations can serve to deplete their value, and thus their perceived ability to preserve rarity as little appears to be special (Pennington, 1996; Scott and Shannon, 2007; Selman, 2009). This, coupled with lack of enforcement and local support for management frameworks has, in many areas, depleted support for and thus the value of designation, and in some cases has led to them being completely ignored (Bishop *et al*., 1995; MacEwen and MacEwen, 1982; Selman, 2009; Stolton and Dudley, 2002).

The designation process

What is designated – what is valued and who values it?

Protected area designation implies that an area has been assessed and fulfils a set of criteria that society consider to be of value and therefore worthy of protection (Selman, 2009). Whilst the original concept of designation was mainly based on visual landscape criteria and designation for the purposed of recreation, during the latter part of the twentieth century there was a rise in scientific biological conservation and increasing calls for isolation and stricter levels of protection, with conservation groups campaigning for stricter regulation and enforcement at the European scale (Fairbrass and Jordan, 2001). During this period factors such as diversity, rarity and fragility were increasingly used as justifications to designate areas (Selman, 2009), as a result of the work of Ratcliffe (1977) who developed a set of criteria[6] that are now commonly used to evaluate sites, and determine and justify the need for nature conservation designation within the UK.

This divide between those who focused on protection of 'landscapes' or natural beauty, and those who were concerned with 'nature' or biodiversity, is reflected in the literature where there appears to be a key divide between those who see designation from a scientific, biological conservation point of view, concentrating on the prevalence of particular species or habitats, and those who focus on the visual and cultural richness of certain landscapes (Harmon, 2007). For example, when looking at methods for designation, Jensen (2006) identifies the use of Landscape Character Assessments as a means of identifying areas of landscape value; whilst Prendergast *et al*. (1999) suggest that the latest scientific theory and techniques are not being used to identify the existence and abundance of rare species and, consequently inform the selection of nature reserves (Prendergast *et al*., 1999). As a number of authors note, this illogical 'two schools approach' (Fischer, 2008) has, and still does, occur in practice (see Fall, 2003; Harmon, 2007; Harrison and Burgess, 2000), and has long been criticised in the operation of conservation in England (MacEwen and MacEwen, 1982).

For decades the Countryside Commission (which later became the Countryside Agency) concentrated its efforts on the scenic landscape and recreation whilst

---

5 JNCC is a statutory adviser to the UK Government and devolved administrations that collates information on protected sites in the UK and Overseas Territories.

6 These criteria are: size, diversity, naturalness, rarity, fragility, typicalness, recorded history, position in an ecological/geographical unit, potential value, and intrinsic appeal (Ratcliffe, 1977).

English Nature (formerly the Nature Conservancy Council) worked separately, focusing on the conservation of wildlife and geology. This splitting of the unity of nature institutionalised professionals and created significant rifts between those bodies responsible for managing our protected areas, and ultimately prevented a more holistic and potentially more effective approach to conservation of the countryside (Bishop and Phillips, 2004; MacEwen and MacEwen, 1982). Only in 2006 were these two bodies come together to form Natural England, with the aim "to ensure that the natural environment is conserved, enhanced and managed for the benefit of present and future generations, thereby contributing to sustainable development" (Natural Environment and Rural Communities Act, 2006). This more holistic view of countryside management accounts for the integration of social, economic, cultural as well as environmental issues, and recognises the human factor in protected area management. Yet despite such policy rhetoric, the findings of research by Scott and Shannon (2007) and Scott *et al*. (2009) suggest that, at the local level, deep-rooted professional divides remain, and as yet there is little evidence of such a holistic approach to protected area management on the ground.

What is of value and therefore should be worthy of designation remains an area of much debate, and is often dependent on how a potential user views the environment and for what purpose it might be used. Noting the presence of the opposing models of segregation, isolation and removal of human interference, and that of integration into wider ecological and social systems, several authors suggest that in central Europe, scientific segregate strategies predominate (Fall, 2003; Harrison and Burgess, 2000; Stoll-Kleemann, 2001). This situation has caused significant problems for the establishment of protected areas (e.g. Germany, see Stoll-Kleemann, 2001; in the UK see Harrison and Burgess, 2000) because it has been characterised by a tendency on the part of scientists to assume superior knowledge, and a lack of willingness on the part of locals and landowners to listen to the reasoning behind proposed designation. This ‘wide communication gulf’ between scientists working in nature conservation, those practicing landscape conservation and managers working on the ground (Harmon, 2007; Prendergast *et al* .,1999) can, and often has, resulted in much tension and hostility, and served to weaken the entire conservation movement and efforts made to conserve the countryside (as Stoll-Keelman, 2001, demonstrated for Germany).

A further criticism of this segregative model of protection is that it has allowed harmful and exploitive use of non-protected areas (Stoll-Kleemann, 2001). Phillips (1997) points to two changes: the first is an increasing awareness that conserving species and habitats in strict nature reserves is simply not feasible in the long term; protected areas alone do not encompass whole ecosystems and are almost never sufficiently large to function ecologically without regard for the conditions on their borders (Hamin, 2002; Stolton and Dudley, 1999). The stricter the controls over the designated area, the less likely it is to deteriorate from internal processes. However, external conditions may change to such a degree that the protected area is compromised (Selman, 2009) whilst a focus on isolated designated areas alone neglects the needs of the wider countryside (Bishop and Phillips, 2004; MacEwen and MacEwen, 1982).

In light of these criticisms, some authors have given support for alternative approaches to countryside conservation. A combination of both segregation and integration now seems most appropriate, as is now followed by biosphere reserves and nature parks (Stoll-Kleemann, 2001) and the provisions of the European Landscape Convention, which provides a looser framework for management and views landscape as both a precious resource in its own right as well as a means to

achieve sustainable development (Bishop and Phillips, 2004; Phillips and Clarke, 2004).

Who designates and how?

Historically, the process of designation has occurred when a governing or outside body/authority identifies a geographical area or habitat or species believed to be of conservation value, and then places controls and restrictions upon what can take place in a defined area. Authors suggest that this top-down approach to designation has dominated in much of Europe and indeed the world, not least because of increasing international pressures and subsequent legislation requiring national governments to protect our most sensitive landscapes (see Fairbrass and Jordan, 2001). However, such an approach to designation brings a whole set of ethical issues (Lockwood, 2010), all of which are readily highlighted in the literature, far more so than areas where designation has occurred 'organically' or bottom-up, arising from a local movement.

Although there is a general acknowledgement amongst those involved in conservation practice that there is a practical need for designation and boundaries, what should fall within and constitute a designation can vary significantly depending on the angle or interest stakeholders choose to take. Social and cultural boundaries and physical boundaries may be very different; and political boundaries and jurisdictions may differ still further. The differing cultural value systems between those designating and managing protected areas and their support communities have frequently resulted in incidences of conflict. This is particularly true where indigenous societies believe that the natural environments within these areas are sacred habitats which connect them to their religious or spiritual values (Andrew-Essien and Bisong, 2009; Berghoffer, 2010). Local and indigenous people may not want, or be prepared to accept, 'pay-offs' for relocation as a result of designation because the land means for more to them than money: they see the land as part of them, their culture and their birthright (Berghoffer, 2010). For example, Aboriginal people believe that following the 'Dreaming' or the time of creation their ancestors changed into trees, rocks or other parts of the landscape and that they live on within these sacred sites and objects, linking the past and the present, the people and the land (Australian Government, 2008). Overlooking such differing value systems during designation can mean that the protected area is simply ignored because means nothing to those who live and work within it (Berghoffer, 2010; Lockwood, 2010).

Although such bureaucratic forms of designation do have a role to play and are highly necessary where there are abundant interests and conflicts (Selman, 2004), a problematic aspect of designating in this way is that nature conservation regulations are perceived as restricting personal and private property rights – a highly evocative issue (Hurley and Walker, 2004; Illsley and Richardson, 2004). The simple impression that restrictions are imposed on existing freedoms is enough for people to react negatively (Prendergast *et al*., 1999; Stoll-Kleemann, 2001; Scott *et al.,* 2009). This was the case in much of Scotland where (until very recently with the advent of land reform) a history of feudalist control caused many rural communities to resent designation due to their perceived disenfranchisement from the process (McKenzie, 2004, 2006).

This reaction to and resentment of outsider control is a common yet complex phenomenon (Stoll-Kleemann, 2001). For example, Stoll-Kleemann (2001) identifies the role of social relations and complex motivations in creating a growing opposition

to the establishment of protected areas within Germany. In a study of efforts by the conservation movement to establish protected areas, Stoll-Kleemann identifies widespread and growing opposition to their establishment, which has escalated to the point where any designation is becoming hard to implement. The role of social relations and complex motivations has created a popular resistance in many areas that reinforce insular attitudes, thus creating rifts between the managers of protected areas and those living within them. Here it is suggested protected area governance mechanisms need to justify themselves through better consultation and communication at the outset; conflicts over the designation process are no surprise where there has been lack of information, discussion and subsequent ambiguity regarding the consequences of designation (Lockwood, 2010; Paavola, 2003). Greater openness to the viewpoint of others from all sides can help prevent the need for authorities to persuade communities and opposition groups of the benefits of designation and conservation (Stoll-Kleeman, 2001).

All these issues raise questions about who has the right to designate, whose value systems count in determining what is designated, and how the management of protected areas should take place. Lockwood (2010) believes that the new multi-level approaches that characterise protected area governance require greater legitimacy, transparency, accountability and fairness, so that they are more inclusive, connected and resilient, and so the protected areas they create are accepted and effective in the future (Lockwood, 2010).

Do protected areas work?

The criticisms and issues discussed in this review can be seen for the UK as just one consequence of the failings of a system created nearly 70 years ago, when the countryside was a very different place (Phillips, 2009; Bishop and Phillips, 2004). Whilst, as a whole, the protected area system has, and continues, to maintain our most valuable, delicate and threatened habitats, species and landscapes (Hamin 2002), biodiversity and landscape quality is still almost uniformly in steady decline (Stolton and Dudley, 1999). There is suspicion that some protected areas may be relatively ineffectual or in the wrong places, and that they are not fulfilling their potential to provide benefits to those people who live and work within them, yet who are often vital to maintaining the very character and assets society values (Bishop and Philips, 2004; Hamin, 2002; MacEwen and MacEwen, 1982; Phillips and Clarke, 2004).

Whilst site-based conservation still has a very important role to play in the protection of the countryside and in meeting international obligations (Powell *et al.,* 2002), there is a growing need for a more comprehensive approach (Bishop and Phillips, 2004; Burgess, 2004; MacEwen and MacEwen, 1982; Scott *et al.,* 2009). Although more inclusionary management approaches are generally gaining support, tensions remain between top-down professional techniques and bottom-up initiatives. Yet experience suggests that neither approach alone is the 'right' answer; both are needed (Selman, 2009) and mechanisms should now allow the strengths of both to be brought into play (Warburton, 2004).

Many argue that designation may be taking place at the expense of initiatives to protect and enhance the wider countryside, because these 'islands' of designation[7]

[7] This relates to the concept of 'island biogeography' (MacArthur and Wilson, 1967) used by some in the debate about the design of nature reserves (cf Diamond and May, 1981).

do little to reconnect habitats or other socio-environmental systems (see Bishop *et al*., 1995; Bishop and Phillips, 2004; Hamin, 2002; Harshaw *et al*., 2006; Phillips, 1998, 2009; Stolton and Dudley, 1999). This is beginning to be addressed by international conservation bodies through mechanisms such as the European Landscape Convention (ELC) and UNESCO's Man and the Biosphere (MAB) Program; however, the full extent and power of these are yet to be seen. The emergence of these new wider-reaching conservation policy mechanisms may lead us to question whether the protected areas ideal has now outlived its usefulness, and its continuing validity as an instrument for conservation in the new century (Selman, 2009; Scott and Shannon, 2007). Selman (2009) suggests that, whilst there are many valid criticisms of designations, they remain widely popular and continue to deliver a range of benefits. Even ignoring their material benefits, the magnitude of non-extractive benefits protected areas provide would appear massively to outweigh their direct costs.[8]

As Selman (2009) rightly points out, many observers would agree with MacEwen and MacEwen (1982) that, for all the flaws of designated areas, far worse would befall the countryside in their absence (see Phillips, 2009; Powell *et al*., 2002). Although the additional wider benefits of designation can rarely be demonstrated, it does seem likely that a large amount of benefit would be lost should wholesale de-designation occur (Selman, 2009).

Many rural land use commentators (Bishop *et al.,* 1995; MacEwen and MacEwen 1982; Midmore, 1996; Phillips 2009; Selman 2009; Scott *et al*., 2009) have called for major reform and rationalisation of protected area policy to address the issue of escalating designations and to renew their status as special areas of rarity. The whole system should be updated to meet the contemporary challenges presented by climate change, globalisation of markets/food production, greater international awareness and the changing demands of society (Bishop *et al*., 1995; MacEwen and MacEwen 1982; Midmore, 1996; Phillips 2009; Selman 2009; Scott *et al*., 2009). Indeed, the complex nature of today's contemporary problems defies normal understanding and often does not sit conveniently with the responsibilities of any one organisation (Clarke and Stewart, 1997). "In recent years, a watershed has arrived: we can be sure that the future for the countryside will not be a continuation of past trends. New tools are therefore needed to help us plan and manage the countryside at a time of unprecedented change" (Bishop and Phillips, 2004, p.3).

Designated areas provide a more favourable ground on which to do battle for conservation because they enjoy a special place in the affections of the public and in the minds of scientists. They also provide great opportunities to develop ideas and techniques for conservative land management and to promote better human relations: they are our test beds for sustainable development (Clark and Clarke, 2011; MacEwen and MacEwen, 1982; Phillips, 2009). Yet experimentation can only be successful if it is accompanied by assessment, evaluation and subsequent learning and productive change (Dudley *et al.*, 2004; Hockings *et al*., 2000). When we reflect upon past failures and successes of protected areas it appears that "learning how to manage natural areas for people as well as nature is a fairly new

[8] Calculating present (late-2000s) value benefits and costs over 25 years, Selman (2009, p. 147) attributed to Natura 2000 sites in Scotland economic welfare costs of around £480 million and economic welfare benefits of around £3.5 billion, although some 99% of these were from non-use values. There were also uncosted welfare benefits linked to social, cultural, educational, research, health and ecosystem services.

area of inquiry, with a lot of room for expansion of knowledge" (Hamin, 2002, pp.355-356).

The rise and impact of outdoor recreation

Many authors are keen to point out that whilst the UK countryside has traditionally been seen almost entirely as an agricultural resource (Bishop and Phillips, 2004; MacEwen and MacEwen, 1982; Pennington, 1996), in recent years there has been a move from productivism to post-productivism. A fall in agricultural production and the use of agricultural subsidies, coupled with a greater concern for wildlife and conservation, protecting cultural values and a need for economic diversity (Marsden, 1998), has led to parts of the British countryside being seen as a resource base which is to be 'consumed' (Curry, 1994; Powell *et al.*, 2002; Satsangi, 2009; Scott *et al*., 2009; Walker and Fortmann, 2003) by both urban and rural dwellers.

As taxpayers become increasingly aware of government spending, "societies with higher levels of education are likely to demand the non-market benefits supplied by protected areas" (Selman, 2009, p. 9). This, along with cuts in Government spending and the increasingly urgent need for protected areas to generate sufficient funds to make a contribution to their operating cost[9] (Font *et al.,* 2004), has led to a closing of the divide between the urban and the rural (Walker and Fortmann, 2003). The countryside is increasingly seen as a refuge from modern, urban, pressures: "the last three decades have seen a dramatic growth of participation in outdoor recreation and tourism activities. This has resulted in a large increase in the volume of people demanding access to the countryside and placed considerable pressure on the environment" (Tribe *et al*., 2000, p.VII).

With the continued growth of the tourism industry worldwide, rapid growth in demand for activities such as walking, trekking and cycling, and the establishment of a link between health and outdoor recreation (Candera, 2008; Williams and Shaw, 2009), protected areas have become a critical factor in the supply of outdoor recreation (Pigram and Jenkins, 2006). Yet recognition of, and dealing with, the impact of tourism and recreation on these areas will increasingly lag behind the growth of tourism to them (Bottrill and Pearce, 1995). With this in mind a pervasive issue is the extent to which it is possible to reconcile goals such as conservation, wilderness and tranquillity with those of public access and recreation (Selman, 2009; Curry 1994; Sidaway, 2005). This requires a more flexible and imaginative approach to protected area planning and management (Scott et al, 2009).

The rise of adventure activities in protected areas

One particular trend is the rise of adventure tourism and recreation and the rapidly-expanding adventure tourism market (see Callander and Page, 2003; Page *et al*., 2005), where non-traditional activities often involve close interaction with the natural environment, in remote, often protected locations. Here, nature and the natural

[8] Front *et al.* (2004) – ie before the current economic crisis – suggested that if the 100,000 nationally-designated protected areas each require an average of $US 500,000 per year for maintenance, the total for maintaining the Global Network of Protected Areas would be around $US 50 billion per year. However, revenue from government sources was already in short supply.

environment is coerced into being a resource to satisfy the wants of escape, achievement, challenge and physical release. (Ryan, 2003). Growth in this industry has precipitated a variety of issues and challenges including the impacts to the natural environment resource base in which activities take place (Ewert and Jamieson, 2003).

Some groups argue that many outdoor adventure activities are potentially damaging to site conservation, and as such should be managed in terms of timing, location and the amount of activity taking place (Font *et al*., 2004). But, whilst the growth of adventure tourism may pose a potential threat to conservation objectives in protected areas, as well as cause increasing conflict between different user groups (in particular more traditional recreational users), much of this is speculative. "Adventure tourism as an academic line of enquiry is a relatively recent entry and as such much of the data… are often suspect" (Ewert and Jamieson, 2003, p. 67). Consequently its impacts on society, the economy and the environment are not fully comprehended (Zurick, 1992). One relatively new form of recreation that has seen particularly rapid growth is mountain biking, the popularity of which has created significant potential for conflict between bikers and other user groups (Chavez, 1996; Fix and Loomis, 1997; Morely *et al*., 2002; Ramthun, 1995). Although much of the literature regarding mountain biking focuses on US and Canadian parks and forests (there appears to be very little literature regarding mountain biking in the UK, especially for areas in England and Wales), it is likely that issues are similar for protected areas around the globe. In the North American context, authors note that although park and forest managers are facing many challenges related to the growing use of mountain bikes (Chavez, 1996), few parks have formalised plans to manage this outdoor activity (Schuett, 1997) although many US States now ban mountain biking from protected areas. Little research has been conducted on the social carrying capacity of mountain-biking environments, relative to the amount of research on physical and biological capacity (Symonds *et al*., 2000).

Conflicts with protected areas

Whilst there is a growing consensus that protected landscapes should not be seen or managed as living museums to past practices, this becomes increasingly complex when each of the stakeholder groups hold differing perceptions of the designated area, and have different ideas about how it should be used and what its future should be (e.g. the study of Nevada County by Hurley and Walker, 2004). Here, conflicts and even perceptions of potential conflicts are almost inevitable (Cessford, 2002; Lewis, 1996) and all too often result in more parts of the protected area being delineated to suit the recreational activities at the expense of the wildlife habitat, thus destroying the original conservation goal (Andrew-Essien and Bisong, 2009).

The growing establishment of protected areas incorporating profitable economic activity alongside conservation activities has been characterised by the exacerbation of existent conflicts and the emergence of new ones around them (Apostolopoulou and Pantis, 2010). Here recognition of differing perceptions, social conditions and social relations will be required in order to work towards strengthening people's understanding of the importance of conservation of the area (Allendorf *et al*., 2007; Hamin, 2002; Harrison and Burgess 1994; Hurley and Walker, 2004; Stoll-Kleemann, 2001) and ultimately the success of the designation. "To prevent tourism cannibalizing itself by destroying the very resources upon which its viability depends, there needs to be greater efforts to strategically bring tourism development, biodiversity, conservation and local communities together" (Christ *et al*., 2003).

The role of education and co-operation in area management

Tourism can degrade natural areas but can also be a reason to protect them; it can help facilitate sustainable management by providing a market-based alternative to the growing number of discriminating travellers trying to find, understand and enjoy a natural environment (Candera and Ispas, 2009). Legislation and regulation may attack symptoms of a problem, but often do little to address the underlying social dynamics which cause the problem in the first place (Trendafilova and Chalip, 2007). Changing people's attitudes towards protected areas and protected areas management may be one of the most crucial ways of improving their success (Stoll-Kleemann, 2001).

Consequently, academics are now emphasising the importance of more adaptive forms of governance in natural resource management in order to promote collaborative learning between all parties involved. Such cross-scale and cross-level learning and adaption, amongst and between different actors at all levels and geographies, is believed by many to be a precondition for delivering environmentally sustainable outcomes (Brunner *et al,* 2005; Clark and Clarke, 2011; Gunderson and Holling, 2002).

There is a wide range of management regimes and structures to control the interaction between humans and wildlife. The management of interaction is currently dominated by physical and regulatory strategies, but considerable potential exists to increase the role of education- and cooperation-based management regimes to prompt long-term attitude change (Orams, 1996; Papagerorgiou, 2001). Indeed, indirect management strategies are often less costly to implement and preferred by tourists (Candrea and Ispas, 2009). Self-regulation via the acceptance of responsibility for conserving landscapes and wildlife by sport or recreation participants themselves is one of the most effective conservation measures (Sidaway, 1991), which works best when the rationale is clear and well justified, so that the individual is informed and aware and then accepts responsibility for their actions adhering to codes of practice for their particular sport (Crow, 2005). High-quality information, both on and off site, is needed to enable visitors to make informed decisions, and when used with interpretation,[10] becomes an important management tool because it can help to influence visitor behaviour (Crow, 2005) including where visitors go, when they visit and what they do when they are there (Keirle, 2003).

However, research by the Dudley *et al.* for the WWF (2004) into the management of protected areas reveals that, at the time of writing, there was a significant lack of education and awareness-raising activities . This is a worrying issue considering that the research identifies education and awareness-raising as a critical success factor in overall effectiveness of the protected area, and suggests that there is a need for much greater intervention in this area in the future (Dudley *et al.*, 2004).

For a protected environment to be effective thorough understanding of the values attached to designated areas are required (Andrew-Essien and Bisong, 2009). As noted by Cessford (2002), it seems that the perceptions and realities of impacts can sometimes be very different; greater awareness can lead to a reduction in problem

[10] Interpretation is a form of education that helps visitors to understand and enjoy the site which when done well not only enhances enjoyment and understanding of a site, can change attitudes or influence behaviour, challenge and inspire, and in doing so develop a visitors understanding and support for the managers' role, their objectives and policies (Crow, 2005).

perceptions[11] and therefore may help to reduce conflict between user groups as well as satisfy the increasing mandate for greater efficiency in conservation of natural reserves,[12] and forge partnerships and alliances with previously antagonistic groups for the benefit of conservation efforts (Lewis, 1996).

Policy changes and implications for management practice

With a positive approach to tourism and recreation management, a harmonious relationship between visitors and the environment can be formed. If managed carefully, tourism and recreation can help to maintain the environment rather than damage it (Tribe *et al*., 2000, p.VI). There is an increasingly interdependent relationship between tourism and recreation and the environment and, because of this, management is increasingly important (Tribe *et al*., 2000). Consequently, both academics and policy makers are placing increasing emphasis on how we govern and manage protected areas (Lockwood, 2010; Thompson, 2005).

Central to successful governance and management is the prevention and/or resolution of conflicts within the protected area system, that arise as a result of diverse interests, goals and aspirations, for utilisation of the environmental resource base (Andrew-Essien and Bisong, 2009). Yet, despite this, there is little theoretically informed analysis of relations between institutions acting at different governmental levels (Thompson, 2005) or their effectiveness in achieving the direct aims of protected area designation and management (Clark & Clarke, 2011; Selman, 2009).

There is a need for greater guidance on management issues (Bushell *et al*., 2007) to counteract the inherent lack of strategic management and public involvement in designation practise and neglect of protected area policy in planning research and policy evaluation (Scott and Shannon, 2007). Protected area policy will increasingly need to be embedded in other land-use strategies, be more collaborative and responsive to changing social needs as well as environmental and economic conditions within a wider rejuvenation of the landscape agenda (Scott and Shannon, 2007; Selman, 2009).

Natural and cultural heritage hot-spots are draw tourism development and the challenges and opportunities this creates have never been so great[13] (Bushell *et al.,*

---

11 Cessford's 2002 study assessing the difference between perception of reality of conflict between mountain bikers and walkers on shared tracks in New Zealand revealed that perception of conflict is often worse than reality. When walkers actually came into contact with bikers, their levels of objection decreased. Reported conflict levels often exceeded those that actually occurred, and there was a distinction between conflict perceptions based on wider social values and those based on actual interpersonal encounters in the field. The efforts of biking advocates to promote positive riding and encounter behaviours through codes of conduct would appear very appropriate. How these strategies may affect walker perceptions of biking over time represent another important are of research.

12 Evidence from Dartmoor National Park has shown that knowledge gain, attitude change and behaviour modification are effective. Informative material within the High Moorland Visitor centre encouraged visitors to see how they could change their behaviour to be more respectful of the natural environment (Tubb, 2003). In the Cairngorms National Park, heavy reliance has been placed on the use of negotiation and partnerships to deliver sustainable development objectives. Here there is a growing emphasis on community involvement in protected areas, including the management of land (Selman, 2009).

13 Two new national parks have been approved in the UK in recent years, while the

2007). The goal in terms of protected areas is to move towards tourism and recreation that can make a positive contribution to the protection of natural and cultural heritage, assist local communities and provide sustainable financing of conservation work, as well as provide an educational role, raising awareness of the many values of protected areas (Bushell *et al.,* 2007; Williams and Shaw, 2009).

More research will be necessary to address how the changing relationship between public goods and land use can be addressed in terms of changes in tourism and recreation (Williams and Shaw 2009). Much of the research that has been conducted on rural recreation is, with few exceptions, now dated, fragmented and fails to adopt a holistic view of the rural resource base as a multi-faceted environment capable of accommodating a wide range of uses and values (Hall and Page, 2006). There is a need for more reliable data that is inclusive and bridges epistemologies; through collective partnerships, greater understanding of issues, priorities, practices and strategies is essential (Bushell *et al*., 2007).

Both academic rhetoric and national and international policy and guidance on protected areas appears to be moving towards the use of such areas as a more holistic, inclusive, locally sensitive and positive policy mechanism that plays a vital role in achieving, as providing a well as model for, sustainable rural development[14] (Council of Europe, 2000; Hamin, 2002; Harshaw *et al*., 2006; Phillips, 1998; Powell *et al*., 2002; Scott and Shannon, 2007; Zupancic-Vicar 1997). Global change is creating the need for more dynamic environmental responses, but advances in technology and information means that there is greater scope for coordination of efforts and collaboration between management activities (Phillips, 2009, Pryor & Peterken, 2001). However, tension exists between the hard-edge single-objective conservation minds and those seeking much broader outcomes[15] (Bushell *et al*., 2007) such as the potential for social learning and environmental education, scope of management by non-governmental organisations and the inclusion of public enjoyment as a purpose of the designation (Selman, 2009).

As was suggested by MacEwen and MacEwen (1982), fundamental changes of attitude cannot be brought about by simply giving orders and issuing decrees: deeply-entrenched interests and attitudes cannot be overcome by persuasion and education alone, and

> "conflict within the limits of democratic debate and decision making is a creative force without which society ossifies … Great improvements in communications, in education, in field work and research are all indispensable. It is equally important to expand the opportunities for the people of the towns, who are cut odd from the natural world, to enjoy nature

---

boundaries of two others are under review. Pressures are likely to grow both for more landscape protection and for designated areas of limited access (Williams and Shaw, 2009).

[14] Since the first World Conservation Strategy in 1980, the Brundtland Report in 1987, and the World Environmental Summit in Rio in 1992, national parks and protected areas are also seen as playing a fundamental role in sustainable development, at a minimum through providing the ecological services (e.g., carbon sequestration, water cleansing, species retention) necessary to sustain development (Hamin, 2002).

[15] Socio-economic benefits that could be enhanced by management strategies include greater awareness, understanding and pride; improved opportunities for the enjoyment of the landscape; encouraging activities that will contribute to people's health and well-being; landscape management to support ecosystem services and supporting scenic area-related business activities (Selman, 2009).

> and to understand it through direct experience" (MacEwen and MacEwen, 1982, pp. 282-283).

Whilst this now appears to be happening with greater access to, and use of, our countryside and protected ares it appears that "learning how to manage natural areas for people as well as nature is a fairly new area of inquiry, with a lot of room for expansion of knowledge" (Hamin, 2002 pp.355-356).

References

Allendorf, T., Smith, J. and Anderson, D. (2007) 'Residents' perceptions of Royal Bardia National Park, Nepal', *Landscape and Urban Planning* vol. 82 pp.33-40

Andrew-Essien, E. and Bisong, F. (2009) 'Conflicts, conservation and natural resource use in protected area systems: an analysis of recurrent issues', *European Journal of Scientific Research* vol. 25 no.1 pp. 118-129

Apostolopoulou, E. and Pantis, J.D. (2010) 'Development plans versus conservation: explanation of emergent conflicts and state political handling', *Environment and Planning A* vol. 42 pp. 982-1000

Australian Government (2008) 'The Dreaming', available at: http://australia.gov.au/about-australia/australian-story/dreaming [accessed 03/05/2011]

Berghoffer, A. (2010) 'Protected areas: the weakness of calls for strict protection, reaction to Fischer 2008',*GAIA* vol. 19 no. 1 pp. 9-12

Bishop, K., Phillips, A. and Warren, L. (1995) 'Protected for ever? Factors shaping the future of protected areas policy', *Land Use Policy* vol. 12 no. 4 pp. 291-305

Bishop, K. and Phillips, A. (eds) (2004) *Countryside planning: new approaches to management and conservation*, Earthscan, London

Bottrill, C.G. and Pearce, D.G. (1995) 'Ecotourism: towards a key elements approach to operationalising the concept', *Journal of Sustainable Tourism* vol. 33 no. 1 pp. 45-54

Brunner, R., Steelman, T. and Juell, L. (2005) *Adaptive governance: integrating science, policy and decision making*, Columbia University Press, New York

Burgess, D. (2004) 'European frameworks for nature conservation: the case of the Birds and Habitats Directive', in Bishop, K. and Phillips, A. (eds) *Countryside planning: new approaches to management and conservation*, Earthscan, London

Bushell, R., Staiff, R. and Eagles, P.F.J. (2007) 'Tourism and protected areas: benefits beyond boundaries', in Bushell, R. and Eagles, P.F.J. (eds) *Tourism in protected areas*, CAB International, Wallingford

Butchart, S.H.M. *et al*. (44 additional authors) (2010) 'Global biodiversity: indicators of recent declines', *Science* vol. 328 no. 5982 pp. 1164-1168

Callaner, M. and Page, S. (2003) 'Managing risk in adventure tourism operations in New Zealand: a review of the legal case history and potential for litigation', *Tourism Management* vol. 24 no. 1 pp. 13-23

Candera, A.N. (2008) 'Integrated quality management for tourism development in protected areas. The case of Retezat National Park', *Bulletin of the Transilvania University of Brasov* vol. 1 pp. 211-216

Candera, A.N. and Ispas, A. (2009) 'Visitor management: a tool for sustainable development in protected areas', *Bulletin of the Transilvania University of Brasov* vol. 2 pp. 131-136

Cessford, G.R. (2002) *Perception and reality of conflict: walkers and mountain bikes on the Queen Charlotte Track in New Zealand*, Science and Research Unit, Department of Conservation, Wellington

Chape, S., Blyth, S., Fish, L., Fox, P. and Spalding, M. (compliers) (2003) *United Nations list of protected areas*, IUCN and UNEP-WCMC, Cambridge, UK

Chape, S., Harrison, J., Spalding, M. and Lysenko, I. (2005) 'Measuring the extent and effectiveness of protected areas as an indicator for meeting global biodiversity targets', *Philosophical Transactions of The Royal Society B* vol. 360 pp. 443-455

Chavez, D.J. (1996) *Mountain biking: issues and actions for UDSA Forest Service managers*, Research Paper 226, UDSA Forest Service Pacific Southwest Research Station, Berkeley, CA

Christ, C., Hiell, O., Matus, S. and Sweeting, J. (2003) *Tourism and biodiversity: mapping tourism's global footprint*, United Nations Environmental Programme and Conservation International, Washington DC

Clark, J.R.A. and Clarke, R. (2011) 'Local sustainability initiatives in English national parks: what role for adaptive governance?', *Land Use Policy* vol. 28 pp. 314-324

Clarke, M. and Stewart, J. (1997) *Handling wicked issues – a challenge for government*, School of Public Policy, University of Birmingham, Birmingham

Collins, J., Thomas, G., Wills, R. and Wilson, J. (2003) *Carrots, sticks and sermons: influencing public behaviour for environmental goals*, Demos, London

Council of Europe (2000) 'European Landscape Convention', available at: http://conventions. coe.int/Treaty/en/Treaties/html/176.htm. [accessed 20.01.2011]

Crow, L. (2005) *Promoting outdoor recreation in the English national parks: a guide to good practice. Practical advice on the planning, management and promotion of outdoor recreation in England's National Parks*, Countryside Agency Publications, Wetherby

Curry, N. (1994) *Countryside recreation, access and land use planning*, Spon, London

Diamond, J.M. and May, R.M. (1981) 'Island biogeography and the design of natural Reserves', in May, R.M. (ed.) *Theoretical ecology: principles and applications*. Blackwell, Oxford

Dudley, N., Belokurov. A., Borodin. O., Higgs-Zogib, L., Hockings, M., Lacerda, L. and Stolton, S. for the WWF (2004) *Are protected areas working? An analysis of forest protected areas by WWF*, WWF, Gland

EECONET (1993) *Declaration of the Conference Conserving Europe's Natural Heritage: Towards a European Ecological Network*, Maastricht, Netherlands

Ewert, A. and Jamieson, L (2003) 'Current status and future direction in the adventure tourism industry', in Wilks, J. and Page, S. (eds) *Managing tourism health and safety in the new millennium*, Elsevier, Oxford

Fairbrass, J. and Jordan, A. (2001) 'European Union environmental policy and the UK government: a passive observer or a strategic manager?', *Environmental Politics* vol. 10 no. 2 pp. 1-21

Fairbrass, J. and Jordan, A. (2002) *EU environmental governance: uncomplicated and predictable policy making?* Working Paper EDM 02-03, Centre for Social and Economic Research on the Global Environment, University of East Anglia, Norwich

Fall, J. (2003) 'Planning protected areas across boundaries: new paradigms and old ghosts', *Journal of Sustainable Forestry* vol. 17 nos 1-2 pp. 82-102

Fischer, F. (2008) 'The importance of law enforcement for protected areas. Don't step back! Be honest – protect!', *GAIA* vol. 17 no. S1 pp. 100-103

Fix, P. and Loomis, J. (1997) 'The economic benefits of mountain biking at one of its Meccas: an application of the travel cost method to mountain biking in Moab, Utah', *Journal of Leisure Research* vol. 29 no. 3 pp. 342-352

Font, X., Cochrane, J. and Tapper, R. (2004) *Pay per view: understanding tourism revenues for effective management plans*, Report for the WWF by Leeds Tourism Group and The Environmental Business Development Group, Leeds

Gunderson, L. and Holling, C. (eds) (2002) *Panarchy: understanding transformations in human and natural systems*, Islands Press, Washington DC

Hall, C.M. and Page, S.J. (2006) *The geography of tourism and recreation, environment place and space*, 3rd edition, Routledge, Abingdon

Hamin, E. (2002) 'Western European approaches to landscape protection: a review of the literature', *Journal of Planning Literature* vol. 16 no. 3 pp. 339-358

Hardin, G. (1968) 'The tragedy of the commons', *Science* no. 162 pp. 1243-1248

Harmon, D. (2007) 'A bridge over the chasm: finding ways to achieve integrated

natural and cultural heritage conservation', *International Journal of Heritage Studies* vol. 13 nos 4-5 pp. 380-392
Harrison, C. and Burgess, M. (1994) 'Social constructions of nature: a case study of conflicts over the development of Rainham Marshes', *Transactions of the Institute of British Geographers* NS vol. 19 no. 3 pp. 291-310
Harrison, C. and Burgess, J. (2000) 'Valuing nature in context: the contribution of common-good approaches', *Biodiversity and Conservation* vol. 9 pp.1115-1130
Harshaw, H., Kozak, R. and Sheppard, S. (2006) 'How well are outdoor recreationists represented in forest land-use planning? Perceptions of recreationists in the Sea-to-sky Corridor of British Columbia', *Landscape and Urban Planning* vol. 78 pp.33-49
Hockings, M., Stolton, S. and Dudley, N. (eds) (2000) *Evaluating effectiveness: a framework for assessing the management of protected areas*, Best Practice Protected Area Guidelines Series No.6, IUCN, Cambridge, UK
Hurley, P. and Walker, P. (2004) 'Whose vision? Conspiracy theory and land-use planning in Nevada county, California', *Environment and Planning A* vol. 36 pp. 1529-1547
Illsley, D. and Richardson, T. (2003) 'New national parks for Scotland: coalitions in conflict over the allocation of planning powers in the Cairngorms', *Journal of Environmental Planning and Management* vol. 47 no. 2 pp. 219-242
IUCN (2010) 'Protected areas - what are they, why have them?', available at: http://www.iucn.org/about/work/programmes/pa/pa_what / [accessed 05.04.2011]
Jensen, L. (2006) 'Changing conceptualization of landscape in English landscape assessment methods', in Tress, B., Tress, G., Fry, G. and Opdam, P. (eds) *From landscape research to landscape planning: aspects of integration, education and application* Springer, Dordrecht
Keirle, I. (2002) *Countryside recreation site management: a marketing approach* Routledge, London
Lewis, C. (ed.) (1996) *Managing conflicts in protected areas* IUCN, Cambridge, UK
Lockwood, M. (2010) 'Good governance for terrestrial protected areas: a framework, principles and performance outcomes', *Journal of Environmental Management* vol. 91 pp.754-766
MacArthur, R.H. and Wilson, E.O. (1967) *The theory of island biogeography* Princeton University Press, Princeton, NJ
MacEwan, A. and MacEwen, M. (1982) *National parks: conservation or cosmetics?* Allen & Unwin, London
Mackenzie, A.F.D. (2004) 'Re-imaging the land: North Southerland, Scotland', *Journal of Rural Studies* no. 20 pp. 273-287
Mackenzie, A.F.D. (2006) 'A working land: crafting communities, place and the politics of the possible in post-Land Reform Scotland', *Transactions of the Institute of British Geographers* NS vol. 31 pp. 383-398
Marsden, T. (1998) 'Economic perspectives', in Ilbery, B. (ed.) *The geography of rural change* Longman, London
Midmore, P. (1996) 'Towards a postmodern agricultural economics', *Journal of Agricultural Economics* vol. 47, issue 1-4, pp. 1-17
Morely, E., Buchanan, T. and Waldman, D. (2002) 'Estimating the benefits and costs to mountain bikers of changes in trail characteristics, access fees, and site closures: choice experiments and benefits transfer', *Journal of Environmental Management* vol. 64 pp. 441-422
Olstrom, E., Burger, J., Field, C.B., Norgaard, R.B. and Policansky, D. (1999) 'Revisiting the commons: local lessons, global challenges', *Science Compass Review* vol. 284 pp. 278-282
Orams, M. (1996) 'Conceptual model of tourist-wide interaction, the case for

education as a management strategy', *Australian Geographer* vol. 27 no. 1 pp. 39-51
Paavola, J. (2003) *Environmental justice and governance: theory and lessons from the implementation of the European Union's Habitats Directive*, Working Paper EDM 03-05, Centre for Social and Economic Research on the Global Environment, University of East Anglia, Norwich
Page, S.J., Bentley, T.A. and Walker, L. (2005) 'Scoping the nature and extent of adventure tourism operations in Scotland: how safe are they?', *Tourism Management* vol. 26 no. 3 pp.381-397
Papageorgiou, K. (2001) 'A combined park management framework based on regulatory and behavioral strategies: use of visitors' knowledge to assess effectiveness, *Environmental Management* vol. 28 no. 1 pp. 61-73
Pennington, M. (1996) *Conservation and the countryside: by quango or market*, Institute of Economic Affairs, London
Phillips, A. (1997) 'Landscape approaches to national parks and protected areas', in Nelson, J.G. and Serafin, R. (eds) *National parks and protected areas: keystones to conservation and sustainable development*, Springer, Berlin
Phillips, A. (1998) 'The nature of cultural landscapes – a nature conservation perspective', *Landscape Research* vol. 23 no. 1 pp. 21-38
Phillips, A. (2009) 'Landscape – the maturing of an idea over 60 years', Available at: http://www.naturalengland.org.uk/Images/Adrian%20Phillips_speech_tcm6-15764.pdf [accessed 20/04/2011]
Phillips, A. and Clarke, R. (2004) 'Our landscape from a wider perspective', in Bishop, K. and Phillips, A. (eds) *Countryside planning: new approaches to management and conservation*, Earthscan, London
Pigram, J.J. and Jenkins, J.M. (2006) *Outdoor recreation management*, Routledge, London
Powell, J., Selman, P. and Wragg, A. (2002) 'Protected areas: reinforcing the virtuous circle', *Planning Practice and Research* vol. 17 no. 3 pp. 279-295
Prendergast, J., Quinn, R. and Lawton, J. (1999) 'The gaps between theory and practice in selecting nature reserves', *Conservation Biology* vol. 13 no. 3 pp. 484-492
Pryor, S. and Peterken, G. (2001) *Protected forest areas in the UK*, A report for the WWF and the Forestry Commission by the Oxford Forestry Institute, Oxford Forestry Institute, Oxford
Ratcliffe, D. (1977) *A nature conservation review*, Cambridge University Press, Cambridge
Ramthun, R. (1995) 'Factors in user group conflict between hikers and mountain bikers', *Leisure Sciences* vol. 17 no. 3 pp. 159-169
Ryan, C. (2003) 'Risk acceptance in adventure tourism', in Wilks, J. and Page, S. (2003) *Managing tourism health and safety in the new millennium*, Elsevier, Oxford
Satsangi, M. (2009) 'Community land ownership, housing and sustainable rural communities', *Planning Practice and Research* vol. 24 no. 2 pp. 251-262
Schuett, M.A. (1997) 'State park directors' perceptions of mountain biking', *Environmental Management* vol. 21 no. 2 pp. 239-246
Scott, A. and Shannon, P. (2007) 'Local landscape designations in Scotland: opportunity or barrier to effective landscape management?', *Landscape and Urban Planning* vol. 81 issue 3 pp. 257-269
Scott, A., Shorten, J., Owen, R. and Owen, I. (2009) 'What kind of countryside do the public want: community visions from Wales UK?', *GeoJournal* vol. 76 no. 4 pp. 417-436
Selman, P. (2004) 'Community participation in the planning and management of cultural Landscapes', *Journal of Environmental Planning and Management* vol. 47 no. 3 pp. 365-392

Selman, P. (2009) 'Conservation designations – are they fit for purpose in the 21st century?', *Land Use Policy* 26 (Supplement), pp. S142-S153
Sidaway, R. (2005) *Resolving environmental disputes: from conflict to consensus*, Earthscan, London
Stoll-Kleemann, S. (2001) 'Opposition to the designation of protected areas in Germany', *Journal of Environmental Planning and Management* vol. 44 no. 1 pp.109-128
Stolton, S. and Dudley, N. (eds) (1999) *Partnerships for protection: new strategies for planning and management for protected* areas, Earthscan, London
Symmonds, M.C., Hammitt, W.E. and Quisenberry, V.L. (2000) 'Managing recreational trail environments for mountain bike user preferences', *Environmental Management* vol. 25 no. 5 pp. 549-564
Thompson, N. (2005) 'Inter-institutional relations in the governance of England's national parks: a governmentality perspective', *Journal of Rural Studies* no. 21 pp.323-334
Trendafilova, S. and Chalip, L. (2007) 'The political economy of managing outdoor recreational sport environments', in Parent, M. and Slack, T. (eds) *International perspectives on the management of sport* Elsevier, Oxford
Tribe, J., Font, X., Griffiths, N., Vickery, R. and Yale, K. (2000) *Environmental management for rural tourism and recreation* Cassell, London
Tubb, K.N. (2003) 'An evaluation of the effectiveness of interpretation within Dartmoor National Park in reaching the goals of sustainable tourism development', *Journal of Sustainable Tourism* vol. 11 no. 6 pp. 476-498
UNESCO (2011) 'World Heritage', available at: http://whc.unesco.org/en/about/ [accessed 05.04.2011]
Walker, P. and Fortmann, L. (2003) 'Whose landscape? A political ecology of the 'exurban' Sierra', *Cultural Geographies* vol. 10 pp. 469-491
Warburton, D. (2004) 'Community involvement in countryside planning practice', in Bishop, K. and Phillips, A. (eds) *Countryside planning: new approaches to management and conservation* Earthscan, London
Williams, A.M. and Shaw, G. (2009) 'Future play: tourism, recreation and land use', *Land Use Policy* vol. 26 (Supplement) pp. S326-S335
Williams-Ellis, C. (1947) *On trust for the nation* Elek, London
Zupancic-Vicar, M. (1997) 'Parks for life: an action plan for the protected areas of Europe', in Nelson, J.G. and Serafin, R. (eds) *National parks and protected areas* Springer, Berlin
Zurick, D.N. (1992) 'Adventure travel and sustainable tourism in the peripheral economy of Nepal', *Annals of the Association of American Geographers* vol. 82 no. 4 pp. 608-628