Conservation and Hunting
Introduction

This chapter provides a brief introduction to the topic of recreational hunting. First, the chapter seeks a general understanding of the term ‘recreational hunting’. Second, it raises some of the controversial debates that surround recreational hunting. Third, it outlines some of the scientific approaches that can underpin the biological sustainability of recreational hunting. Fourth, it discusses some of the debates over the contributions that recreational hunting can make to rural livelihoods. Fifth, it considers some contributions that recreational hunting makes to conservation. Finally, the chapter discusses some challenges that face those who wish to continue hunting for their recreation, and some of the opportunities now presented.

What is recreational hunting?

Hunting as sport or recreational pursuit has been described from the earliest histories and literatures (Adams, this volume, Chapter 8). However,
hunting has developed very differently across different periods of history and in different cultures. The aboriginal hunter, the ancient Assyrian king, the medieval poacher, the Victorian trophy hunter, and the modern sports hunter have all killed animals. However, they have not performed the same act. The weapons used, the game pursued, the reasons and justifications offered, the symbolic functions that their hunting has fulfilled, the legal restrictions that have applied to hunting, and the impacts on the ecological systems in which hunting has taken place, have all been different (King, 1991).

Much hunting that is practised for sport or recreation today targets large mammals and uses guns. Many terms are currently used to describe contemporary forms of hunting, including ‘sport hunting’, ‘trophy hunting’, ‘tourist hunting’, ‘hunting tourism’, ‘field sports’, and others. Equally, the over-arching term of ‘recreational hunting’ has entered the lexicon more recently, so I now seek some understanding of the term.

The Oxford English Dictionary defines the verb to hunt as ‘to go in pursuit of wild animals or game’ or ‘to engage in the chase’, and hunting as the action of the verb to hunt. Furthermore, the noun recreation is defined as ‘the action of recreating oneself or another … by some pleasant occupation, pastime or amusement’. Taken in combination, recreational hunting might be construed as the ‘pleasant occupation of going in pursuit of wild animals or game, or of engaging in the chase’.

This dictionary definition of hunting does not include killing the quarry. Indeed, anthropologists stress the importance of the ‘sporting chance’ to the true recreational hunter (Marvin, 2006). The quarry should present a challenge to the hunter, such that any killing occurs only at the end of a contest that is far from certain. The hope and intention of the true recreational hunter is to kill the quarry, but the skills used to find the quarry, and how the quarry is killed, are far more important than the fact the quarry is killed. Put another way ‘one does not hunt in order to kill, but rather the reverse, one kills in order to have hunted’ (Ortega & Gassett, 1968, in Marvin, 2006).

Anthropologists also stress how important are the specific cultural contexts in which different forms of recreational hunting are practised (Marvin, 2006). These include both premeditated actions performed before the hunt takes place, such as obtaining permission to hunt, travelling to the hunting area and seeking suitable quarry to kill legally, and the cultural norms associated with the hunt. After any kill, culturally determined actions may include collecting trophies from the hunted quarry, as well as gutting, tagging, butchering, freezing, and eating it. Put another way, the cultural context can shape decisions
on when to hunt, what to hunt, how to hunt, what technology to use and how to dress (Moriarty & Woods, 1997). The latter is probably best epitomised by the traditional hunting pink of those who hunt foxes *Vulpes vulpes* on horseback with dogs. The khaki of the classic African hunting safari, and the tweed and waxed jackets of a European gamebird shoot, are somewhat less regimented, but nevertheless culturally distinctive, as well as practically suited to prevailing landscapes and weather conditions.

On this basis, I suggest that ‘recreational hunting’ refers to hunting where the hunter or hunters pursue their quarry for recreation or pleasure. The enjoyment of recreational hunters arises from the social and cultural norms associated with the hunt and from the sporting contest that occurs between hunter and quarry, which need not necessarily include killing the quarry.

Recreational hunters may seek a range of quarry species, from large mammals to small birds, and use a range of technologies in pursuit of their quarry, from more traditional bows and arrows, traps, dogs, falcons and ferrets, to more modern guns and rifles, and most recently to tranquillising dart guns. Besides enjoying the hunt, recreational hunters may also be seeking a trophy, and/or meat for consumption, and/or to make a direct or indirect contribution to population management and habitat conservation goals. Thus, recreational hunting is a multi-faceted activity that is variously motivated and takes place in many ecological and sociopolitical landscapes (see also Loveridge *et al.*, 2006).

**Controversial debates?**

Recreational hunting is the subject of considerable debate. Proponents and practitioners cite the conservation and socioeconomic benefits of recreational hunting. In contrast, opponents are concerned with issues of sustainability, and of ethics, animal welfare and animal rights.

Proponents claim that much recreational hunting has minimal biological impact, as it is generally selective of appropriate sex and age classes that do not significantly impact on the hunted population (Jackson, 1996). Thus, scientists have noted that yields from recreational hunting mostly tend to be very conservative and well below maximum sustained yields; that is, they involve off takes that should allow ongoing harvests in perpetuity (Caughley & Gunn, 1995). Indeed, practitioners have noted the recovery of game species such as white-tailed deer *Odocoileus virginianus*, pronghorn antelope
Antilocapra americana, wild turkey Meleagris gallopavo, Canada goose Branta canadensis and wood duck Aix sponsa in North America, through judiciously managed recreational hunting (Jackson, 1996).

Furthermore, proponents assert that recreational hunting allows the use of areas that game-viewing tourists would not visit. In turn, these areas remain under conservation management because of the economic incentives that hunting provides. Such areas include ‘low’ categories of protected areas (PAs) that allow forms of sustainable use. These are areas generally classified internationally by IUCN in their Categories IV to VI (IUCN, 1994), while commonly used national designations include game reserves and controlled hunting areas. Recreational hunting may also be an important use of private and communal lands that again remain under conservation management. In southern African countries like Zimbabwe and Namibia, the use of private and communal land areas for recreational hunting has doubled the areas under conservation management without the burden of the costs of this extra management falling on to already stretched State conservation agencies (Child, 1995). In turn, the use of such lands for recreational hunting can provide community benefits in remote rural areas (Jones, this volume).

Proponents also claim that the high financial returns derived from recreational hunting can provide important benefits to national exchequers and to local communities (Leader-Williams, 2000). The daily rates charged to recreational hunters who travel as tourists to developing countries are much higher per capita than are those generally charged for game-viewing tourism. Furthermore, hunting and trophy fees are set at hundreds and thousands of dollars per trophy, depending on the species killed, while park entrance fees are set in fives, tens and twenties of dollars. Therefore, game-viewing tourists need to be accommodated in much larger numbers than do hunters to achieve the same returns (Leader-Williams, 2000; Loveridge et al., 2006). In turn, recreational hunters have much lower infrastructural requirements than game-viewing tourists, who may have considerable direct environmental impacts, for example through their need for lodges and roads, and for water extraction and waste disposal (Roe et al., 1997).

Opponents of recreational hunting claim that much hunting has been biologically unsustainable (Loveridge et al., 2006). Concerns have long been raised about its demographic impacts (Milner-Gulland et al., this volume, Chapter 5) and more recently about its genetic impacts (Festa-Bianchet & Lee, this volume, Chapter 6). Indeed, some traditional forms of hunting practised for recreation are worryingly unsustainable, for example the millions of migratory
birds shot and trapped annually by Mediterranean hunters (McCulloch et al., 1992; www.birdlife.org/action/change/sustainable_hunting/index.html).

The indiscriminate slaughter of these migratory birds also flouts many of the ethical values associated with the notion of the sporting chance in recreational hunting. Likewise, forms of ‘canned’ hunting, where the quarry animal is also not afforded a sporting chance, are particularly open to attack by opponents. Other grounds for opposition arise from concerns over animal welfare and animal rights (Dickson, this volume, Chapter 4). Hunting by long chases may prove stressful to the hunted animal, as was suggested for red deer *Cervus elaphus* hunted by dogs in Exmoor (Bateson & Bradshaw, 1997), a finding that was subsequently contested (Harris et al., 1999).

Taken overall, the position of the opponents of recreational hunting remains fixed, and they consider it to be anachronistic, unnecessary and morally unacceptable, often irrespective of scientific facts or evidence of conservation benefits. They may pursue their opposition at different political levels, ranging from the local to the national and international. Local opposition may result in protests and attempts to disrupt hunting activities. National opposition may result in attempts to achieve national bans of particular types of hunting through lobbying national parliaments, as recently occurred for hunting with dogs in Britain. Opposition at the international level may play out at biennial Conferences of the Parties to the Convention in International Trade in Endangered Species of Wild Fauna and Flora (CITES), during acrimonious debates over proposals to promote the conservation benefits of trophy hunting of species listed in Appendix I. At whatever level this opposition is played out, the debate can become highly politicised. For example, the government department that managed the parliamentary debates over hunting with dogs in England and Wales recently noted that an ‘inordinate’ amount of parliamentary time had been spent on this issue over the last few years, over 240 hours since 1997 (www.defra.gov.uk/rural/hunting, posted on 28 September 2004).

Such controversy raises the question of what issues should be paramount in discussions of recreational hunting. For many in developed countries, remote from direct experience of living with wild animals, animal welfare and animal rights issues are of greatest importance (Dickson, this volume). Their positions remain firmly fixed, unswayed by any possible conservation gains or social benefits that recreational hunting may offer. Equally, some national policies in developing countries do not allow hunting either. India is opposed to hunting and sustainable use of animals based on its religious practices that
revere the sanctity of animal life (Misra, 2002). Kenya has banned hunting and many forms of sustainable use, both for ethical reasons and because of the difficulty of effectively controlling the management of its once thriving safari-hunting industry (Price Waterhouse, 1996). Such nationally agreed policies clearly require respect from the proponents of recreational hunting. However, the different perspectives that proponents and opponents bring to debates on recreational hunting also present considerable challenges to constructive discussions of its future.

Which are the appropriate scientific approaches?

Over-hunting is one of the original evil quartet of factors that have been responsible for most documented recent extinctions (Caughley & Gunn 1995), and is a factor that continues to threaten species globally (IUCN, 2007). However, it not clear whether any species has been driven to extinction by what is now understood as recreational hunting. The passenger pigeon *Ectopistes migratorius*, once numbered in the millions in North America, became seriously depleted by a combination of habitat loss and unselective commercial shooting. The extent to which those hunting for recreation were responsible for its final demise in the wild is open to question (Schorger, 1955).

Nevertheless, because of concerns about over-hunting, much recent theory has been brought to bear on how to achieve biological sustainability (Loveridge *et al.*, 2006), including source–sink models, sustainable yields and quota setting, and reducing genetic losses while harvesting trophy males (Reynolds *et al.*, 2001; Loveridge *et al.*, 2006). Therefore, the science is now available on which to set conservative yield quotas for well-regulated recreational hunting, even for threatened species. For example, the southern white rhino *Ceratotherium simum simum* has been restored by strategies that included generally well-regulated, recreational hunting in South Africa (Adcock & Emslie, 1994; Leader-Williams, 2002). After their reduction to very low numbers in the early 1900s, white rhinos initially recovered within PAs. Soon after CITES came into force, white rhinos were listed in Appendix I in 1977. Because PAs were exceeding their carrying capacities for rhinos, white rhinos were then increasingly moved to private land. To provide incentives for landowners to keep rhinos, it was made possible for limited numbers of surplus white rhinos to be hunted on private land. Despite some initial regulatory problems
(Adcock & Emslie, 1994), the white rhino continued to recover so well that it was downlisted to CITES Appendix II in 1994 (Leader-Williams, 2002). Based on the successful approach followed for white rhinos, conservative quotas were agreed for the export of black rhino *Diceros bicornis* trophies from Namibia and South Africa in 2004 (Leader-Williams *et al.*, 2005).

So what science is needed? There can be little disagreement that improved local monitoring of many hunted populations is required. While the tagging of carcasses, the use of weigh stations, and the ageing and sexing of carcasses is a common practice within many North American and European hunts, the same cannot be said for the majority of hunted populations elsewhere, where quota setting is based on little more than guesswork (Severre, 1996). Nevertheless, there are areas of tension. Some hold that hunting quotas need to be based on detailed prior knowledge of the population biology of the hunted population, to avoid any uncertainty (Milner-Gulland & Ackakaya, 2001), or that, at the very least, quotas should be set using a precautionary approach. Others contend that quotas can be set through adaptive management that itself is practised in a precautionary manner (Rosser *et al.*, 2005).

The ‘precautionary principle’ notes that, when faced with scientific uncertainty, regulators should act in anticipation of harm to ensure that harm does not happen (Cooney, 2004). Nevertheless, it has remained unclear how this principle can be applied to recreational hunting, particularly when it is used as a tool to mitigate other possibly more serious impacts than limited trophy off take, for example through poaching, competition with livestock and habitat loss (Rosser *et al.*, 2005). Science cannot demonstrate that recreational hunting is safe before it has taken place, so hunting must happen before data can be gathered, and assessments of sustainability can only be retrospective. In turn, this provides a pivotal role for adaptive management, known less formally as the process of trial and error, whereby decisions and procedures are reviewed and the lessons learned are used to adjust the management system (Caughley & Gunn, 1995).

Adaptive management of hunting is crucial, given uncertainties over its ecological consequences, the likelihood of stochastic events, and social and economic changes. Nevertheless, to be effective, adaptive management requires resilient management institutions that are adaptable to changing biological and environmental conditions (Frisina & Tareen, this volume, Chapter 9).
Contributions to development?

From a socioeconomic and development perspective, there are two broad, but not exclusive, types of recreational hunting (Sharp & Wollscheid, this volume, Chapter 2):

- *local hunting*, where the hunter usually lives close to the hunting arena, and organises and pays appropriate fees for the hunting experience locally.
- *hunting tourism*, where the hunter travels some distance from home, often abroad, and is prepared to pay considerable sums of money, including to an intermediary supplier, to organise aspects of the hunt.

Many recreational hunters participate in the first type of hunting, while many fewer, but usually richer, recreational hunters take part in the second.

Both types of hunting have the potential to make considerable contributions to local development (Loveridge *et al.*, 2006), although only hunting tourism, where it takes place in developing countries, is directly relevant to international development. In terms of its socioeconomic benefits, hunting tourism attracts low volumes of international tourists, but can provide significant sums for conservation and foreign exchange for the national exchequer. Hunting tourism is less fickle than game viewing in times of trouble and unrest, and remains the least volatile option for wildlife use in unstable countries, such as those in the Congo Basin (Wilkie & Carpenter, 1999). In addition, recreational hunting can produce benefits for local communities, as with CAMPFIRE (Communal Areas Management Programme for Indigenous Resources) in Zimbabwe, ADMADE (Administration Management Design, which is a community-based approach to wildlife management) in Zambia, and Conservancies in Namibia (Hulme & Murphree, 2001). In the case of CAMPFIRE, sport hunting has been the primary (>90 per cent) source of revenue and, of this, 60 per cent has derived from the sale of elephant *Loxodonta africana* hunts. The balance derives from the sale of tourism lease rights, of hides and ivory, and of crocodile *Crocodylus niloticus* and ostrich *Struthio camelus* eggs (Bond, 1994, 2001). However, it is critical to determine if such benefits, whether distributed as household dividends or as community infrastructure, make people more tolerant of the costs of living with wildlife, and thereby create an incentive for conservation among local communities (Leader-Williams & Hutton 2005).
Contributions to conservation?

Conservation comprises actions that directly enhance the chances of habitats and species persisting in the wild. While conservationists agree over the need to conserve biodiversity, polarised debates often arise over whether protection or use is the best way of achieving this objective. However, some have asked whether a combination of both is possible, for additional conservation gains (Hutton & Leader-Williams, 2003).

Recent research on private land in a developed country has indeed shown that a combination of both protection and use through two forms of recreational hunting appears to provide additional conservation gains. Gamebird shooting is, and fox hunting was until recently, widely practised across lowland England. For their survival, the quarry species of gamebird shooters and fox-hunters require both woodland and hedgerow habitats and these are also required habitats for Britain’s generally declining populations of woodland and farmland birds (RSPB, JNCC, WWT & BTO, 2005). But does participation by landowners in gamebird shooting and fox-hunting provide incentives to conserve key habitats on lowland farms? Measures of the extent of woodland cover on farms where the landowner was not involved in either activity, or was involved in hunting alone, in gamebird shooting alone, or in both activities, showed stepwise increases in the extent of woodland cover (Oldfield et al., 2003). Indeed, on farms where the owners participated in both gamebird shooting and fox-hunting, woodland covered 10 per cent of their area, the same IUCN target for national coverage of PAs that conservationists have long aspired to achieve. It is important that similar research is carried out in other land ownership systems, and in countries of different development status, to determine if recreational hunting also provides an incentive to conserve in such situations. Equally, it is important to recognise that this research simply indicates a correlation and so does not demonstrate a cause-and-effect relationship. Therefore, further research based on the semi-natural experiment created by the ban on hunting with dogs in Britain would be desirable.

Future challenges?

Recreational hunters around the world will increasingly need to face critical debates in defence of their sport, if other forms of recreational hunting are
not to face the same fate as hunting with dogs in Britain. While scientists may benefit from the semi-natural experiments that changes in management could provide, hunters need to address issues that might affect the future of their sport in a timely manner. I now outline some of these challenges, noting some of the pressure points and possible ways forward.

Recreational hunting represents a considerable interdisciplinary challenge. For example, mathematically inclined biologists may focus on issues of biological sustainability relative to harvesting theory, while animal welfarists raise concerns about the fate of prey species during hunting, proponents of animal rights question whether the rights of prey species are violated and anthropologists debate changes in local cultural traditions. Furthermore, rural economists and sociologists may raise concerns about contemporary impacts on rural people and rural areas, while conservation biologists may be interested in examining the contributions of recreational hunting to wider species and habitat conservation. However, the wide range of specialist disciplines required for a holistic debate about the future of recreational hunting are rarely brought together in a collective dialogue. This can result in fractured, single-issue debates that are dominated by the best-organised position.

Likewise, recreational hunting has many and varied forms, ranging from the classic African foot safari to hunting on horseback with dogs in England. Each form is often highly context-specific, each with different participants and each with different constituencies and platforms of support, who generally speak without any common voice. Organised groups opposed to recreational hunting, whether to particular forms of hunting or to all recreational hunting, can pick off their targets one by one, without any likelihood of collective action or support by the various types of recreational hunter in defence of their different forms of sports. Again, this can lead to dominance of any such discussions by the best-organised, single position.

A key and emerging tactic of those opposed to recreational hunting is their use of increasingly political tools to voice their objections. As already noted, the use of national parliamentary time is one such tactic. Another is use of stricter domestic measures to prevent the import of trophies from otherwise internationally sanctioned trophy hunts abroad. CITES has mechanisms to agree quotas for species that are listed in Appendix I where those species are trophy hunted because of the conservation benefits that trophy hunting is believed to bring. Thus, hunting quotas have been agreed for species like African elephants, leopards *Panthera pardus*, white rhinos and markhor *Capra falconeri* at successive Conferences of the Parties to CITES, to which importing
countries are party and vote upon. Yet, in response to domestic anti-hunting pressures, countries such as the United States can prohibit the import of trophies taken by hunters, therefore making it much less likely that US hunters will participate in such hunts in future. Such highly politicised actions continue, despite the evidence of the conservation benefits of recreational hunting, whether these comprise the biodiversity benefits of field sports in Britain (Oldfield et al., 2003) or the recovery of markhor in Pakistan (Frisina & Tareen, this volume).

At the same time, recreational hunters require open minds to address some of the obvious pressure points that face the different forms of their various sports. Adequate controls are often lacking in many forms of recreational hunting. This lack of control can particularly affect high-value hunting tourism and may manifest itself through exceeding quotas, through lack of transparency in allocating hunting opportunities, and through flouting of foreign exchange regulations (Price Waterhouse, 1996). In turn, this may lead to concerns about the biological and socioeconomic sustainability of recreational hunting, and raise charges of corrupt practices (Leader-Williams et al., this volume, Chapter 18). Thus, high-value recreational hunting has been the subject of long-term or temporary bans in several countries, for example Kenya and Uganda, respectively (Price Waterhouse, 1996; Lamprey & Mugisha, this volume, Chapter 13).

High value recreational hunting may experience similarly bad practices to those that affect game-viewing tourism operations, where transparency is no more likely in allocating opportunities for a lodge site, or where foreign exchange controls may be equally flouted. Nevertheless, the general public finds it much more difficult to understand that well-managed recreational hunting can contribute to conservation, given that individuals of species that conservationists seek to conserve are killed. Therefore, when control is lacking, recreational hunting is more likely to get a bad press than game-viewing tourism, which the public is more conditioned to believe is relatively benign. In addition, the general public is likely to believe that hunting is incompatible with game-viewing (Davies et al., this volume, Chapter 14), in which more people take part, resulting in further bad publicity for hunting.

These pressure points throw up certain challenges for proponents of recreational hunting. First, can those who offer and regulate hunting tourism opportunities start to push their product closer towards the ideals of ecotourism? While many definitions exist for ecotourism, few encompass all the ideals for which true ecotourism should strive. They include: minimal environmental
impacts on the natural resource base; financial contributions to conservation and protected area management; low social impact on, and financial contributions to, local communities; and raising awareness and contributing to conservation education (Quebec Declaration, 2002). All these ideals are within reach of well-run recreational hunting operations, but are rarely explicitly stated as goals. On the biological front, achieving sustainable quotas is key. On the socioeconomic front, reducing leakage and improving governance is key, which in turn could help ensure that appropriate financial contributions are available to support both conservation and local communities.

But how can these ideals be achieved? Two routes suggest themselves, certification and self-regulation. However, the many and varied forms of recreational hunting suggest that both routes will be complicated to implement, because it will be difficult to design any system(s) where one size fits all. Instead, it is most likely that context-specific, and locally- or nationally based approaches, will be best suited.

Certification has been proposed as an approach that could help move recreational hunters towards sustainable management (Lindsey et al., 2007). Nevertheless, while certification schemes such as the Forest Stewardship Council (FSC) may work for certain natural products, it remains unclear how appropriate schemes could be drawn up for recreational hunting. It would be necessary to determine what aspect(s) of a recreational hunting operation would best be certified. For example, would the criterion be that a trophy has been taken as part of a sustainable harvest, mirroring the objectives of the FSC scheme, or that the outfitter runs his operation close to the ideals of the Sustainable Tourism Stewardship Council (Font et al., 2003)? Furthermore, at what level should the chosen certification system be audited, and indeed, at what level(s) should (an) independent certification body(ies) be situated, and who should offer any resulting ecolabels? Finally and perhaps critically, who should pay for certification: the user or the regulator? While such difficult matters are resolved, it may be helpful to move towards local and context-specific efforts to self-regulate particular forms of recreational hunting.

In terms of self-regulation, a good example is the Independent Supervisory Authority for Hunting (ISAH) that was founded in 2000 to regulate hunting with dogs in England and Wales (www.isah.org.uk). ISAH was financed by subscriptions from its members but appointed an independent panel, in turn, to appoint an independent Chairman and Commissioners whose task was to set up and administer protocols for the regulation of hunting with dogs. The
protocols that they established incorporated clear principles that were to guide their decisions, which included:

- **Humanity**: the avoidance of unnecessary suffering;
- **Utility**: the effective management of quarry species; and
- **Stewardship**: sensitive management of living environment.

Despite its transparent approach, the establishment of the ISAH came too late to influence the political train of events set in motion by promises made during the British general election of 1997. Nevertheless, ISAH could provide a model of a nationally based, self-regulatory approach that could be adapted to local conditions elsewhere. Equally, future self-regulatory bodies should be established well in advance of any political processes that seek to debate the future of different forms of recreational hunting.

**Conclusions**

This chapter has offered a brief overview of the different and context-specific forms of recreational hunting, and discussed some of the views of its proponents and opponents. To its many opponents, the killing and hunting of quarry species is anachronistic and morally indefensible. To proponents, the traditional forms of recreational hunting can have considerable benefits for conservation and for rural economies. However, there are many and varied forms of recreational hunting, and opponents are very well organised and funded. Therefore, practitioners need to guard against complacency, to use self-regulation to address those aspects of recreational hunting that are most likely to cause public concern, and to explain the conservation benefits of recreational hunting clearly and unequivocally.

**References**


Ortega & Gassett (1968) La Caza y Los Toros. Revista de Occidente, Madrid. (Cited in Marvin, 2006.)


