

Parks



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- maintaining and improving an effective network of protected area managers throughout the world, building on the established network of WCPA;
- serving as a leading global forum for the exchange of information on issues relating to protected area establishment and management;
- ensuring that protected areas are placed at the forefront of contemporary environmental issues such as biodiversity conservation and ecologically sustainable development.

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Cover: *Whose protected area? Sherpa children living in the buffer zone of Sagarmatha (Mt Everest) National Park. Our protected areas will only survive with the cooperation and involvement of local people. Photo: Dr Paul Rogers ICPL. Fishing in Royal Chitwan National Park. Photo: Prabhu Budhathoki. The Ifugao people have been the architects of the Philippine Rice Terraces for the last 2000 years. Photo: Virginia Tschopp.*

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Editorial

MICHAEL BERESFORD



WE LIVE in interesting times. Life is not easy for protected area professionals. We are bombarded with information, invited to consider new paradigms, asked to construct new partnerships and to think out-of-the-box. Against this, one truth remains unchanged – our protected areas are the most valuable natural assets on the planet. They are the cornerstone of environmental conservation policy. It is equally true that because protected areas are a human idea, they will only survive and flourish in the long-term if they have the support of the majority of humans. This is a major challenge for all of us in the 21st century.

The theme of this issue of *Parks* is Category V Protected Landscapes/Seascapes – the only one of the six IUCN protected area management categories based on the interaction of people and nature. This doesn't make Category V any more important than other categories. However it does mean that it has increasing relevance for the management of other categories and, perhaps more importantly, it has direct relevance as an approach for the world's wider rural areas based on sustainable development.

Protected Landscapes are cultural landscapes, i.e. they have co-evolved with human societies. They are areas where the natural landscape has been transformed by human actions and the landscape qualities have shaped the way of life of the people. All management approaches to these areas must be based on a clear understanding of this, often complex, inter-relationship.

Category V Protected Landscapes represent both a designation and a conservation approach – a product and a process where *"Safeguarding the integrity of this traditional interaction is vital to the protection, maintenance and evolution of such an area."* (IUCN Guidelines for Protected Area Management Categories 1994).

Successful management of Protected Landscapes depends on both effective conservation of the environment *and* safeguarding the social and economic vitality of the people who live within them. The key challenge lies in the management or resolution of conflicting uses, encouraging and supporting appropriate activities and guiding change.

Let's be honest, the Protected Landscape idea is not popular with many of our protected area colleagues from a natural science background. Category V is seen as a compromise, a dilution of protection, a dangerous precedent allowing developers to place a foot in the door. We need to demonstrate through case studies and good practice that this is not so. We need to convince others of the need to examine new ways of achieving conservation goals in the 21st century. As Jeff McNeely (now Chief Scientist at IUCN) said some years ago, *"...species protection may have worked for Noah, but it is clearly not working for us!"*

The following series of articles demonstrate the wide variety of values and approaches of Category V Protected Landscapes around the world.

In the first article Peter Ogden looks at European Protected Landscapes from an agricultural perspective, illustrating how innovative management techniques are being developed to safeguard natural and cultural values and promote sustainable farming.

From East Africa, Bob Wishitemi and Moses Okello look at the future of the wildlife dispersal areas and the pastoral community rangelands of Kenya, outside the traditional Category II National Parks and describe how a Protected Landscape approach is bringing the communities back to the centre of conservation policy through the promotion of resource based enterprises.

From Asia, Prabhu Budhathoki demonstrates how the buffer zone management programme in Nepal has adopted a Protected Landscape approach to safeguard the long-term objectives of the National Parks and meet the needs of the people living in the adjoining areas.

Jessica Brown, Nora Mitchell and Jacquelyn Tuxill's article from the USA shows how Category V management objectives are providing an important opportunity in the US context as the US National Park Service increasingly looks at 'non-traditional' designations such as heritage areas, corridors and long distance routes to broaden the role of the service.

Finally, from South America, Eric Chaurrette, Fausto Sarmento and Jack Rodriguez describe the relationship in the tropical Andes between the protected areas and the highly-charged issues of open access and community property rights and argue the need for a Protected Landscape approach citing the Quijos River Valley as a case study.

This issue of *Parks* is one of three publications by the WCPA Category V – Protected Landscapes Task Force in the run up to the World Parks Congress in Durban. The articles have been written by members of the Task Force.

Protected Landscapes – Protected Areas Where People Live is currently being written by Task Force members Jessica Brown, Nora Mitchell and Michael Beresford and will be available in draft form at the IUCN World Parks Congress for debate, discussion and subsequent publication as an output of the Congress.

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Protected Landscapes: their role in promoting the sustainable use of agricultural land

PETER OGDEN

The demands placed on agricultural land for food production is a global issue. In many countries, this agenda is characterised by highly intensive and mechanised farming practices whilst in others the opportunity to produce even modest amounts of food provides the compelling focus for farming. As the social and economic disparities between intensive and subsistence farming systems widen, Protected Landscapes (Category V Protected Areas) are increasingly demonstrating how innovative management techniques can help reduce this sustainability deficit. A major dimension associated with this challenge is the promotion of sustainable farming in areas characterised by the distinctiveness of their landscapes. By illustrating how the Protected Landscape concept provides a framework for good practice, this article shows that farming when undertaken in an integrated and environmentally friendly manner, not only enhances the natural and cultural values of Protected Landscapes, but also benefits the economy and the quality of life of rural communities within these areas. Using case studies from European Protected Landscapes, the paper suggests five key management principles and a series of associated stewardship practices, which collectively offer guidance to promote the sustainable use of agricultural land. Whilst recognising that the approaches stem from a European perspective, it is suggested that the principles have a wider applicability, if they are adapted to and reflect the sensitivities of local circumstances.

LESS THAN FIFTY years ago, one farmer in Western Europe would have fed himself and three other people. Today most of those same farmers probably feed over 100 people¹. In regions of Europe and North America, farms have become so big and their production so dependent on fertilisers, pesticides and heavy machinery, that farmers grow their food to the specifications demanded by supermarket chains. It is not inconceivable that in the foreseeable future, the entire global retail food system will be controlled by just five or six firms¹. The faster the pace of this change, the greater the dangers to the natural environment and the quicker the traditional farming landscapes and social structures associated with them, will disappear. The demands placed on agricultural land for food production are not only a global issue but also one which affects the environment in which we all live.

In America, many of the environmental and social problems associated with this type of farming can be prevented. If a more integrated approach to agriculture is adopted not only can the landscape character of farmland be protected but its value as a reservoir of wildlife and cultural heritage can be safeguarded. Where traditional farming systems have remained unchanged for long periods of time and reflect an intimate relationship with the environment, important wildlife habitats or specialised plant and animal communities thrive. Given these circumstances, farming makes a real and positive contribution to the distinctiveness and individuality of local landscapes and the basis for their habitat diversity.

Whilst these conditions may not characterise every country in the world, what is clear is that the key to maintaining diverse landscapes, local biodiversity and cultural values is invariably the existence of environmentally friendly forms of agriculture. In addition, when these activities are coupled with diversified production and supply chains that focus on local markets, they create local work and support the livelihood of the local farming community rather than distant corporations. Indeed the mutually supportive nature of this combination of activities provides the basis for sustainable agriculture² and the benefits which arise from it.

¹ Kirschenmann F. "A revolution in Agriculture", Glynwood Centre, 2002,

² Sustainable agriculture: A whole-systems approach to food and fibre production that balances environmental and cultural integrity, social equity and economic viability among all sectors of the public, including international and intergenerational communities.

If the essence of global food production is a plastic wrapped, slightly processed slab of meat transported thousands of miles, local sustainable farming means fresh produce grown and supplied from neighbourhood farms sold at farmers' markets and in local shops. Such an approach ensures that food miles (the distance food travels from farm to plate) are kept to a minimum.

The role of Protected Landscapes in promoting change

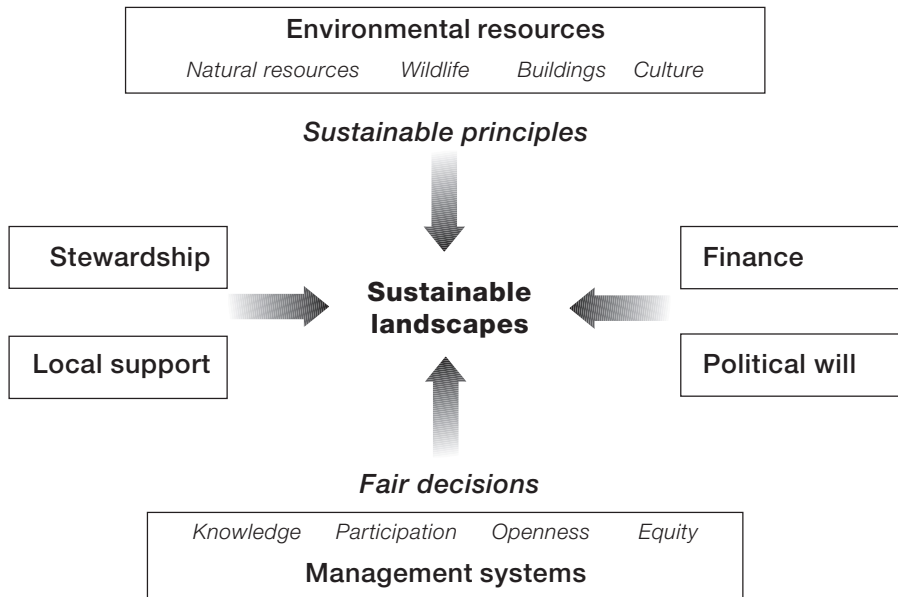
At the forefront of the agenda for promoting the sustainable use of agricultural land are the many Protected Landscapes (Category V Protected Areas) around the world, where environmental and nature conservation practices have been combined with agricultural policies and extended into the farmland environment. Within many Protected Landscapes and in particular those in Europe, it has long been recognised that sustainable agriculture provides a realistic means of building strong and interdependent links between resource management, economic development, social welfare and environmental conservation. Of key significance, is the realisation that the Protected Landscape approach provides both a practical and economic role for farmers and an important framework around which environmental conservation can be linked to the improvement of the quality of life for local people. Protected Landscapes are increasingly demonstrating how innovative management can help reduce the sustainability gap that differentiates environmentally damaging farming practices from those which, in a European context, are considered sustainable

The benefits of a balanced approach to farming and environmental conservation are nowhere better demonstrated than in Southern Öland, an island in the southeast of Sweden. Although significant areas of Southern Öland are designated Nature Reserves or Landscape Protection Areas (Category V Protected Landscapes), the entire landscape reflects more than 5,000 years of human habitation and present farming systems have evolved to match the physical constraints and environmental values of the area. The southern part of Öland is dominated by a vast limestone pavement covering 250 km², the single largest actively-farmed limestone pavement in the world. The area's high biodiversity and historic values are conserved through well-structured, low impact traditional farming practices, which respect the land's capabilities and the area's natural ecosystems and cultural heritage. Even though most of the farmland is of nature conservation value and is under some form of protective guardianship, a legal Stewardship Agreement between all the farmers and the relevant management bodies ensures that an integrated approach to the management of farmland is adopted throughout the area. The predominance of environmentally friendly farming practices coupled with recognition by the farming community of their intergenerational responsibilities, enables modern farming and economic development activities to be undertaken without compromising the area's traditional natural and cultural values. Not surprisingly these relationships have created a distinctive landscape, the outstanding importance and uniqueness of which has been recognised as a Cultural Landscape of World Heritage status.

Because sustainable development in its widest sense lies at the heart of the planning and management of Southern Öland and, indeed, many other Protected Landscapes, these areas represent ideal models demonstrating the benefits of a collaborative and integrated approach to the management of natural resources; in particular, farmland. The opportunities for promoting the sustainable use of agricultural land can therefore be best understood if one considers the management systems that underpin and drive the Protected Landscape approach itself. These can be summarised as shown in Figure 1.

The recent publication "*Guidelines for the Management of Protected Landscapes*" (IUCN 2002) explores these relationships in greater detail and shows how the management processes that steer the Protected Landscape concept provide real opportunities for promoting sustainable development and land use practices.

Figure 1. Management systems within Protected Landscapes.



It is therefore clear that the promotion of environmentally sensitive agricultural policies at a national level, the encouragement of an enhanced environmental stewardship ethic amongst the farming community and the adoption of collaborative approaches to the management of natural resources and wildlife conservation farming which reflect the Protected Landscape approach, can succeed and make agriculture relevant to both local communities and the expanding global economy. In addition and in the case of those countries which benefit from agricultural support programmes (e.g. those in the European Union), these sustainability relationships can be strengthened still further. By ensuring that agri-environmental schemes³ are promoted as alternatives to purely production based support measures, financial support for farming can be effectively uncoupled from intensive agricultural production at the local level thereby providing a means of supporting farming communities whilst maintaining the integrity and values of the farmland environment.

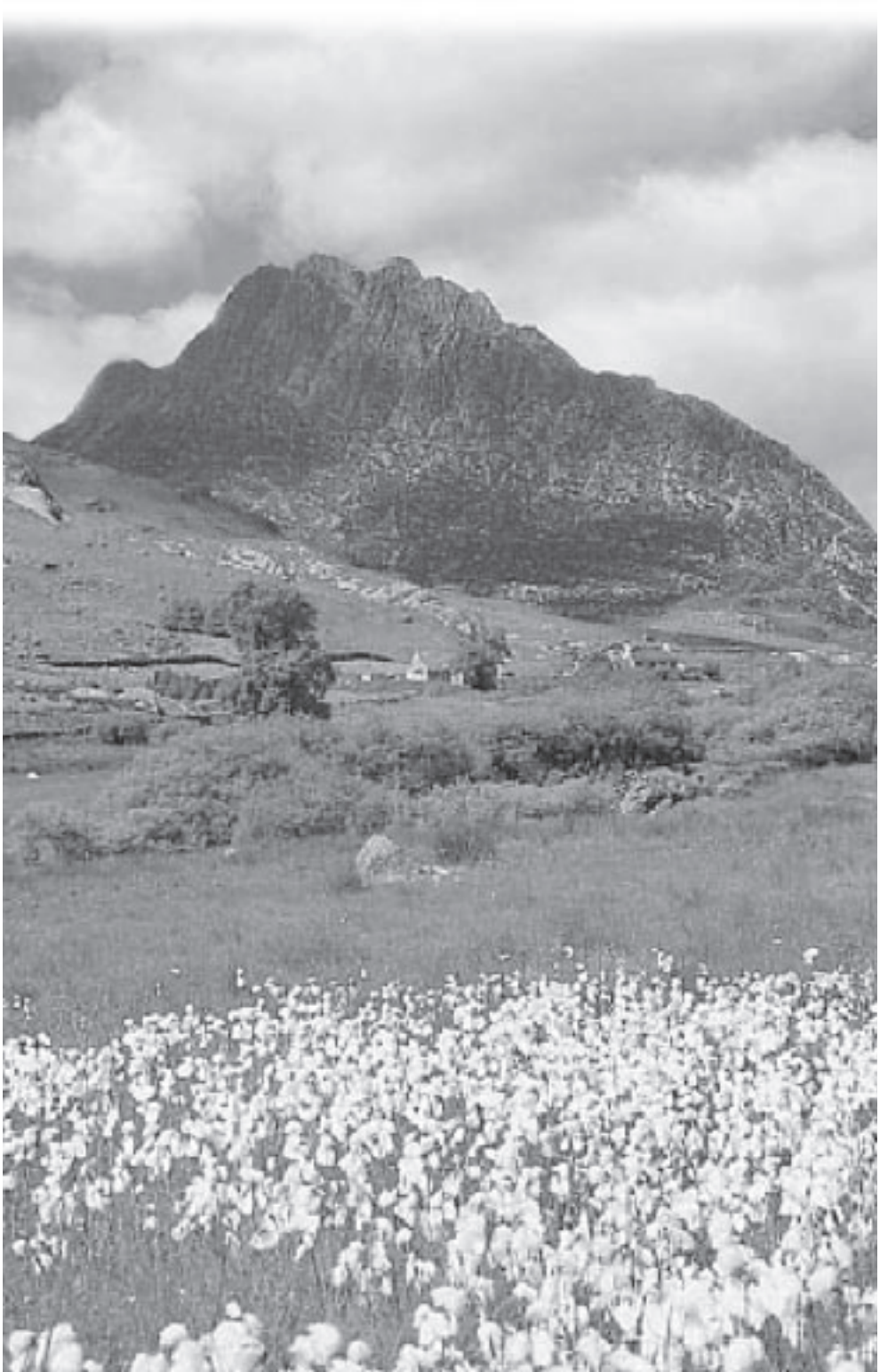
The benefits of sustainable farming

Pioneering agri-environmental schemes in Protected Landscapes across Europe which reflect this fact and recognise biodiversity and the landscape as social and economic commodities, clearly illustrate how farming when undertaken sensitively not only enhances an area's natural and cultural values, but is also beneficial to the economy of those areas. These benefits are well illustrated by the "Tir Cymen"⁴ and "Tir Gofal" initiatives, implemented in the Snowdonia National Park, Wales. The Snowdonia National Park (a Category V Protected Area) covers 213,100 ha of which 70% of the land area is in private ownership and supports approximately 1,400 hill/mountain sheep farms. The viability of farming is almost totally dependent on financial support from the European Union's Common Agricultural Programme, but despite

³ Agri-environmental measure: a means of using public funds to provide incentives to farmers to adopt farming practices, which are compatible with the protection and enhancement of traditional landscapes and the wider environment. Agri-environmental payments are not subsidies, but are intended to support the incomes of farmers in return for them providing a range of environmental 'goods' or services.

⁴ Tir Cymen is the Welsh name for the agri-environmental scheme which operated for a five-year experimental period in three areas of Wales. In English the term means a 'tidy land'.

An agri-environmental stewardship in the Snowdonia National Park, Wales. Photo: Snowdonia National Park Authority.



this, agriculture continues to decline. It was for this reason in 1992 the Tir Cymen Environmental Stewardship scheme was introduced, in an attempt to provide a new approach to farming.

The objective of the scheme was to combine, on a whole farm basis, good farming practice with the conservation of semi-natural habitats, landscape conservation and the protection of archaeological features whilst at the same time promoting opportunities for the public to enjoy the countryside. In return farmers sign a 10-year whole Farm legal agreement and conform to a conservation code of practice. The scheme effectively offers farmers payments to change their farming practices and recognises in monetary terms, the environmental value of the biodiversity and cultural heritage resources of farmland in the Park. By 2001, 411 whole farm agreements existed, covering 71,770 ha or 33% of the National Park area.

Since their introduction, the schemes have not only enhanced the biodiversity and landscape of the Park but also reduced environmentally damaging farming practices. In addition, new job opportunities have been created, farm diversification initiatives and the farming community's awareness of environmentally sensitive farming practices has increased. The multiplier effect of extra spending by farmers in the local economy has also created additional local employment and the demand for new services. Introducing changes of this kind that reduce the economic productivity of agricultural land (where it is practical or desirable to do so), however represent a potential loss of income for farmers, few of whom can afford to reduce their productivity without some form of compensation. Public funds are therefore important to enable these schemes to succeed.

It is therefore clear that where farming practices are adapted and become more sustainable, the heritage of landscapes and the popular culture of Protected Landscapes are safeguarded and made more economically relevant to those who live and use these areas. As confidence in the approach grows and where opportunities to promote them exist, so the schemes create more employment and help maintain and revitalise rural ways of life.

Good practice principles

It is apparent that if the sustainable management of agricultural land is to succeed, certain management characteristics must coexist. These include:

- A "Stewardship⁵ ethic" amongst the farming community.
- A systems perspective which enables the consequences of farming practices on both human communities and the environment to be understood.
- Interdisciplinary collaboration and an acceptance of the corporate responsibilities arising from any activities which affect agricultural land use and the environment.
- A recognition that sustainability is a condition not a variable; not a target to be achieved, but rather a direction to guide constructive change.
- An understanding that any transition to a more sustainable form of agriculture is a continual process which requires a series of small, realistic steps.
- A realisation that sustainability involves integration and addresses not only environmental and social concerns, but also offers environmentally acceptable, innovative and economically viable opportunities.

Where these prerequisites exist, the sustainable use of agricultural land can be achieved if the following management Principles and farming practices are adopted, see Box 1.

The role that Protected Landscapes have played in promoting these sustainability principles and realising the benefits of best management practices is being increasingly demonstrated

⁵ Stewardship: Planning for and taking the necessary actions over the long-term to successfully preserve and protect the natural cultural, or historical value of a resource asset, often in ways which not only benefit an individual but others as well.

Box 1. Principles and farming practices which promote the sustainable use of agricultural land in Protected Landscapes (Ogden, 2002).

**Principle 1.
The quality of the resource is maintained**

Practices

- The quality of natural resources used in farming (soil, water, air) are maintained or enhanced through sustainable farming methods, such as non-polluting ways of regulating pests and diseases, nutrient recycling, soil protection and using renewable resources and recycled products;
- Natural resources are safeguarded by minimising the use of toxic products, limiting artificial inputs, controlling pollution etc;
- Biodiversity and cultural assets are conserved within traditional farming systems;
- The survival and use of agricultural biodiversity is supported thereby maintaining the genetic diversity in livestock and crops;
- Land that has been degraded by non-sustainable farming practices is restored/rehabilitated.

**Principle 2.
Farmers relationships with other interests are managed**

- Wherever possible, the traditional knowledge of farmers in respect of the management of their land and other natural resources is used, built upon and shared;
- Farming is integrated with the conservation of scenery, biodiversity, historic and cultural assets;
- Those farming practices which help to maintain the distinct identity of different landscapes and communities are promoted and encouraged;
- Complementary links between farming and other suitable activities on farms (e.g. tourism and forestry) are encouraged;
- Management partnerships with farmers and others are established to deliver integrated programmes of environmental stewardship;
- Such partnerships are used to increase awareness amongst other farmers of the benefits of sustainable agriculture.

**Principle 3.
Opportunities to support sustainable agriculture are maximised**

- Systems of advice and extension services to promote sustainable farming are supported, or developed;
- Access to national and international funds is sought to encourage sustainable approaches to farming through systems of incentives etc;
- Outstanding achievements in the field of sustainable farming are recognised and rewarded.

**Principle 4.
Encouragement is given to producers to get added value from sustainable farming**

- Producers are encouraged to develop and market environmentally sound products;
- New alliances are built with consumers, the organic farm movement and purchasers of environmentally-sound foods;
- Supplementary sources of income for farmers from sustainable activities (e.g. tourism, crafts) are developed;
- Local markets are developed to add local distinctiveness.

**Principle 5.
The wider picture is positively managed**

- Help is provided to enable farmers to adapt to the changing needs of society in ways that retain their individuality and independence;
- Links between farming and other aspects of the rural economy and society are encouraged and built.

across different regions in Europe. In the case of the Peneda Gêres National Park in Portugal, the promotion of the sustainable use of agricultural land coupled with diversification initiatives, has formed the basis for establishing programmes of integrated rural development.

Established in 1971, the Peneda Gêres National Park covers 71,422 ha of which 7.2% is State owned, the remainder of the land being private or owned by local communities. Although the Park has suffered severe depopulation, agriculture and tourism still remain important. The implementation of a European Union funded project has enabled an integrated approach to the management of agriculture across the whole Park to be achieved. Products with quality labels recognised by the EU (honey, meat from local breeds of cows and goats) and other products such as aromatic plants are all grown and harvested in a manner which links farming to the conservation of the Park. The creation of new markets for these products has provided new sources of income for farmers. In addition and as part of the sustainable management of the area, a species recovery programme has been introduced along with measures to eliminate invasive species.

The conservation value of the farmland has therefore been optimised using farm management agreements and important habitats and ecosystems are conserved and maintained through the encouragement of traditional farming practices. The creation of a Local Development Association, bringing together the Park Authority, communities, the farmers' organisations and other stakeholders, has allowed a more cooperative attitude to the sustainable development of the region. In addition professional qualifications have been introduced for game wardening and a hunting management plan agreed with local hunters ensures that game management and nature conservation are achieved in a complementary manner.

Despite initial resistance, local farmers now view the Protected Landscape as an asset rather than a threat to their interests. By working together, the Park Authority and local farming communities have developed effective communication networks, improved their working relations and most importantly increased their levels of mutual trust. The benefits of extending this integrated approach to an international level is similarly demonstrated by the "Environmental

The terraced landscape of Peneda-Geres National Park, Portugal. Photo: A.J. Barros-Arch, Peneda-Geres National Park.



Partnership for Central Europe” currently operating in the White Carpathians, a patchwork landscape straddling the Moravian-Slovak border. The Environmental Partnership established in the early 1990s encourages civic groups, farmers and business people to promote a range of small-scale local, farm-based rural initiatives. An Association has been established to turn more than 250 local fruits into high-quality, natural juices, jams, alcohol and dried fruit. Dried fruit is sold in speciality stores and by mail order under the label ‘Traditions of the White Carpathians’. New markets have been created using a distinctive marketing brand name symbolising high-quality natural products from the region.

The initiative has not only encouraged organic farming throughout the region but also made a significant economic contribution to local communities by creating new job opportunities and diversifying family incomes. By working in partnerships, skills in local communities and throughout the region are shared and used more effectively. Likewise the existence of a cooperative approach has created a sense of regional identity, a pride amongst the area’s residents and provided an ideal way of preserving the area’s social fabric and rich cultural and natural heritage. These few case studies clearly illustrate in a European context that land use activities when undertaken in a sustainable manner can bring real benefits not only to farmers, but also to the environment and the wider community. Experience elsewhere in Europe also shows that distinctive landscapes and quality environments create an unique sense of place for those who live in these areas and offer significant and often unrealised economic opportunities for rural communities.

By maintaining the environmental quality of farmland and promoting environmentally friendly farming practices, the sustainable management of Protected Landscapes can be achieved and used as the basis for broader programmes of rural development and in many instances rural regeneration. Achieving the benefits of this alternative approach will however require landowners and environmental managers to change their attitudes. Not only will farmers need to learn to do things differently but conservationists will also have to change some of their traditional views and ideals. Each will need to move closer together and understand the other’s aspirations and limitations. Just as importantly politicians and decision makers will need to promote policies which address the biodiversity and cultural needs of rural communities.

Hay collection in the Retezat National Park, Romania: Photo: Retezat National Park.



Conclusion

At its worst farming has proved to be irretrievably destructive. Equally, at their best, truly sustainable farming practices can be environmentally protective, economically creative and socially rewarding. If farmed landscapes are to be conserved and the ecosystems and cultural heritage associated with them enhanced, farming practices and conservation activities must become integrated so that each is socially, economically and environmentally beneficial. Experience from Protected Landscapes in Europe is showing that a more sustainable approach to farming which balances economic imperatives with environmental qualities is possible. In so doing it can make a valuable contribution to the quality of life of those living in these areas and using them for pleasure. Retaining the value and integrity of biodiversity and the cultural heritage of farmland depends however on the development of national and even international agricultural policies which recognise the role and value of the natural and cultural resources of the farmland environment and the need to promote an integrated approach to their use. The future of wildlife on farmland in many industrialised countries depends as much on changing rural policy, as it has traditionally depended on the ability of environmentalists to promote the conservation of important species or habitats.

Approaches are required not only within all Protected Landscapes but elsewhere, which reassure farmers that, by adopting sustainable agricultural practices, the goods and services they provide will retain both economic value and social relevance. Although recognising that the approaches in this paper stem primarily from an European perspective of farming and environment relationships, it is not inconceivable that these principles could be applied more widely so long as they are adapted to and reflect the sensitivities of local circumstances. Irrespective of whether this is possible or not, one thing is certain. If the global challenge of promoting a more sustainable approach to farming is not addressed, the existing sustainability deficit will remain and the quality of the environment within Protected Landscapes, along with the viability of communities and the cultural traditions of those people who have lived in these areas for generations, will suffer.

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Application of the Protected Landscape Model in southern Kenya

BOBBY E.L. WISHITEMI AND MOSES MAKONJIO OKELLO

Conservation of biodiversity outside designated protected areas in Kenya is becoming impossible due to declining available land space, increasing human populations, alienation of the local people, lack of socio-economic incentives for conservation and lack of suitable models to be adopted. The traditional National Park Model, although having led to establishment of key Kenyan parks and reserves, cannot be adopted any further as it mainly emphasises wilderness and its biological resources and concentrates less on local expertise, needs and development. Thus the current network of protected areas is under many threats, is unpopular and resented by local communities. Biodiversity resources outside Kenyan parks and reserves are under danger of extermination unless communities are brought back to the centre of conservation and an appropriate protected area model outside this current network of protected areas explored. This protected area model must incorporate local wishes and succeed in working with lived-in landscapes that present a meeting place for human needs and conservation of natural resources, especially in wildlife dispersal areas and pastoral community rangelands of Kenya. This paper discusses the weaknesses of the National Park Model, presents the threats facing biodiversity resources in Maasai pastoral Group Ranches and advocates a Protected Landscape Model approach through the promotion of resource-based enterprises, development and conservation.

THE CONSERVATION OF natural resources in Kenya since the 1940s has been largely based on the National Park Model classified as Category II of IUCN network of protected areas in the world (IUCN 1986). This has been characterised by the government or local agencies identifying an area based on resource endowment criteria, displacing the local people, outlawing human settlement and designating it as a protected area. There are about 52 such protected areas in Kenya covering about 8% of total land (Nyeki 1993; Mwangi 1995). Now conservation in Kenya seems to be in crisis (Mwale 2000) partly because of this singular model approach and exclusion of local community interests. In a new study, Okello and Kiringe (2002) have looked at the relative magnitude and types of threats to the protected areas of Kenya. The aim of the study was to determine viability and current status of protected areas and thus assess the status of conservation in Kenya. At the moment, 62% of all Kenya's protected areas are threatened; 40% significantly and 22% increasingly under threat (Okello and Kiringe 2002). Further, the threat index of all protected areas is relatively high (58% to 60%), with all marine protected areas and about 88% of forest/mountainous protected areas being significantly threatened.

Unless a conservation alternative to the Category II National Park Model is explored and applied extensively, national parks and reserves will unfortunately remain the only final frontier for the conservation of biodiversity under prevailing circumstances. No conservation outside these protected areas will be possible, consequently leading to loss of great diversity of biological resources in Kenya (IUCN 1990; Mwale 2000). Given that more biodiversity and representative ecosystems are located outside the current network of protected areas in Kenya, the loss of biodiversity is likely to be very significant. It will need more than conservation policies to reverse this situation. Government and development agency roles, policies, management regimes and practices need to be pro-active and responsive to changing scenarios. The strategy should be broad, target new conservation initiatives on a landscape level in and around existing protected areas and beyond them. An application of an alternative model of conservation that goes beyond park boundaries, involves local communities and bridges the hostile gap between conservation of natural resources ideals and the aspirations of indigenous local communities is urgently needed to safeguard vast landscapes of cultural, biological and historical significance in Kenya.

The Protected Landscape versus National Park Models

IUCN (1986) has put together six categories of protected areas and their characteristics in an effort to harmonise and document global conservation strategies. A protected area is formally defined as *“an area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means”*. There are now over 30,361 protected areas covering an area of about 13.25 million km² (about 10%) of global land surface (Beresford and Phillips 2000). However, as impressive as this looks, this network of protected areas does not sufficiently guarantee the conservation of biodiversity in the world (Aichison and Beresford 1998). Most countries, as well as important biomes and ecosystems, still fall below the threshold of the 10% area of protection strategy, agreed upon at the IVth World Parks Congress in Caracas, Venezuela in 1992. Even more critical is the fact that a majority (about 72%) of these protected areas are located in developed countries (Europe, Australia and North America) compared to developing countries where natural resources are increasingly under pressure due to degradation and over-utilisation to support their rising human population and fledgling economies.

While protected areas in Kenya are manifested as national parks, nature reserves, wildlife sanctuaries and community protected areas (areas endowed by natural resources and owned and managed by the communities for economic and other benefits), a majority of them fail to address some key aspects of the definition attributed to a protected area. The focus has mainly been on *“protection and maintenance of biological diversity and of natural resources”* and less on *“associated cultural resources”*. Further, great emphasis has been on *“managed through legal means”* and less on *“managed through other effective means”*. While Kenya has targeted mostly the conservation of wildlife, natural monuments, historical and archeological sites, few landscapes representing unique interactions between the environment and culture have been protected or recognised. Further, tribal or ethnic-based management regimes that represent *“effective management means”* have not been recognised or legitimised. This bias in emphasis has led to protected areas being synonymous with exclusion of humans and their activities, protection of wildlife and other natural resources and management enforced by government through legal means. We believe that this is largely responsible for the crisis of conservation in Kenya where resources outside protected areas have been exterminated or are under severe persecution. It also explains the unpopularity of protected areas among Kenya’s local communities. Most protected areas have also increasingly become insular and fragmented unviable conservation entities, which cannot guarantee conservation for posterity.

In order to address opportunities for greater conservation and address conservation outside parks/reserves, a serious consideration of a model that involves *“a working lived-in landscape/environment”* by man is necessary. A Category II National Park Model is defined as *“a natural area of land or sea designated to protect the ecological integrity of one or more ecosystems for present and future generations”*. On the other hand a Protected Landscape Model (IUCN Category V), which involves human activities and regarded by Beresford and Phillips (2000) as *“a conservation model for the 21st century”*, is defined as *“an area of land, with coast and sea as appropriate, where the interactions 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”* (IUCN 1986). These models differ in characteristics and scope. The Category II National Park Model essentially places more emphasis on undisturbed wilderness endowed with natural resources for conservation to the exclusion of human activities and development except for recreation and education (Sarkar 1999), while the Category V Protected Landscape Model encourages a working environment of high natural and/or cultural value so that safeguarding the integrity of this traditional interaction is vital to the protection, maintenance and evolution of such areas. The Category V Protected Landscape Model, though very suitable across many landscapes especially outside the current network of Kenya’s protected areas, has rarely been applied.

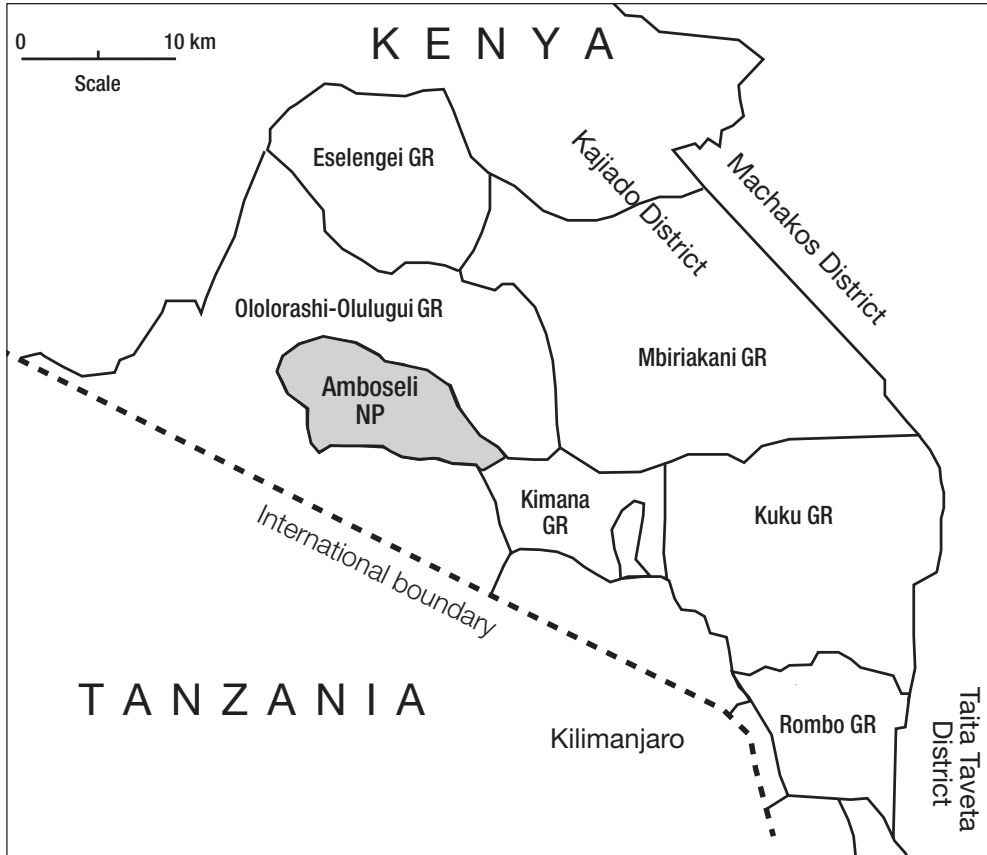


Figure 1. The Tsavo-Amboseli Ecosystem with the surrounding Maasai Group Ranches (GR). Source: Kenya Wildlife Service, 1996.

The Protected Landscape character of Maasai communal lands

Given the great demand for land in Kenya, designation of more protected areas based on the Category II National Park Model is becoming impossible. Local people now comprehend their rights and are supported by international human rights organisations. Many communities in Kenya, especially the Maasai, lost their land to colonial settlers and to ‘carving off’ land to establish protected areas without consultation or compensation. They cannot allow a repeat of conservation measures to be presented and implemented as they were in the past. Human population in Kenya continues to increase at about 3% annually (GoK 2001). Not surprisingly, the local people’s demand and dependence for sustenance on natural resources found on their land also continue to increase. Current benefits of conservation pass over to the central government rather than to local communities, making most protected areas resented and irrelevant to the local communities which continually shoulder lost opportunity costs and conservation-related losses. The only conservation approach that will work in Kenya outside protected areas, in wildlife dispersal areas and in communally owned lands such as the pastoral Maasai, Samburu and Turkana, will be the Protected Landscape Model because of its involvement of local people, its valuing of their culture and its encouragement of sustainable development within lived-in working landscapes.

The Maasai live in communally owned Group Ranches established in the early 1960s to discourage further loss of pastoral tribal lands. In the Tsavo-Amboseli area (Figure 1) there are six Group Ranches (Mbirikani, Kuku, Kimana, Eselengei, Ololorashi-Olulugui and Rombo)

where they live and work. This lived-in working landscape of the Tsavo-Amboseli area represents one of the major remaining wildlife conservation blocks in Kenya, which is inhabited by the renowned Maasai, an indigenous people of Kenya whose adherence to their cultural practices and pastoralism have won them international fame. Further, this area is a rangeland of outstanding visual quality and beauty with the world's largest freestanding mountain (Mount Kilimanjaro), associated with the scenic Chyulu Hills.

The area also has one of the most abundant free ranging wildlife (especially large mammals) concentration. It is for this reason that the world famous Tsavo and Amboseli National Parks are located here, surrounded by the Maasai in their Group Ranches. It is still common to see herds of zebra, wildebeest and gazelles harmoniously grazing side by side with Maasai livestock. Wildlife live and move freely among the parks, Group Ranches, community wildlife sanctuaries and other dispersal areas in the ecosystem covering an area greater than 6,000 km².

Given that the Group Ranches have been endowed with great biodiversity, physical features and cultural attraction, characteristics of the Category V Protected Landscape Model conservation have been practiced and maintained for years. Group Ranch affairs are managed by an elected leadership, which is mandated to regulate use of plant, water and land resources. The leadership group also regulates human migration and settlement patterns in the landscape and ensures free access to pasture and water for all members. Wildlife and other natural resources are often unharmed and allowed to share the land. This has been the case for most pastoral, communally owned lands in Kenya for years and did not change with the evolution of community Group Ranches in the 1960s.

The workings of the Protected Landscape Model in the area

The community level management regime fulfils the important requirement of a protected area being *"managed through other effective means"* and not always necessarily *"managed through legal means"*. Most characteristics of this management regime have conformed more to the characteristics and objectives of the Category V Protected Landscape Model. Characteristics such as lived-in working environments, harmonious existence between nature and culture through the protection

Kilimanjaro – Africa's tallest and the world's largest freestanding mountain. It is a big aspect of marketing Amboseli National Park and the Community Wildlife Sanctuaries. Photo: Bobby E.L. Wishitemi and Moses Makonjio Okello.



of landscape, continuation of traditional land uses (such as pastoralism), social and cultural manifestations (such as Maasai artefacts, traditional homesteads or *bomas*, song and dance and dressing code), land use practices that are compatible with nature (such as wildlife conservation and pastoralism), maintenance of biological diversity, provision of public enjoyment through recreation and tourism and benefits to local communities (as in *cultural bomas* where cultural artefacts, song and dance are presented to paying tourists) all fulfil characteristics of Protected Landscape Model.

Vast areas of the Tsavo-Amboseli landscape are managed by a mosaic of different Maasai local communities. These Maasai landscapes provide an informal showcase of the protected landscape areas managed by local communities through their leadership. With Group Ranches being legally recognised land parcels in Kenya and their leadership recognised in legal structure, the lack of the name of working environments is not an issue, rather the key is the application of its principles and requirements of lived-in protected landscapes with biodiversity and cultural lifestyles, interacting for the benefit of the local communities. The greatest impediment to this model as applied in communally owned landscapes of Kenya has been lack of public funding or other incentives to maintain that character of the landscapes.

It is in recognition of the importance of these landscapes that the African Wildlife Foundation (AWF) has its "Heartland Project" and several initiatives under *Conservation of Resources through Enterprise (CORE)* projects focusing on the Amboseli-Longido area that comprises the Tsavo-Amboseli ecosystem in Kenya and the Longido plains across the border on the Tanzanian side. This area has large herds of large mammals, including elephant populations, which have been studied by a long running research project in Amboseli. Cynthia Moss's Amboseli Elephant Research Project (AERP) has produced valuable information on elephant social organisation and behaviour. They are committed to elephant conservation, but have realised that elephants need more space than found in Maasai Group Ranches and have enlisted local support by educating the Maasai on the importance and benefits of elephants in local tourism.

The AERP has also provided incentives by awarding compensation money when elephants kill Maasai livestock. This compensation scheme as well as the central role of elephants in community wildlife sanctuaries is changing negative attitudes to elephants, wildlife and

Chyulu – the beautiful landscape and physical feature attractions of the Chyulu Hills. Photo: Bobby E.L. Wishitemi and Moses Makonjio Okello.



conservation. With tourism investors leasing areas within Group Ranches for lodge establishment, community wildlife concession areas, scenic tourism areas such as the Chyulu Hills and community wildlife sanctuaries, the Maasai are beginning to benefit directly and significantly from wildlife.

This explains the desire for each Group Ranch to establish its own wildlife sanctuary, which then attracts international tourism investors like the African Safari Club that is currently leasing Kimana Community Wildlife Sanctuary for over Ksh. 7 million per year compared to less than Ksh 0.25 million annually the Group Ranch was receiving when it ran the sanctuary on its own. Other areas in Kenya where the Protected Landscape Model can be seen is in pastoral areas in Samburu and the vast mosaic of private land owners in Laikipia where also AWF has a presence. This underscores the importance of economic incentives and central community roles for the Protected Landscape Model to be viable.

Impediments to the viability of the Protected Landscape Model in the area

The rangeland landscapes in the Tsavo-Amboseli area, where cultural and biodiversity conservation under principles of Protected Landscape have been exemplified over the years through community management regimes, are under siege. A number of changes are taking place that threaten this interaction between culture and nature and is driven by both internal and external forces. The Maasai population in Group Ranches is slightly over the national average and therefore increasing pressure on plant, animal and land resources. This is leading to serious decline of ground plant cover and hence degradation of the landscape. Shrub and trees take longer to grow in these range lands that receive less than 500 mm of rainfall annually. These plant resources are heavily used for establishing temporary Maasai shelters and *bomas* that change about every five years. Shrubs and trees are also increasingly used for wood fuel and charcoal production, fencing of homesteads and farms and cattle sheds. Since the land is communally owned, there are insufficient and inconsistent incentives for cultivating stewardship of resources, leading to loss of plant cover and resulting soil erosion that seem to go unnoticed or are simply ignored by the community.

The collapse of the beef industry in Kenya and lack of expertise in livestock husbandry has continually eroded pastoralism as a means of economic livelihood among the Maasai. Without government incentives or a properly established beef industry to encourage efficient marketing and pricing for the Maasai livestock, alternative economic means, even though incompatible with cultural and natural resource conservation, have started to gain popularity. The impoverishment of the Maasai is obvious and their daily struggle for survival so vivid that it is not surprising to see them start embracing agriculture in marginal rangelands or convert every wetland and riverine habitat for cultivation. The rivers and their scarce water resources are frequently diverted to irrigate horticulture farms that are providing direct and more significant household income than both pastoralism and conservation combined. Oloitokitok and Kimana areas are leading in production of onions, tomatoes and vegetables. In a recent study on land use changes (Okello and Nippert 2001), over 89% of the local community in the Tsavo-Amboseli area now practice both pastoralism and agriculture, with about 9% practicing only pastoralism. This means that traditional lifestyles are shifting significantly towards cultivation to provide alternative income to declining pastoralism. Further, over 96% of local community members support agricultural expansion as a land use alternative. This change is incompatible with conservation and will endanger biodiversity conservation.

Agricultural expansion does not only destroy natural habitats and alter the character of rangeland landscape, but will fuel the human-wildlife conflicts as wildlife destroy crops more frequently than they harm livestock. Over 40% of Group Ranch members experience crop damages annually by wildlife compared to only about 21% who experience livestock losses (Okello and Nippert 2001). Annual combined losses of both crops and livestock to wildlife

become of even greater concern to local communities as over 64% of community members incur both crop and livestock losses annually. These losses of crops and livestock to wildlife, as well as human deaths, insecurity and human injury have reduced support for conservation. Although traditional interaction over the years has created great tolerance for wildlife among the Maasai, with over 62% of the community still thinking that wildlife should roam freely on their land and 92% stating that wildlife conservation is important, a majority of them are now supporting destructive and incompatible land uses such as agricultural expansion and a further majority of over 86% are supporting and demanding Group Ranch subdivision into individually owned land parcels. A number of Group Ranches (such as Kimana and Mbiriakani) have already done partial sub-division while others are in the process of doing so. Further, a majority (91%) of Group Ranch members think that complete subdivision will soon occur, thereby permanently changing the character of Maasai landscapes as conservation and cultural entities. This, despite a majority (77%) thinking that subdivision will further negatively affect pastoralism particularly communal access to grazing lands, pasture and water. Equally, more Group Ranch members (over 75%) acknowledge that Group Ranch subdivision will negatively affect natural resources, particularly wildlife conservation (Okello and Nippert 2001).

With about 60% of the local community being illiterate and/or with very low levels of education, changing attitudes and opinions by creating awareness through formal education may be less successful. The negative impacts of a land use shift to agriculture that will alter their culture and conservation need to be explained clearly and consistently to them. However, many local communities are demanding education as a key incentive together with household cash and access to natural resources (such as water, pasture, firewood and plant resources). The solutions many local communities are seeking increases human-wildlife conflicts. The absence of a benefit from conservation seems to be increasing a *separation* rather than *integration* of culture and nature in the landscape. Fencing and/or translocation of wildlife has the support of over 75% of the local communities. Most of them (78%) support the creation of *fenced in* community owned wildlife sanctuaries from which they can benefit, but be separated from, so that they can practice other land uses such as pastoralism and agriculture (Okello and Nippert 2001). In 1996, the Kimana Group Ranch formally became the first community owned wildlife sanctuary in Kenya. Other Group Ranches such as Eselengei, Ololorashi-Olulugui, Mbiriakani and now Kuku Group Ranches have or are in the process of voluntarily setting aside a section of their Group Ranches as exclusive wildlife sanctuaries or wildlife concession areas and benefiting from the lucrative tourism industry in the area (Okello and Kiringe 2002).

These changes to the landscape character where culture and natural resources so perfectly integrated in a working landscape is due to the economic impoverishment and lack of incentives within a framework of changing socio-cultural and religious fabric of the Maasai people. Despite great opportunity costs of allowing wildlife on their private communally owned lands, the Maasai continue to shoulder wildlife-related damages without compensation (banned in 1977) from the government. Meanwhile, the government continues to draw large amount of foreign income from parks (Tsavo and Amboseli), Maasai traditional lands that were taken away from them without compensation or consultation. As international tourists enter and leave their backyard, all the Maasai can do is sell carvings, sing traditional songs and dance for meagre benefits while the government takes all. This has to be reversed so that the community directly benefits from the lucrative tourism industry through appropriate incentives and economic partnerships with tourism investors so that they receive direct and significant income from the wildlife found on and around their land. However, with threats like Group Ranch sub-division, agricultural expansion, corruption and lack of transparency within Group Ranch leadership, lack of skills and stewardship spirit that is exemplifying the 'tragedy of the commons', conservation progress in the ecosystem is threatened and the current landscape character in danger of collapse.

Nested National Park Model in the Protected Landscape Model: the pitfalls

The Protected Landscape Model and character has been in place in the Maasai rangelands and working well for culture and nature even without formal recognition or legitimisation. Communities had a management regime headed by its leaders and allowed regulated access rights to and use of natural resources (land, pasture, water, animal and plant resources) for all its members similar to the Hima system of Saudi Arabia (Draz 1965). Traditional systems of resource conservation can sustain societies for centuries and have both a cultural, ethical and conservation rationale. Such traditional regimes form authentic models of range and resource conservation. The emergency of the Group Ranch system in the 1960s for communal pastoral tribes enabled them to exhibit the character of Protected Landscapes with management regimes embedded in community structure and leadership rather than in central government. However, lack of formal recognition of these old regimes of range and resource management as a legitimate network of conservation by government has led to lack of support and the public incentives necessary to maintain the character of these landscapes. Instead, as with the Maasai, the Kenyan government has done the opposite: encouraging and providing incentives for agricultural practices, shift to sedentary lifestyles, lack of community empowerment in conservation and lack of incentives to the community to maintain a pastoral lifestyle. It is this that is leading to a change in the traditional landscape character and harmonious interaction of culture and nature with these landscapes.

What we now see is an evolution of community wildlife sanctuaries based on park model nested within a working lived-in Protected Landscape. This may be aiming to imitate the government-run parks and reserves and compete for the lucrative tourism income flowing into the area. However, these community wildlife sanctuaries (such as Kimana) exclude human settlement and use of resources (Okello and Adams 2002) by locals and livestock (especially when leased by tourism investors). This is contrary to and in negation of the principles of the Protected Landscape Model and character of the area. It is precisely for this reason that some community members are against the evolution of these community owned wildlife sanctuaries, or if they support their establishment, are against foreign investors leasing them for the tourism business (Okello and Nippert 2001).

Further, the community sanctuaries are usually too small in area to be viable conservation units. They represent a fragment of the entire ecosystem and violate good design approaches based on principles of island biogeography (Soulé *et al.* 1979; Western and Ssemakula 1981; Young and McClanahan 1996). When these community wildlife sanctuaries are established in isolation from other protected areas, without linking them by corridors, they go along the same path as the increasingly challenged and failing National Park Model in Kenya. Most national parks and reserves in Kenya are too small to be viable. It is for this reason that many of them must depend on private lands outside the protected areas as wildlife dispersal and migratory areas. With human encroachment and different land use priorities outside parks/reserves, biodiversity loss outside protected areas, especially in migration corridors and dispersal areas is inevitable (Mwale 2000). Parks such as Nairobi and Nakuru are now severely affected by loss of dispersal areas (Western 1997). Community based wildlife sanctuaries based on the National Park Model will suffer similar fate with time. Restoring the character of the Protected Landscape Model that allows working environments that promote compatible cultural and conservation lifestyles on a landscape level is inevitable in pastoral communal lands and in other wildlife dispersal areas.

However, we also see the establishment of nested community wildlife sanctuaries in Protected Landscapes as an important way for communities to benefit directly and significantly from conservation, especially where public financial support and incentives are absent. We recognise the immense potential for earnings from such areas which are likely to improve attitudes to resource conservation and legitimise conservation as a beneficial land use option. However, we think that the small park model inspired community wildlife sanctuaries nested

in a Protected Landscape Model is unnecessary as these landscapes should be maintained and supported through the provision of economic incentives for the benefit of the local communities without changing the nature and character of the landscape either in part or as a whole. The protection of these landscapes as a whole would provide a larger area for continued interactions of culture and nature and guarantee the pastoral lifestyle that is now threatened by Group Ranch subdivision, changing socio-cultural and land use practices. Protected Landscapes provide for a greater variety of habitats and ecosystems for diverse wildlife species and maintain the biodiversity character of the area. With proper incentives, incompatible land use practices such as agriculture can be minimised or confined to appropriate areas. Transparent and accountable local management structure can empower the local community and revive the declining spirit of resource stewardship by helping cement the traditional social and cultural fabric of the community.

The socio-economic and land use changes in the area (Sindiga 1995) are supported by the government and fuelled by the lack of public economic incentives, lack of recognition of the special landscape character and marginalisation of the Maasai from decisions and involvement in conservation issues in the area. Emergence of community wildlife sanctuaries within the landscape is evidence of the community's strong desire to directly benefit from conservation and tourism, the dissatisfaction with economic handouts from conservation rather than community empowerment, the appreciation that wildlife resources on their land is for them and their benefit and the desire to be involved in decisions regarding the natural resources on their land. That is why a majority (75%) of Group Ranch members with wildlife sanctuaries on their land want a new, transparent, accountable local committee to handle the wildlife sanctuary and ensure equitable sharing of income (Okello and Nippert 2001). Few of them (less than 2%) want their land leased to foreign investors, especially if they will disallow cattle grazing and access to pasture and water in the wildlife sanctuary and therefore inhibit their lifestyles. Local members want a wildlife sanctuary that will allow them access to resources such as water (40%), pasture (73%), plant resources (36%) and land for settlement (10%) especially in seasons and times of severe scarcity. This confirms that even with emerging community wildlife sanctuaries, the characteristics of working protected landscapes with community members involved, benefiting and economically developing are still strongly desired.

Other benefits apart from access to resources could directly come from the potential for ecotourism (Okello *et al.* 2001). The important characteristic of recreation and associated economic returns can easily be realised for the community wildlife sanctuaries in the Tsavo-Amboseli area. Located in an already heavily marketed area by Tsavo and Amboseli Parks, it will tap into an already available tourism market. But in order to avoid potential competition with existing national parks, diversification of tourist activities and attractions such as bird hunting, walking safaris, camel and horse safaris is necessary. The scenic beauty of the Kilimanjaro and Chyulu Hills adds to the attraction of this area, together with cultural experiences the Maasai people can offer. There are also tourists who will visit community owned sanctuaries if they realise it is directly benefiting and supporting local communities that shoulder the burden of wildlife losses. A majority (71%) of tourists come to Tsavo-Amboseli area to see wildlife as the number one attraction (Okello and Adams 2002). Most tourists (89%) visit the ecosystem for pleasure rather than for business and therefore deliberately plan on touring. Other than wildlife, some tourists visit the area for scenic beauty (18%) and some for culture (3%). A majority of tourists (65%) are willing to visit community owned wildlife sanctuaries and even more (90%) tourists coming to the area would prefer that a portion of the fees they pay directly benefits the local people. Sixty-four per cent of tourists who came to the area visited *cultural bomas* and a majority (73%) of those who did not visit *cultural bomas* would visit if they were told of cultural attractions exhibited there. These facts support the potential of cultural tourism and income from tourists that would enhance the value of these protected landscapes. Further, confining agriculture

to only designated suitable areas in a comprehensive land use plan would help maintain the character of these landscapes.

Conclusion

A Category V Protected Landscape Model, even without formally being regarded so, has been applied, promoted and maintained in Maasai communal rangeland landscapes of the Tsavo-Amboseli area in southern Kenya. This has helped promote the interaction of cultural and natural resources together with the biodiversity of the area. The Maasai culture and lifestyle has interacted with the physical and biological environment for years to produce a distinct landscape that has supported pastoralism lifestyle as well as conservation of biodiversity. The greatest impediment has been the lack of formal recognition by government of the cultural and biological character of these landscapes, the threat of Group Ranch sub-division into individually owned parcels of land, lack of public support and incentives to keep this landscape character intact and rapidly changing socio-economic aspects (such as land use changes). With the evolution of community wildlife sanctuaries nested within the Protected Landscape Model, conservation as well as economic benefits from ecotourism will provide for the lacking economic incentives and support to make the Protected Landscape approach truly viable in the area. This would then provide a blueprint for further protection of biodiversity of resources in working landscapes outside protected areas

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A Category V Protected Landscape approach to buffer zone management in Nepal

PRABHU BUDHATHOKI

One of the pressing challenges resource managers have been facing all over the world is conflict with local communities in resource management. Buffer zone concepts have been adopted as a strategy to address these issues making a good balance between the long-term objectives of protected areas and immediate needs of the people living in and adjacent to these areas. Although the application of the buffer zone concept is quite new, it has been emerging as a viable strategy in linking ecological and economic objectives. This paper presents an overview of biodiversity conservation paradigms and emergence of buffer zone initiatives in Nepal. It also describes strategies and approaches adopted to translate the buffer zone concept into practice. The buffer zone management programme of Nepal has been adopting a Category V Protected Landscape approach to biodiversity conservation, sustainable human development and community development based on principles of community mobilisation and self-reliance. The innovative experiences of Nepal in buffer zone management can be useful in other countries interested in pursuing a Category V Protected Landscape approach.

NEPAL IS A SMALL, LANDLOCKED COUNTRY in the southern lap of the Himalayas, surrounded by India and China, having extreme climatic and topographical variations. With only 0.1% of the world's total surface area, the country contributes over 2% of the flowering plants, 8% of the birds and 4% of the mammals (BPP 1995). Nepal is home to many globally endangered, vulnerable or threatened animal species, which include the tiger (*Panthera tigris tigris*), one horned rhino (*Rhinoceros unicornis*), gaur (*Bos guarus*), snow leopard (*Panthera uncia*), Ganges River dolphin (*Platanista gangetica*), gharial (*Gavialis gangeticus*) and giant hornbill (*Buceros bicornis*). In the global context of biodiversity richness Nepal is believed to be in twenty-fifth position (NBAP 1998). This exceptionally rich repository of biodiversity carries both national and international significance.

Establishing national parks and other forms of protected areas (PAs), has been adopted as a key conservation strategy to protect the rich natural heritage of the country. Impressive networks of protected areas that cover more than 18% of the total surface area of the country have been created within two decades. Strict restrictions on the use of park resources have been imposed to control resource degradation. To date, the country has 16 protected areas of different categories (Figure 1). The land mass designated as PAs in 2000 was around 27,000 km², which is more than six times the 1973 area (Figure 2). This shows the great commitment of Nepal to the conservation of biodiversity despite being one of the world's most economically underdeveloped countries.

However, the success of conservation is not always beneficial to the people of Nepal. The strict protection measures which deny traditional resource use rights have come into direct conflict with the local communities as their livelihood is threatened. Additionally, increasing livestock and crop depredation has been another main source of park/people conflicts. Due to restrictions inside the protected areas, extractive activities have been intensified in the surrounding areas causing severe damage to ecosystems (Shrestha 1999). The population and its associated demands are exerting pressure on the natural resources, which in many cases have already reached the threshold point. For example, more than 250,000 people (40,000 households) living around the Royal Chitwan National Park in the buffer zone (BZ) are turning the national park into a green island amidst the sea of people. This indicates that in the long run, an island approach to conservation seems to be self-defeating in both ecological and socio-economic terms.

Figure 1. Protected areas of Nepal.

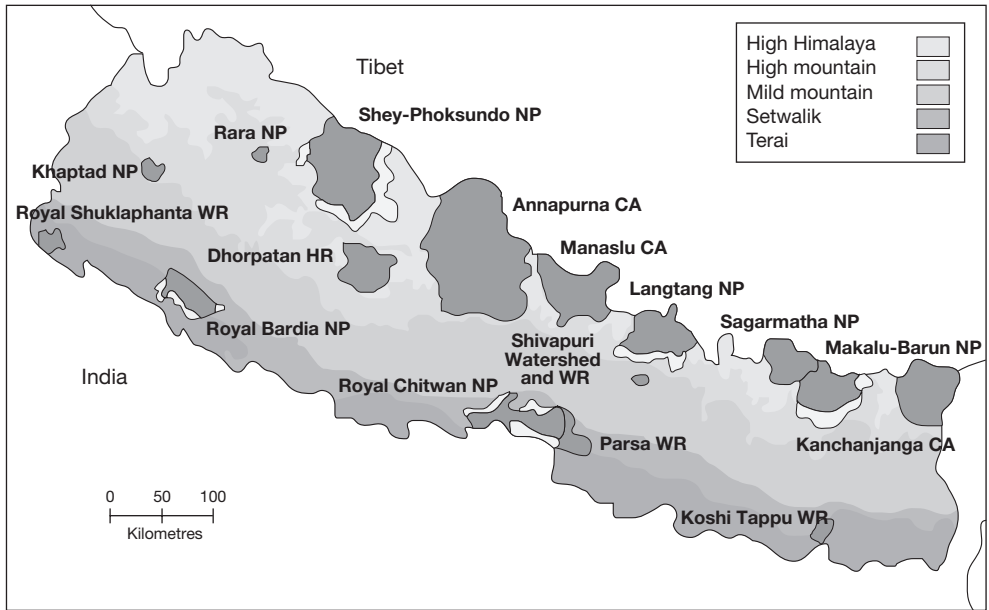
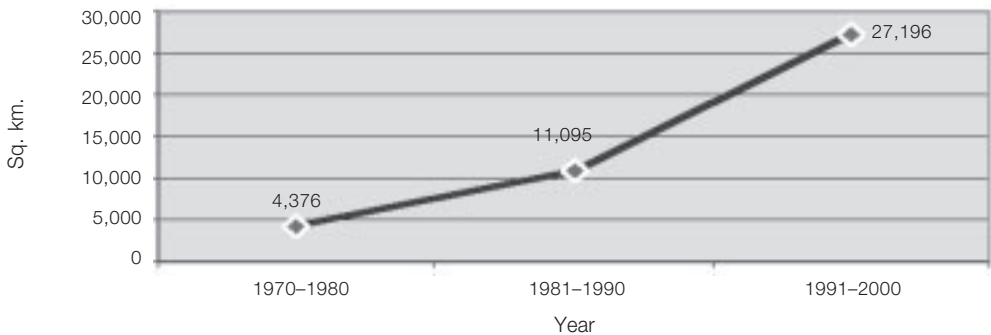


Figure 2. Trend of protected area establishment.



Despite mounting efforts over the past two decades, threats to sustainable biodiversity conservation continuously exist in different forms and scales. A conservation approach based on a people-exclusive model is not sufficient to manage protected area systems and conserve the biodiversity of Nepal.

This situation has demanded an appropriate strategy that could ensure the balance between the immediate needs of the local people and the long-term objectives of the PAs. It has been generally believed that the future of national parks largely depends on the better management of the areas outside the parks and with the cooperation of local communities. The introduction of the buffer zone (BZ) concept in 1994 in protected area management has been a benchmark in linking conservation with human needs. In the case of Nepal, an area surrounding the park or reserve, encompassing forests, agricultural lands, settlements, cultural heritages, village open spaces and many other land use forms, has been considered as a buffer zone (HMG/N 1996). This means BZ expands conservation opportunities beyond boundaries where a great extent of human modification has taken place. The BZ areas will function as an ecological link between the park and the wider area as BZ forests are managed with a multiple use concept that promote conservation-friendly practices through community participation (see Box 1).

Box 1. The buffer zone area – an example of the Protected Landscape approach.

The Royal Chitwan National Park (RCNP) was established in 1973 as the first national park of Nepal to conserve attractive wilderness areas and the habitats of many endangered wildlife species such as rhinoceros (*Rhinoceros unicornis*) and tiger (*Panthera tigris*). Although a complete inventory of biological diversity in RCNP has not yet been accomplished, an outstanding biological richness with 570 species of flowering plants, 50 mammals, 486 species of birds, 17 reptiles and 68 fish species have been recorded so far (BPP 1995). Recognising its unique biological resources, UNESCO designated RCNP (IUCN Category II of Protected Area) as a World Heritage Site in November 1984. The total gazetted area of the park is 1,682 km², which includes 932 km² under core area or park and 750 km² area under buffer zone¹.

The buffer zone of RCNP was declared in 1996 and is spread over four districts, 35 Village Development Committees (VDCs) and two municipalities having about 510 settlements, with a population of 223,260. About 43% of the buffer zone is still covered by forest (DNPWC 2000). Some of these forest patches in the BZ are important animal refuges and comprise the last remaining corridors linking RCNP with wider montane ecosystems to the north and Indian Wildlife Sanctuaries to the south. The buffer zone forest also serves as a main source of forest resources where forest area ranges from 0.1 ha to 2.1 ha per household (DNPWC 2000). Besides biodiversity, RCNP and its BZ are also known for various cultural and historical sites. The BZ area is an excellent mosaic of various ethnic tribes, both indigenous as well as hill migrants. They possess a wealth of knowledge on the use and management of biodiversity. The cultural and religious values and customs associated with them are very impressive and a good blend of nature and culture.

¹ GPS survey of the park boundary based on 1992 maps show a total park area of 1,182 km². Similarly, current GPS survey of the buffer zone boundary based on 1992 maps show a total area of 766 km² (DNPWC 2000).

Declaration of a BZ provides opportunities for local people to use forest products on a regular basis (HMG 1996). The Buffer Zone Regulation (1994) has also opened an avenue for sharing park benefits with local people living in the BZ. Park authorities are allowed to recycle 30 to 50% of the park revenue in the development of BZ areas. To date BZs in six national parks (two in the Terai and four in the mountains) have been delineated and subsequent delineation in other PAs is under process. Various projects including the Park and People Project (PPP) have been supporting the government in the better implementation of the BZ initiative. Since 1997 more than US\$ 700,000 of park income has been recycled to implement conservation and development activities in these areas.

Implementation strategy

The BZ initiative has been introduced as a new strategy to conserve biodiversity by addressing the impact of local people in the protected areas and the impact of the protected areas on the local people (Figure 3). The BZ programme in Nepal has adopted a Category V Protected Landscape approach to resource conservation and sustainable human development, based on self-reliance and community mobilisation principles. It aims to provide an alternative natural resource base and livelihood opportunity to BZ communities, so that their dependence on national park resources is minimised resulting in park/people harmony for long-term biodiversity conservation.

The programme also advocates a community-based approach to conservation of park resources by forging partnership arrangements between community organisations and park authorities. The underlying principle of BZ management is expanding partnership in conservation, which broadens conservation constituencies and democratic environmental governance. In Nepal, community mobilisation for buffer zone management has been based on the principles of developing four capitals at the local level (Figure 4) and has embraced the following approach:

Figure 3. Conceptual strategy of BZ management.

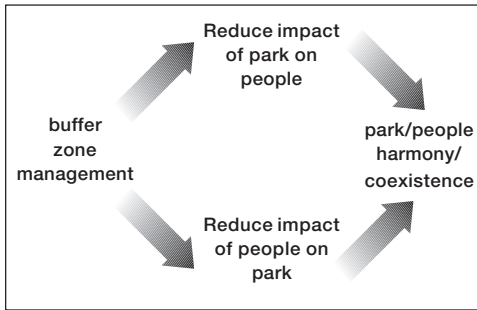
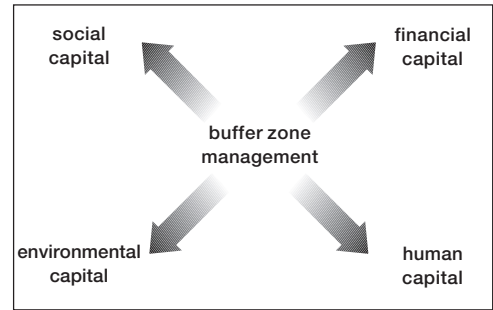


Figure 4. The four capitals of BZ management.



- motivating, organising and mobilising community men and women into self-governing, self-functioning and self-reliant community organisations;
- encouragement to mobilise financial capital resources through the promotion of community saving schemes;
- enhancing capacity of community organisations through training and skills; and
- entrusting resource users with the rights to manage natural resources/environmental governance.

Social capital

Biodiversity conservation requires active participation of all the people influencing the resource use practices. Developing cohesive and self-reliant organisations at the grassroots level has been considered as an effective tool for empowering communities to undertake sustainable community development and conservation activities.

So in BZ management the park adjoining communities, both men and women, have been mobilised to form User Groups (UGs). Participation of all households in the mobilisation and decision-making is essential. These settlement based community organisations (UGs) have been federated to form User Committees (UCs) at the Sector or Range Post level. The chairpersons of these committees form a Buffer Zone Development Council (BZDC) at the national park level where Park Wardens act as a member secretary (Figure 5). The BZDC is entrusted to mobilise their share of the park revenue for the conservation and development activities in the BZ through users' committees and groups. User Committees will submit a programme of their needs and priorities to the BZDC after intensive consultation and endorsement from the users' meeting and by adopting well-defined criteria (Table 1). Other criteria of disbursing funds are the size of the UG or population coverage, impact of UG on the national park, impact of park on people, geographic location (proximity to park), community willingness to participate in the process and support from other agencies.

As a process of building partnership and ownership, the community should contribute at least 25% of the project cost. The community development activities should fulfil five criteria to achieve funding; namely a) productive, b) 'do-able' or within the reach of people's capacity, c) equitable, d) sustainable or can be maintained by local efforts after the hand over of the project; and e) conservation-friendly, (Budhathoki 2001).

Financial capital

The financial capital is considered to be the backbone of self-reliant institutions. The UG members have been encouraged to adopt weekly saving schemes to generate their own financial base. The frequencies of saving are given more importance than the amount of saving in order to develop the saving habit. The community capital generation scheme has been introduced not

Figure 5. Community organisational structures for buffer zone management.

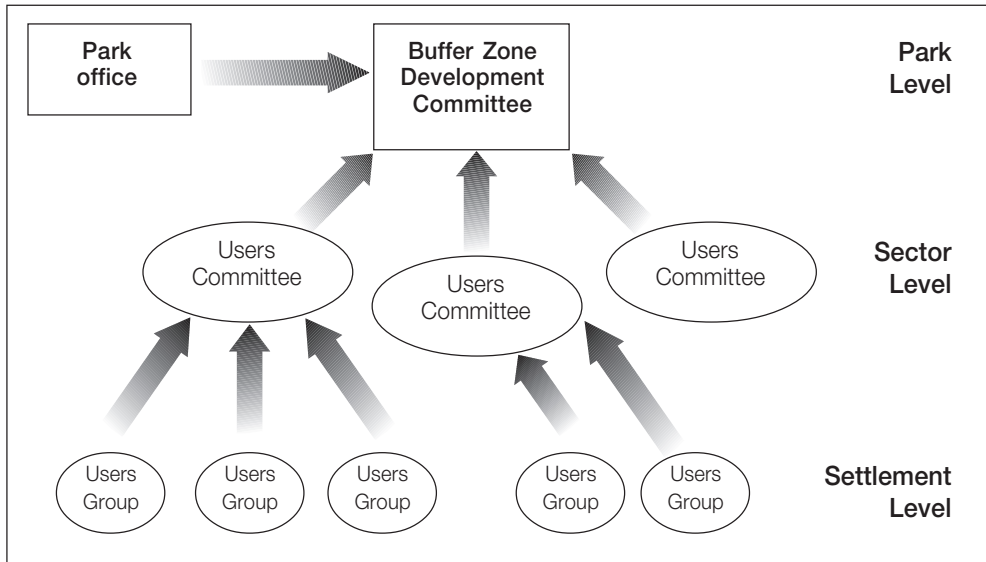


Table 1. Programme selection criteria (HMG 1999).

1. Conservation programme	30%
2. Community development	30%
3. Income generating and skill development programme	20%
4. Conservation education programme	10%
5. Administrative expenses	10%

only to create an internal financial capital base at the local level but also to inculcate the habit of saving natural capital and to reduce the external dependency syndrome. Women have been especially mobilised to adopt saving schemes as means to empower them. UGs have been utilising Internal Capital Fund (ICF) for the provision of small credit facilities to their own members for productive use to uplift their social and economic conditions. Resources contributed to the scheme will be considered as a contribution by each member to derive collective benefit from the organisation (UG). As the internal capital of UGs starts to grow they are facilitated to form credit cooperatives at the sector/committee level by pooling their surplus saving together for optimum mobilisation of capital within and among various UG members in a sustainable and transparent way. This alternative funding mechanism, if established fully, would be highly effective, particularly in those parks where there is little or no park income to fund BZ activities.

Human resource/capital

Enhancing community capacity has remained one of the core interventions to establish a park/people partnership in BZ management. It has been carried out to enhance the capacity of the BZ communities for:

1. laying the foundation for grassroots institution development;
2. bringing improvements in the sector-driven service delivery in the community; and

3. improving the individual efficiency of UG members carrying out or willing to undertake socio-economic activities. Equipped with the necessary knowledge and skills, the community would be able to harness the benefits of conservation and mainstream developments going on around them.

This would be instrumental in creating alternative livelihood opportunities and poverty alleviation in the BZ areas. Various support packages have been designed to strengthen existing indigenous knowledge and practices as well as to introduce appropriate technologies and new skills.

Environmental capital

The sustainable management of natural resources in the BZ is equally important for conservation of protected areas and to sustain the livelihood of BZ communities. Community empowerment is the key to better management of environmental assets in the BZ. It develops a sense of ownership of resources and secures their access, encouraging people to invest in the conservation of resources. The key approach of resource management in the BZ is conservation through sustainable utilisation of natural resources. It has therefore been required that for the sustainable management of natural resources and biodiversity conservation in the BZ, local communities need to be involved in all spheres of resource management. The community forestry practices, which put buffer zone forests under community management, have been adopted for the restoration and conservation of environmental resources outside protected areas. Community forests have been considered not only an environmental asset and resource base to derive local resource needs, but also as a valuable and long-term asset for the community for their holistic development. It will ultimately broaden conservation constituencies to expand conservation beyond boundaries, which is very important for a wider landscape level conservation.

Proper management of Category V helps reduce dependency on the core area resources – local communities collecting grass from community forests in the buffer zone of Royal Chitwan National Park. Photo: Prabhu Budhathoki.



Lessons, challenges and opportunities

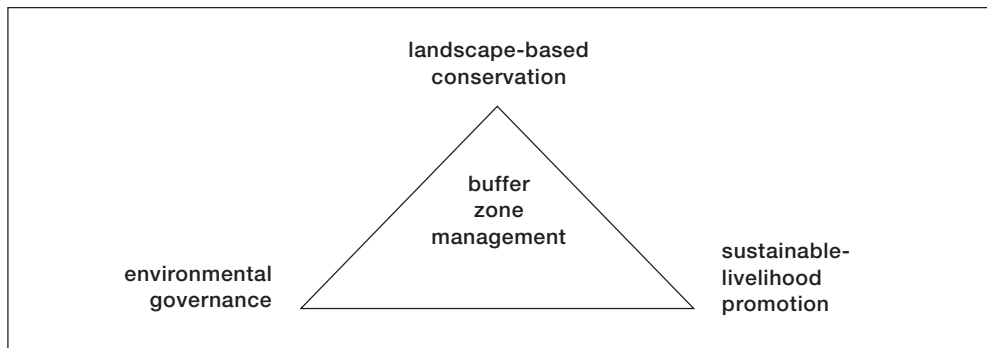
The BZ initiative of Nepal has been in the forefront when appropriating a fair share of conservation benefits to BZ communities for their holistic development. The implementation strategy is based on the careful integration of conservation and development priorities for the communities living in the landscape (Figure 6). It approaches livelihood issues of the local communities not only as an environmental imperative but also as an issue of social justice. The BZ initiatives, which are integrated and holistic, have been demonstrating positive results in addressing poverty, governance and conservation issues together. It has been fairly successful in turning situations from conflict to cooperation and coexistence. Complete resolution of conflicts will take time; however, it has been observed that the incidence of confrontations has diminished after the initiation of the BZ programme.

Preliminary indications are that there is increased cooperation from the villagers in tackling problems like grazing and wood theft (Kothari *et al.* 2000). According to a recent impact study, about one fifth of the UGs were found to support park authorities in detecting poachers and protecting wildlife. Park offences have decreased by 38% in comparison to 1994 (PPP 2000). BZ works have also been successful in increasing forest cover, wildlife populations and in earning income from the forests (Basnet *et al.* 1998; Kothari *et al.* 2000; PPP 2000).

Studies also indicate that about 40% of the UGs are now self-sufficient in forestry resources and this is expected to increase in the coming years as more forests are handed over to local communities. There is growing evidence of positive changes in social indicators including the rise in per capita income. The generation of community capital is very impressive, reaching about US\$ 600,000 in 2001 (within five years of its introduction). It is also encouraging to see growing participation of women (about 50% of UGs are women) in conservation. These well-founded mechanisms have encouraged communities to increase socio-economic development and conservation activities on their own initiatives. It is worth noting that community capital generation and mobilisation schemes have been helpful in directing park revenue into conservation-supportive activities.

Since the BZ initiative in Nepal is still very young it is too early to draw conclusions. There are still many gaps in policy and practices. Nepal has been adopting a benefit-sharing approach as a means to achieving people's support in conservation. People have been supported to create alternatives in the BZ so that restrictions to park resources could be better ensured. Policy still denies involvement of community institutions in the overall management of protected areas (both park and BZ) and access to park resources. The BZDC has not been fully empowered and currently acts as an advisory body to the warden to mobilise park revenue in the BZ programme. The BZ policy has been fairly weak in

Figure 6. Main elements of buffer zone management.



addressing decentralisation and community empowerment issues. It will take time to appreciate the empowerment approach in protected area management as Nepal has just embarked on an 'incentive based conservation approach' departing from the 'enforcement approach' of the past. The park and central institutions have not been reorganised to address the most promising but challenging conservation undertaking of the government. Slow progress in BZ declaration is another setback, resulting in a delay in recycling park revenue for community development. As yet there is no effective coordination mechanism that exists between park warden, other government agencies and local political bodies to bring synergy in conservation at the wider landscape level.

Although the need and necessity of sharing conservation benefits with people have been eloquently discussed, (Kothari *et al.* 1998; Borrini-Feyerabend 1995; Dudley *et al.* 1999; Ghimire and Pimbert 1997; Jeanrenaud 1999; MacKinnon *et al.* 1986), translating these concepts into hard reality remains a daunting task. Various approaches such as the Eco Development Programme in India, Campfire Programme in Zimbabwe etc. adopted in different parts of the world to expand conservation benefits beyond boundaries also have limitations and strengths (Kothari *et al.* 2000; Ghimire and Pimbert 1997). The systematic application of BZ is rather recent (Ebregt and Greve 2000) and is in the process of evolution.

However, the main strengths of the BZ programme in Nepal are well-formulated policy frameworks and a well-tested and balanced implementation strategy. Furthermore, the BZ programme fits well within mainstream development as it fulfils the major development priority of the government by assisting poverty alleviation and fostering sustainable livelihoods. The management strategy could address both social and ecological needs for long-term conservation support of people and landscape-level conservation. The important lesson to be drawn from these initiatives is the development of community institutions in the BZ and the generation of community capital.

Conclusion

The BZ management practices of Nepal are innovative and progressive. The BZ management strategy has been successful in demonstrating strong links amongst social, economic and environmental issues with an impact on the conservation of natural resources and livelihood promotion. It is widely accepted that the existing conservation policies and legal frameworks of Nepal are one of the most people oriented in the world, which allows park managers to share both resources and revenue with the local communities. It has well defined strategies to achieve equity, sustainability and harmony (ecology and economy) in BZ management. In Nepal, BZ management is not only a concept, it is a well-accepted conservation practice. In the long-term, proper management of buffer zones would turn park/people relations from conflict to cooperation and help create socially and ecologically stable areas around the protected areas of Nepal. This will ultimately turn park from an island condition to networks of different ecosystems.

It has been evident that without having a strong (self-reliant, self-governing and self-functioning) social organisation the true partnership between park and park-adjointing community for biodiversity cannot be achieved. Legal and policy frameworks and appropriate institutional arrangements are very important to increase the capability and capacity of the people. As BZ policy and the management strategy of Nepal are based on a careful integration of conservation and development priorities, they represent all the key elements of the Category V protected landscape approach. They have wider applications, with necessary local adjustment, for the development and management of Protected Landscapes adjacent to strict protected areas. However, it is also important to examine the strength, acceptance and adoption of this young and innovative conservation initiative for its further refinement.

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Partnerships and lived-in landscapes: an evolving US system of parks and protected areas

JESSICA BROWN, NORA MITCHELL AND JACQUELYN TUXILL

The United States' national system of parks has been evolving to include many different kinds of protected areas and a diverse array of stewards, including public agencies, NGOs, local communities, private landowners and others who live on and work the land. Increasingly, the new areas being added under the auspices of the US National Park Service (USNPS) involve 'non-traditional' designations that rely on partnerships, such as heritage areas and corridors and long-distance trails. The management objectives for these partnership areas often overlap closely with those of Category V Protected Landscapes/Seascapes. This paper reviews experiences from several regions of the United States where conservation objectives are being realised in lived-in landscapes through collaboration among diverse partners, including the USNPS and local communities. It reviews the findings from a recent workshop on partnership areas. With interest growing in the concept of a nationwide system of parks and conservation areas, the authors envision a broadening role for the National Park Service in working with others on stewardship of the American landscape.

THE NOVELIST Wallace Stegner, whose work is set in the wild open spaces of the western United States, once called national parks *one of the best ideas we ever had*. In the broadest interpretation of Stegner's words, this "best idea" is not a rigid one but constantly changing. While the experience of community-conserved areas confirms that human societies have been devising conservation regimes for millennia, long before governments created the first national parks (Borrini-Feyerabend 2002), the evolution of the national parks model has important implications for the future role of communities and governments in protected areas.

In the United States, as in other parts of the world, the national parks model has been evolving since the 'Y parks' – Yosemite and Yellowstone National Parks – first were established in the mid-nineteenth century. The creation of these first US National Parks was paralleled, during the same period, by the establishment of other formally designated protected areas in countries such as Canada, Australia, New Zealand and Brazil (Phillips 2003). The term, 'traditional North American model,' calls to mind a certain kind of protected area, a 'Y park' most likely: a large and wild place in which people are allowed as visitors, but not as residents. However, the reality today in the United States is a national system comprised of many different kinds of protected areas and a diverse array of stewards, including public agencies (such as the US National Park Service), NGOs (such as land trusts), local communities, private landowners and others who live on and work the land.

Increasingly, the new areas being added under the auspices of the US National Park Service (USNPS) encompass lived-in landscapes, whose management depends on partnerships. Called 'non-traditional units' or 'partnership areas,' they include long-distance trails (such as the Appalachian National Scenic Trail, which spans 14 states), wild and scenic rivers, and heritage areas and corridors. While these kinds of protected areas are familiar in the northeastern part of the country, with its longer history of settlement and high proportion of privately owned land, they are now found in every region of the United States. This trend can be seen also in Canada, where similar partnership areas are increasingly being designated (Mitchell *et al.* 2002).

Perhaps the greatest shift from the conventional national park model in the United States is represented by those areas where the federal government owns little or no land and management is overseen by a Congressionally authorised 'trust' board or commission of which the USNPS is

but one player. In these situations, the role of the federal government shifts, management responsibilities are shared and the partnerships become long-term. In the case of heritage areas and corridors, the impetus for designation often comes from local communities and non-governmental organisations. The USNPS typically plays an important supportive role, through studies that document the rationale for designation and by providing technical and financial assistance for a limited time after designation.

These partnership areas represent the majority of new designations being proposed to Congress. The recent experience with National Heritage Areas is one indication. There are currently 23 National Heritage Areas in 17 states, encompassing a total area of 158,635 sq miles, with a total population of over 45 million people. These areas were designated between 1984 and 2000. In the recent Congressional session (107th Congress), 37 bills were introduced proposing new Heritage Areas or planning studies for proposed areas. These bills comprised over half of the legislative agenda for the USNPS in the 107th Congress. There has also been an increase in proposals for Heritage Areas in western regions of the United States and new proposals include an expanding array of landscape types that encompass increasingly diverse populations. Another trend is that these areas are forming partnerships with existing national park units (Barrett 2003).

While not always fitting neatly within a particular protected area management category, these 'non-traditional' designations that rely on partnerships generally overlap closely with the management objectives of Category V Protected Landscapes/Seascapes. In this paper we review experiences from several regions of the United States where conservation objectives are being realised in lived-in landscapes through collaboration among diverse partners, including the US National Park Service and local communities. We review the findings from a recent workshop on partnership areas and discuss the growing role of partnerships in creating and managing protected areas in the United States. We also explore the idea of a national system of parks and protected areas that is currently under discussion.

Ebey's Landing National Historical Reserve

Established by Congress in 1978, Ebey's Landing National Historical Reserve encompasses 17,400 acres in the central portion of Whidbey Island in Washington State's Puget Sound. The Reserve contains a landscape rich in cultural history and natural variety. The scenic views are spectacular, whether looking west across Admiralty Inlet to the Olympic Mountains or toward the eastern horizon of the Cascade Mountains. Unlike the more traditional units of the US National Park System, people live and work within this landscape and the Reserve is managed through a partnership among the National Park Service, local and state government, and the private sector.

Whidbey Island's old glacial lakebeds contain some of the richest soils in the state and have attracted people as far back as 1300, when Native Americans cultivated these 'prairies' for growing favoured root crops. After the Donation Land Law of 1850 offered free land in the new Oregon Territory to any citizen who would homestead for four years, Colonel Isaac Ebey and other European-Americans filed claims on the prairies and shorelines of central Whidbey Island. Today, the old field patterns, fence lines and farm buildings of the early homesteaders are still visible in the landscape. While there has been some loss of farmland to development within the Reserve (indeed, it was such development that led to Reserve designation), some of the land is still farmed today by descendant families of the early homesteaders. Many long-time residents feel deep ties to the land.

But the story is much more than just farming history. Penn Cove, on Whidbey Island's protected eastern shore and the nearby abundance of tall timber in Whidbey's forests, attracted sea captains and shipbuilders. Captain Thomas Coupe claimed the shoreline acres that eventually became the town of Coupeville, the main town within the Reserve. Maritime trade along Penn



Ebey's Landing National Historical Reserve encompasses 17,400 acres in the central portion of Washington State's Puget Sound. The Reserve is managed through a partnership among the US National Park Service, local and state government and the private sector. Photo credit: Rob Harbour.

Cove, combined with farming, made Coupeville a thriving commercial centre. Once waterborne transportation gave way to land-based transportation, Coupeville was no longer a hub of Puget Sound commerce. Coupeville's prosperous past is reflected in the wide array of historic buildings that in 1972 were officially listed as the Central Whidbey Island Historic District. In addition, Whidbey's strategic placement at the entrance to Puget Sound brought a military presence to the island in the late 1800s, which remains today. Aspects of this military past are also preserved and interpreted through the Reserve (Gilbert *et al.* 1984).

The designation of Ebey's Landing as a national reserve grew from a decade-long controversy sparked by the question of whether to allow development of Ebey's Prairie, the most spectacular of the three major prairies and the heart of today's Reserve. The end result, after many twists and turns over the ten-year period, was unusual for the USNPS at that time. Ebey's Landing was the first unit of the National Park System intentionally set up to be managed collaboratively by a trust board of individuals representing the USNPS and state, county and local government. The Reserve is a 'partnership park,' in which the federal government's role is not as landowner, but as a partner with local residents and communities. This partnership works to protect a valued cultural landscape that visually documents the region's history, while also ensuring the public right to recreational access and enjoyment of scenic views (McKinley 1993).

From its establishment the Reserve has remained largely in private ownership. To fulfil the management goal of preserving the historic landscape of open space, farmland and historic settlements has meant, and continues to mean, close cooperation with private landowners. To this end, partners have relied on the tools of private land conservation, including purchase or exchange of development rights, purchase of scenic easements, land donations, tax incentives, zoning and local design review. Although today visitors to the Reserve can hike trails and seaside bluffs, stroll beaches, walk through Coupeville's historic district, and follow a driving tour outlined in an USNPS brochure, there is no large park presence. In the Reserve, farms are still farmed, forests are still logged, historic buildings are still used as homes and places of business.

The work and the challenge of this partnership lie in guiding and managing change in a way that respects the cultural values and historic landscape.

Ebey's Landing will always represent a balancing between the needs of the people and communities within the Reserve and the goal of preserving a historically important working rural landscape. While familiar to managers of protected landscapes elsewhere in the world, these challenges are relatively new for the US National Park Service.

The John M. Chafee Blackstone River Valley National Heritage Corridor

The heritage corridor designation has three broad purposes: to enhance and protect cultural landscapes and historic sites, to improve historical understanding and heritage appreciation and to stimulate community and economic development Drost 2001a. The John M. Chafee Blackstone River Valley National Heritage Corridor encompasses nearly 400,000 acres located within central Massachusetts and northern Rhode Island, along 46 miles of the Blackstone River. The national corridor was designated by the US Congress in 1986 to preserve and interpret for present and future generations the significant value of the Blackstone Valley. The corridor area includes 24 cities, towns, villages and almost one million people.

The valley's distinctive character was shaped by the American Industrial Revolution, which transformed the Blackstone Valley's landscape. Linked by the Blackstone Canal, many historic features from this era still exist including mill villages, roads, trails, dams and millponds. The Industrial Revolution also left behind distinctive living landscapes of neighbourhoods where ethnic traditions, languages and foods are still important parts of the culture. The Blackstone River Valley Corridor's natural areas, hilltop vistas, glacial outcroppings, verdant valleys and fields, and abundant water bodies, provide habitat for indigenous and migrating wildlife species and recreational opportunities for residents and visitors (Blackstone River Valley National Heritage Corridor Commission 1998).

Typical of areas with this designation, the Blackstone River Valley National Heritage Corridor is an affiliated area of the National Park System; however the federal government does not own or manage any of the land or resources in the corridor. Instead the National Park Service, the state governments of Massachusetts and Rhode Island, dozens of local municipalities, businesses, non-profit historical and environmental organisations, educational institutions and many private citizens, all work together in partnerships to protect the Valley's special identity and prepare for its future (Creasey 2002).

When Congress, recognising the Valley's national significance, established the Blackstone River Valley National Heritage Corridor in 1986, it also created a mechanism that would enable the residents of the Valley to preserve and protect the resources that give the Blackstone Valley its uniqueness. In order to set the wheels in motion, Congress established a unifying Commission to provide a management framework to assist the states and local government in the development and implementation of integrated cultural, historical and land resource management programs.

Operating within a working landscape of strongly independent New England communities, the Commission leverages limited human and financial resources to carry out an extensive and geographically broad mission. Without authority to own land or powers to regulate land use, the Commission has had to be diligent and entrepreneurial in its outreach and ability to be responsive to opportunities. To this end it relies on a combination of public education, public-private partnerships and 'targeted' investments. The Commission feels that its strength is its ability to integrate issues related to the environment, community development and preservation, land use planning and economic development.

The Commission had to reach out to other institutions and build cooperative linkages to address management issues within the Blackstone River Heritage Corridor. A good example is the creative approaches used to bring public attention to water quality problems along the river. According to the Corridor's Superintendent, Michael Creasy, "We knew that a typical 'Save our



The Blackstone River Valley National Heritage Corridor provides habitat for indigenous and migrating wildlife species and recreational opportunities for residents and visitors. Public education programs offered on the floating 'Riverclassroom' introduces local residents to the environmental, historical, economic and community values of the Blackstone River. Photo: Jim McElholm.

Watershed' approach wouldn't work here... so instead we brought people to the river to show them the potential benefits of the river to their communities and the local economy." The Commission forged partnerships with local institutions such as Chambers of Commerce, tourism councils and conservation NGOs. It takes local people out in canoes for tours and involves them in voluntary clean-up projects. It has built a 49-passenger boat to serve as a "Riverclassroom," is building a series of river landings along the historic canal and is establishing a bicycle path. These and other projects help to create connections among the many environmental, historical and economic and community values of the landscape. As Creasy notes, "the success of the Heritage Corridor is based on creating a vision and having people place value on something that others might not readily see" (Creasy 2002).

Other examples of designated heritage areas for industrial landscapes include the Delaware and Lehigh National Heritage Corridor and the Rivers of Steel National Heritage Area, both in Pennsylvania. The Delaware and Lehigh National Heritage Corridor is 160 miles long and follows the Delaware and Lehigh, a watered towpath canal with the longest period of service of any similar canal in the United States. The Corridor encompasses a region shaped by anthracite coal-mining, steel production and other manufacturing, and includes many communities established during the period of the canal's construction and operation in the mid-nineteenth century. A trail being developed within the corridor will link these communities and will intersect with existing trails, including the Appalachian Trail (DiBello 2001).

The Rivers of Steel National Heritage Area is located in southwestern Pennsylvania in the city of Pittsburgh, once the 'Steel Making Capital of the World.' A commanding force for over a century, the Pittsburgh steel industry – represented by steel mills lining the city's rivers – made possible railroads, skyscrapers and shipbuilding, while altering corporate practice and labour organisation in the United States. Rivers of Steel Heritage Area helps to preserve the region's cultural heritage and develop educational programming. Public hiking trails and riverboat tours link remnants of the old mills and communities founded by mill workers. Rivers of Steel is managed by a non-profit organisation, working in partnership with local communities, business and union interests and local, state and federal agencies (Tuxill and Mitchell 2001).

Proposed Champlain-Richelieu Valley International Heritage Corridor

The Champlain-Richelieu Valley (New York and Vermont, United States; Quebec, Canada) is being considered for designation as an international heritage corridor. This historic waterway, which since colonial times has formed a crucial link between the Upper Hudson River Valley and Canada's St Lawrence River, encompasses Lake Champlain, the Richelieu River and associated historical and cultural locations. The area is rich in cultural resources including sites of colonial settlements, aboriginal activity, forts, naval battle sites and industrial development dating from Samuel de Champlain's initial voyage to the area in 1603 through the Industrial Revolution. The landscapes and historical heritage of this trans-boundary region record a formative part of the history of the United States and Canada, as many of the major battles of the French and Indian War, the American Revolution and the War of 1812 were fought along this corridor. Other cultural sites reflect the relationships among early French and English explorers and settlers, First Nations peoples and the history of the impact of human activity on the natural landscape Drost 2001a.

The Champlain-Richelieu Valley, which consists of two regionally important watersheds, is rich in natural resources and impressive scenery. Its landscape has been shaped over the past two centuries by farming, forestry and transportation along its waterways. Much of the land in the Valley is still used for agriculture, with small dairy farms characterising the region in Vermont and New York and larger scale crop production more typical of farmland in Quebec. Tourism is an important part of the local economy and the area attracts visitors from the nearby urban centres of Montreal and Albany, as well as from the more distant Boston and New York City. Western European visitors are drawn to the region, due to the historical connections with England, France, Germany and the Netherlands.

The Champlain-Richelieu Valley is currently being considered for designation in the United States as a National Heritage Corridor and for a comparable designation in Canada. On the US side, the National Park Service has prepared a special resource study and has held a series of workshops and public meetings to obtain input from a wide range of local stakeholders. A parallel process is underway in Canada among the Canadian federal government, the Quebec provincial government and regional governmental stakeholders. Recently the Quebec-Labrador Foundation (QLF) held a series of public meetings on both sides of the border to facilitate broad stakeholder participation in developing guidelines for a new heritage programme within the region (Drost, *et al.* 2002). Currently QLF is working under contract to the Québec government to advise on a plan to create an administrative entity and develop a course of action for the implementation of the Corridor.

There are many challenges to achieving designation and a workable management plan for a trans-boundary area of this scale, encompassing two countries, two states and one province and hundreds of local governments. Existing institutional and political structures can act as impediments, as can the need to determine jurisdiction among various entities at federal, state, provincial and local levels. The various political entities involved on either side of the border have different mandates and this presents a significant challenge in creating effective administrative structures. Further, there is the basic issue of ensuring adequate communication in both French and English. Despite these challenges, experience in the Champlain-Richelieu region demonstrates that public participation can help build local support for designation, enhance communication and foster mutual understanding among diverse communities across political boundaries.

This international heritage corridor designation process provides an important opportunity to test the Category V approach in a trans-boundary region where a Category II protected area would be likely to meet strong local resistance. In the nearby Adirondack State Park in New York, local resentment still lingers more than 100 years after its establishment in 1892. In the Champlain-Richelieu Valley, communities and residents have already begun voluntary

approaches to protect natural and cultural resources, including private land conservation (e.g., conservation easements and agricultural preservation restrictions) and public-private partnerships. This initiative is helping to protect the natural and cultural richness of the landscape, linking communities across political boundaries to their shared history and reminding local residents and visitors of the diverse cultures that have inhabited the region Drost 2001b.

Cuyahoga Valley National Park

The Cuyahoga Valley National Park (CVNP) preserves the rural landscape along twenty miles of the meandering, northward flowing Cuyahoga River and the Ohio and Erie Canal between the large urban populations of Cleveland and Akron in northeast Ohio. The historic canal allowed shipping between Lake Erie and the Ohio River, resulting in the commercial prominence of Ohio in the early 1830s and shaped the character of the region as canal-related industries and agriculture became the dominant occupations. Many of the small towns, villages and farms that made up this nineteenth century landscape still exist today. In 1974, an Act of Congress established the park to “preserve and protect for public use and enjoyment, the historic, scenic, natural and recreational values of the Cuyahoga River” and to maintain, “needed recreational open space necessary to the urban environment” (NPS 2001).

Today, the park includes a complex network of land ownership and management practices. Of the over 32,000 acres in the park, only 19,000 acres are in federal ownership. The remaining acreage is owned by other public entities (such as local park districts), private or non-profit institutions (such as ski areas and scout camps), or individual private landowners. The park also lies in two counties and includes 15 municipalities. To enhance communication and coordination of this ‘management mosaic,’ the Cuyahoga Valley Communities Council (CVCC) was formed.

The Cuyahoga Valley National Park encompasses a complex network of land ownership and management practices, including many working farms. Through a new programme called the Countryside Initiative, the park is helping to sustain the agricultural heritage of the valley. Photo: NPS Photo.



The Council is made up of representatives from the 15 surrounding communities, the local park and school districts and the USNPS. The not-for-profit CVCC plays an important role in maintaining communication and a positive working relationship between the USNPS and local communities.

Even though agriculture has been an important part of the of the Cuyahoga River Valley's history, preservation of 'rural landscape' character and values have only recently been recognised as a priority. At the time the park was created, small working farms still existed in the valley, but many were in a declining condition. As a result, farmsteads were being converted by private owners to other purposes, including housing subdivisions. In response, the USNPS acquired some properties to protect them from future development.

With no mechanisms in place to ensure the perpetuation of agricultural land use or traditions, CVNP has proposed a new rural landscape management programme. This new programme, the Countryside Initiative, will:

- create a partnership with a non-profit organisation with agricultural expertise, the Cuyahoga Valley Countryside Conservancy, to assist park staff with informed rural landscape management decisions;
- integrate privately supported, economically viable and environmentally advanced approaches to agricultural practices within a national park setting; and
- develop markets for locally produced products.

The goal of this initiative is to sustain the agricultural heritage of the valley in a way that is consistent with best environmental practices and USNPS rural landscape management objectives and through this value-added economic strategy, to preserve the remaining agricultural land and buildings. This Countryside Initiative represents a precedent-setting attempt to integrate rural landscape management objectives with more conventional natural and cultural resource preservation practices in national parks (Debo and McMahan 2001).

In the late 1980s, the Cuyahoga Valley National Park began discussing with interested local citizens an ambitious concept for a public/private partnership focused on preserving historic, natural and cultural resources in a 110-mile long corridor extending from Cleveland to New Philadelphia, Ohio along the route of the historic Ohio and Erie Canal. Two local non-profit organisations spearheaded public involvement in a grassroots planning process, which brought together a diverse coalition of local governments, non-profit organisations, foundations and business interests in support of this concept, culminating in federal legislation in 1996 formally creating the Ohio and Erie Canal National Heritage Corridor. Since 1996 a broad network of public and private partners have made enormous progress in implementing a Corridor Management Plan, creating an energetic new force for conservation, preservation, recreation and sustainable economic development in northeast Ohio.

A growing role for partnerships

In May 2000 our organisations, the USNPS Conservation Study Institute and QLF/Atlantic Centre for the Environment, in cooperation with the USNPS Park Planning and Special Studies Program, convened a workshop for National Park Service staff and partner organisations involved in managing partnership areas. The aims of the workshop were to explore experiences with partnerships that are outside the traditional National Park Service management model and to propose next steps for creating more effective long-term conservation partnerships. The workshop brought together 25 participants from within the USNPS and its partner organisations, with an emphasis on examples from the northeastern United States (for a full report of the workshop see Tuxill and Mitchell 2001 citation at the end of this article). A second workshop was held in March 2003 and focused on experiences with partnership areas in the western United States.

The workshop participants identified a number of ways in which the experience of working in partnership areas serves to strengthen the entire National Park System, while providing important benefits to partner organisations and communities. These benefits include:

■ **Partnership areas help the National Park Service to reach new constituencies and build relationships that enhance public support for conservation**

Partnership areas can reach people who wouldn't otherwise be reached, thus building new constituencies and support. Because these areas are often found in or near communities – in people's 'backyards' – they can make conservation and the idea of a National Park System more tangible to a broader cross-section of the general public. Working cooperatively builds long-term relationships among the USNPS and conservation and preservation interests as well as officials and legislators at the local, state and federal levels. These connections can also lead to national and regional collaboration that serves to protect natural and cultural resources and helps to expand understanding of the USNPS and partnership organisations.

■ **Partnership areas help to broaden the impact of the National Park Service and partners**

The mission of the USNPS is written broadly to focus on the National Park System and, through cooperation with partners, to enhance conservation. Partnership areas offer a wide range of opportunities for the USNPS to provide national leadership in conservation. As one participant noted, the National Park Service through its various collaborative arrangements has an opportunity "to embrace and extend the conservation and interpretation role of the agency and deal with the evolving sense of what constitutes an important place today" (Doherty in Tuxill and Mitchell 2001). Areas managed through partnerships enhance recreational opportunities and the protection and interpretation of nationally significant resources, both cultural and natural, often in instances where it would not otherwise happen. These areas are able to leverage other funding and private sector contributions, thus extending the investment of federal dollars.

■ **Partnership areas offer valuable lessons that can be applied in other settings**

The diverse working relationships that result from managing partnership areas introduce fresh perspectives and new interpretations and conservation techniques, which can be applied in other circumstances by both the USNPS and its partners. The accumulating body of experience in planning and managing partnership areas by working collaboratively is directly relevant to challenging situations that confront the agency in the more traditional units of the National Park System.

■ **Partnership areas foster a stewardship ethic among the general public**

Areas that are jointly planned and managed by USNPS and partner organisations offer many opportunities for conveying a stewardship message. Partnership areas such as the national heritage areas affirm that the places where we live and work contain cultural, natural, scenic and recreational resources worthy of protection. They contribute a broader context and relevance to the story of the nation's natural and cultural history and they enhance the ability to convey those messages in ways that may affect conservation on a broader scale. As one participant noted: "People are raising their field of vision beyond the often fragmented preservation of individual areas, structures and critical habitats to focus on how the benefits of parks and responsible stewardship can be integrated into the connecting fabric of people's everyday lives" (Diamant in Tuxill and Mitchell 2001).

The vision that emerged from the workshop was of a future in which units of the National Park System and the partnership areas outside the system are part of a nationwide network of parks and conservation areas that are relevant to a diverse population. In this future, non-profit organisations, institutions, businesses and public sector agencies are important players. The National Park Service plays a central role in this network of collaboration, founded on the

agency's traditional strengths, but extending beyond this tradition to include its extensive experience in partnerships.

At the same time, the trend of managing through partnerships presents new challenges to the National Park Service and its partners. These include the need to create a broader vision for the USNPS that encompasses the full scope of partnerships and to foster within the agency and other institutions an understanding of partnerships as a potent catalyst for stewardship of the landscape. Further, the skills that lead to successful long-term partnerships are not necessarily widely understood. Thus there is a need to both learn from the success stories and provide leadership training that will position the USNPS and its partners to be most effective in its collaborations (Tuxill and Mitchell 2001).

The importance of partnerships is increasingly being embraced by the USNPS, as demonstrated by the creation of a national Partnership Council and a senior agency position with partnerships as a key responsibility. A working group of the Partnership Council has written recently:

“By continuing collaboration and partnerships, the Service can strive to serve the public more effectively as a steward, educator, environmental leader, and advocate for a visionary nationwide system of local, state, and federal parks and conservation areas. Such a system can link parks, open space, outdoor recreation areas, communities and other special places and organise them through cooperation, consultation, and communication into a vibrant park and conservation network. Energised by this vision, NPS believes that the power of the park and conservation idea lies in its larger purpose – to create a citizenry that understands and serves as steward of our heritage and our home on earth.” (NPS 2003).

Conclusion

As models for protected areas continue to evolve in the United States, the concept of a nationwide system of parks and conservation areas is gaining attention. The idea is not new: the distinction between ‘a national system of parks,’ and the National Park System was first noted by Stephen T. Mather, the founding director of the US National Park Service (Pritchard 2000). In 2001, the National Park System Advisory Board challenged the agency to “serve as a catalyst to encourage collaboration among public and private park and recreation systems at all levels – to build a national network of parks and open spaces across America” (National Park System Advisory Board 2001).

Recently, the Director of the US National Park Service has spoken of the importance of a “seamless national network of people, property and ideas” to the future management of parks, open spaces and historic places (Mainella 2002). This seamless network is an inclusive concept, providing a national framework for conservation that encompasses wilderness as well as places close to where people live and work.

Successful experience with partnership areas will be central to the United States’ evolving National Park System in the coming years and to the conservation of landscapes in communities across the country. The growing use of innovative, ‘non-traditional’ designations that rely on partnerships, such as heritage areas and corridors and long-distance trails, presents an important opportunity to test how Category V Protected Landscapes/Seascapes management objectives can be met in the US context. Further, these areas are broadening the role of the National Park Service in working with others on stewardship of the American landscape.

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A Protected Landscape candidate in the tropical Andes of Ecuador

ERIC CHAURETTE, FAUSTO O. SARMIENTO AND JACK RODRÍGUEZ

The approach to integrate culture and nature into the protection of biodiversity in cultural landscapes is analysed with a case study of the Quijos river valley, in eastern Ecuador, South America. The site was proposed as a candidate for Category V in consistent recognition of being the only Amazonian site holding the status of National Cultural Patrimony. We review the current array of public and private protected areas and the emphasis on their operation as it relates to the issues of open access and common property rights in the tropical Andes. We argue for the need to revise the current conservation approaches and provide insight on the Baeza township and the Quijos river valley at large as candidates for Protected Landscape designation.

NATIONAL PARKS became synonymous with 'paper parks' in many developing countries after it was noted that conservation measures did not produce any visible impacts in the pristine forests. Protected area (PA) theorists are now arguing for these countries to adopt an alternative approach of one that includes, rather than excludes, local residents; and where the western cultural division between humans and nature is blurred, such as in the Protected Landscape model (Category V PA under The World Conservation Union-IUCN designation). Tourism researchers are following by promoting these areas as good venues for ecotourism, although very little is known about their compatibility.

This article sheds some light on the subject through the presentation of a case study of the Quijos river valley, Ecuador, a site that is being proposed as a Protected Landscape and which is undergoing rapid change with regards to resource exploitation and tourism. Land regime analysis is used to examine the multi-faceted forms under which ecotourism has evolved in the valley. Results from the case study serve as a basis of analysis to evaluate the compatibility of ecotourism with Protected Landscapes. Broader implications regarding protected area Management and tourism research are then discussed.

The study area: Quijos river valley

The Quijos river valley constitutes one of only three main access routes into the Ecuadorian Amazon. This 'gateway to the Amazon' has attracted consecutive waves of exploration and settlement: from early 16th century Spanish explorers, to the more recent incursions of colonists following the opening up of the valley with the construction of roads in the 1970s to reach oil fields lower in the Amazon forest. The most recent wave of exploration is in the form of ecotourism attracted here by the region's spectacular landscape and rich biological and cultural diversity.

A transect of the Quijos region reveals the high degree of environmental change that occurs with different elevations, as seen in Table 1.

Table 1. Altitudinal distribution of the Quijos River basin (modified from Sarmiento 1998, Wesche 1995).

Elevation (m)	Ecosystem type
Above 4,500	Snow-covered peaks, glaciers
4,500–4,200	Moraine
4,200–3,800	Páramo
3,800–2,500	Montane cloud forest
2,500–1,200	Upper montane forest
1,200–600	Lower montane forest
Below 600	Lowland humid tropical forest

Although incipient in the valley, ecotourism has been identified as a development priority by the Quijos Municipality and local NGOs. Ecotourism is seen as a key activity that can diversify the local economy and encourage more sustainable land uses that complement PA goals of conservation. The multiple forms of land ownership regimes (protected areas, common and private lands) in the valley are influencing how ecotourism is evolving in the area and represents a challenge for guiding its development.

Public protected areas

In Ecuador public land management regimes, such as the North American National Park concept, are perhaps the most common approach to addressing tourism and resource management issues (Brandon *et al.* 1998). The Quijos valley has the largest expanse of protected areas in Ecuador, where approximately 94% of the territory of the basin is officially protected by three established protected areas (Ministerio del Ambiente 2001):

1. Antisana Ecological Reserve (AER);
2. Cayambe-Coca Ecological Reserve (CCER); and
3. Sumaco Napo-Galeras National Park and Biosphere Reserve (SNGBR).

However, similarly to other protected areas in the country, they are under constant threat of encroachment, poaching and development. In the study area these threats come from within the Quijos river valley (due mostly to colonisation and dairy farming) and from without, by such activities as oil exploration and water extraction. Some areas that remain inaccessible have remained untouched and are in an excellent state of conservation despite weak management and control (Sarmiento 1997).

Tourist visits to the Quijos' PAs are very few and, as Table 2 shows, are among the lowest in the country. Access to the PAs are made difficult by bureaucratic obstacles such as entrance permits that can only be bought in Quito. In Cayambe-Coca Ecological Reserve for instance, the park warden has stated that he regularly has to turn back tourists who want to enter the reserve because they have no entrance permits.

A panoramic view of the Quijos river valley. Photo: Jack Rodriguez.



Table 2. Five-year register of visitors to Ecuador's selected protected areas (Ministerio de Turismo 2000).
N/A: data not available.

Protected Areas	1995	1996	1997	1998	1999
Parque Nacional Cotopaxi	59,659	49,245	51,489	56,082	52,734
Parque Nacional Galapagos	55,786	61,895	62,809	64,791	66,071
Reserva Productiva Cuyabeno	4,957	6,947	5,649	6,408	989
Reserva Ecologica Cayambe-Coca	1,171	1,551	962	1,698	478
Reserva Ecologica Antisana	N/A	N/A	N/A	N/A	N/A
Parque Nacional Sumaco-Napo Galeras	N/A	N/A	N/A	N/A	N/A

Tourist infrastructure and services in the Quijos Valley's three state-run protected areas are also largely inadequate. There is no tourist accommodation or transportation infrastructure on site. Guiding and interpretative services are not provided either, leaving only tour companies with entrance permits to lead tours in the PAs. Therefore, independent travellers endeavouring to hike within the PAs do so at their own risk with little if any form of security or services provided by the reserves and park. In response to this there is a new conservation trend that is emerging in the Quijos river valley: private protected areas.

Private protected areas

Most public PAs in the Quijos River basin are understaffed and inadequately developed, hence opportunities for ecotourism exist outside of the public protected areas in the surrounding privately-owned ones. Indeed, not unlike other regions of the world, private PAs in Ecuador are multiplying. A national network of private reserves (Corporación Red Nacional de Bosques Privados del Ecuador) was established in 1996 and, in 1999 counted 41 members with reserves ranging in size from 10 to 19,000 ha (Brown and Mitchell 1999a; Langholz and Brandon 2001). In addition numerous other private reserves also exist, which are not part of the national network. Private reserves play an important role in protecting biodiversity and, in the Quijos river valley specifically, they have emerged as the leading providers of ecotourism products.

There are four large private reserves in Quijos river valley: Sierra Azul, Bosque Protector de Termas de Papallacta, Reserva Cumandá and Reserva de Cabañas San Isidro de Labrador. Some private reserves have been highly effective at targeting specific niche markets and attracting what local tourism businesses call 'turismo científico' or scientific tourism, such as ornithologists, entomologists and other wildlife specialists or amateur naturalists. This is the case for Cabañas San Isidro de Labrador, where professional and amateur ornithologists spend on average 3–5 days and pay \$120/night to bird-watch in the reserve's large expanses of primary and secondary cloud forest.

There is no clear pattern of ownership: some private reserves belong to cattle ranching families who have decided to diversify their income sources by offering ecotourism opportunities in the forested portions of their land. Others belong to outside business people who either have an interest in conservation, or see an opportunity to capitalise on the emerging ecotourism market, or possibly both. Three characteristics shared by all the region's private reserves are:

1. they are all dedicated to ecotourism;
2. they have the financial and managerial capabilities to provide a high quality tourism product that meets the strictest of tastes (food and accommodation, safety, guiding, interpretation and education); and
3. all the reserves abut the larger public protected areas, therefore extending habitat protection, providing an ecological buffer between PAs and human settlements and enhancing viewing opportunities for wildlife and the overall ecotourism experience for the visitor. Therefore,

private protected areas currently remain the most compatible with and, overall, the best venue for ecotourism in the valley.

Open access

Unfortunately, although the Quijos river valley is surrounded by three important public PAs, the lower portion of the valley itself (below 3,200 m) and its tributaries (the Papallacta, Cosanga and Borja rivers) fall outside any effective customary, legally protected or controlled land use regime, resulting in a landscape that is open access. As Weaver (2001) correctly states, it is these unprotected natural environments that are rapidly disappearing.

Similar to other mountainous tropical areas, the Quijos valley's biologically rich and diverse cloud forests are rapidly diminishing due to the uncontrolled influx of colonists and their unsustainable land uses (logging and the expansion of a dairy cattle ranching industry). According to Denniston (1995), as recently as the early 1970s cloud forests covered up to 50 million ha in narrow mountainside belts. But these forests have been under severe pressure, disappearing faster than the better publicised lowland tropical rain forests. Neotropical botanists estimate that almost 90% of these forests have been lost in the northern Andes – largely to the expansion of grazing from both above and below (Sarmiento and Frolich 2002).

Despite efforts by Quijos Municipality, it has been unable to protect the valley and its rivers from any kind of development. Oil pipelines have been laid along the Quijos River banks and pollutants and solid waste are contaminating its cold mountain waters. Soil erosion and landslides due to pasture expansion and road and oil construction upstream are all exacting a toll on the valley. In addition, the river is being used more intensively with the onset of adventure tourism in the form of kayaking and rafting. Each year hundreds of kayakers from across the world congregate from October to March in the valley to run its rivers. The largest river of the valley, the Quijos, has an extremely high gradient and is considered a world-class river, in the company of such rivers as the mighty Colorado. Again, under open-access conditions, efforts to control and restrict developments of any kind have met with failure, resulting in a landscape that

A lake in the Papallacha area. Photo: Fausto O. Sarmiento.



is becoming increasingly scarred, less appealing to ecotourists and, increasingly, a threat to the burgeoning adventure tourism industry itself.

Common property

In the upper portions of the Quijos river valley (above 3,200 m), on the eastern flanks of the Antisana and Cayambe volcanoes exist the communities of El Tambo, Jamanco and Oyacachi. Both Comuna Jamanco and El Tambo own and use communal lands that are located within the Antisana and Cayambe-Coca ecological reserves; the Quichua community of Oyacachi is located in the heart of the Cayambe-Coca Ecological reserve, therefore disputing the rigid classification of these PAs as Category I. These are old settlements that far pre-date the establishment of any PA in Ecuador. The communities of Quichua descendants, whose livelihoods and cosmology are closely linked to the Andean environment, are very different from the newer colonist settlements found lower down in the valley. Whereas in the lower portions of the valley transplanted colonists are aggressively converting dense cloud forests into pasture, livelihoods in the colder grassy highlands (páramo) are in delicate balance with the Andean ecosystem. In fact, much of the ostensibly 'natural páramo' landscape found at these elevations is, in fact, anthropogenic in origin (Sarmiento 2002).

The absence of trees in these high altitudes was long explained by climate determinants such as the excess of cold and wind, or insufficient rainfall. New studies effectively demonstrate how human intervention, rather than climate, is the maker of this unique landscape. Over centuries, through the use of fire and more recently sheep and cattle grazing, the Quichua have effectively halted the process of ecological succession thereby maintaining the land in a state of grassy highland or páramo. This practice encourages the growth of more nutritious grasses used to support their herds and also makes the land fertile for the cultivation of potato, broad beans and other crops well adapted to the cold and high elevations (Gade 1999).

In the páramo, land is held communally; in fact, decisions regarding access to the páramo, its use and maintenance (through controlled burning and grazing) are taken by each community as a whole during assemblies that are held periodically. A duty roster is also maintained, assigning, on a rotational basis, a member of the community to care for the cattle grazing on the páramo. Mingas are also frequently held to carry out various projects that benefit the whole community and also act to reinforce reciprocal relations and ties in the communities. In this way traditional Andean beliefs and customs that have survived the hacienda rule are still very much alive in the communities of Jamanco, Oyacachi and El Tambo and are reflected in the surrounding landscape. All three of these communities are experimenting with tourism. Both Oyacachi and Comuna Jamanco have built rudimentary thermal bath resorts to attract visitors, while El Tambo offers guided horseback excursions around the base of the Antisana volcano. Similarly to cattle ranching on the páramo, tourism initiatives in these communities are built communally through mingas and decisions regarding its development are taken by the community as a whole during assemblies. This mechanism should ensure that tourism develops within the limits of acceptable change set by the communities involved. Unfortunately, their successes with tourism are mixed at best. Their lack of cash resources, access to markets, business and language training (nobody speaks English) means that tourists mostly opt for the better organised and publicised Private Reserves and eco-lodges. Moreover, the páramo on which these communities' herds depend has also come under threat with the large-scale water extraction projects that are being conducted in the area and communities have not received any compensation. The unique páramo ecosystem, its critical role as a natural water reservoir for Quito and the ways of life of the pastoral communities that depend on it and maintain it, have come under the attention of national and international groups who are seeking to find new ways to protect and conserve the area's natural and cultural heritage.

The Protected Landscape and ecotourism

There is a growing interest at local, national and international levels to designate the Quijos river valley as a Protected Landscape (Category V Protected Area under the World Conservation Union IUCN designation). The Protected Landscape is being advanced as a valuable model that can integrate biodiversity conservation, cultural heritage protection, local livelihood needs and goals and the sustainable use of resources. The Protected Landscape is a relatively young concept, first appearing in IUCN's Protected Area Management categories in 1978. It emerged from Europe but conservation experts are arguing for its adoption in other parts of the world. St Lucia is in the process of including the Category V designation in its National System of protected areas. The country is densely populated and much of the land is communally or privately owned, requiring innovative approaches to biodiversity conservation (Romulus and Lucas 2000). Peru has also recently added the Category V designation to its system of protected areas, mandating a national level organisation to identify potential sites (Brown and Mitchell 1999b). In a recent WCPA-IUCN International working session on stewardship in Protected Landscapes, five sites were advanced as prime candidates for Category V designation:

1. the Sierra Nevada de Santa Marta, Colombia;
2. the Quijos river valley, Ecuador;
3. the Valley of the Kings, Pizac, Peru;
4. Alto Cañete-Cochas Pachacayo, Peru; and
5. communities living near Sajama Volcano, Bolivia (Sarmiento *et al.* 2000).

To date, 5,578 Protected Landscapes exist worldwide, of which only 245 are located in South America (Table 3). Although scarce in South America, Protected Landscapes nevertheless represent an approach that holds much promise for addressing paper park symptoms in the region (Lucas *et al.* 1998). This is due to Category V's three distinguishing characteristics:

1. emphasis on the value of interactions between people and nature over time and linking conservation of cultural and natural heritage;
2. potential to bring benefits to local communities and contribute to their well-being; and

Table 3. Global distribution of Protected Landscapes (adapted from IUCN, 1998).

Region	Number	Area (km ²)	Percentage cover
North America	2,085	245,301	1.05
Europe	2,654	339,927	6.72
North Africa and Middle East	12	552,056	0.40
Africa (Western/Central)	1	100	0.00
Africa (Eastern/Southern)	2	511,883	0.11
East Asia	15	960,719	0.51
South Asia	9	1,562	0.04
South-East Asia	10	920,491	0.46
North Eurasia	2	1,482	0.00
Pacific	1	146	0.01
Australia/New Zealand	6	559,856	0.75
Central America	1	954	0.01
Caribbean	5	914,823	6.21
South America	245	250,138	1.39
Total	5,570	81,057,44	80.71

3. accommodation of diverse management regimes, including customary laws governing resource management that can build on existing institutional responsibilities and continue traditional practices and governance within the culture (Brown and Mitchell 2000).

The designation has also been advanced as a possible administrative framework to help guide ecotourism in the area (Sarmiento *et al.* 2000). Lawton (2001) also argues that higher IUCN category protected areas such as the Protected Landscape have a high potential to accommodate ecotourism. The compatibility of this designation with current efforts to develop ecotourism in the Quijos valley is examined according to the Protected Landscape's three distinguishing features.

Linking culture and nature conservation

Protected Landscapes exist to protect areas that are outstanding examples of positive interactions between humans and nature over time. Their management plans are designed to accommodate local customary rights and traditions in order to support the traditional activities that help maintain these working landscapes. One of the unique features of the Quijos valley is the páramo ecosystem (above 3,200 m of elevation). These grassy highlands are a spectacular example of a biologically rich ecosystem that is the result of human intervention and, therefore, perfectly suited to the Category V designation. Moreover, although anthropogenic in origin, the páramo houses a variety of plants and animals (e.g. spectacled bear, Andean condor) that are highly attractive to ecotourism. Lower down in the valley, the landscape changes to a mosaic of remnant cloud forest, pasture and crops with small villages nestled at the valley bottom. The scenic quality of this river valley is an attractive landscape attribute in itself, where the attractions are not only the unaltered forests but also the farmed hillsides and villages. In a Protected Landscape then, ecotourists would not only seek pristine nature but also appreciate the manifestations of the interactions of culture and nature.

Benefits to community well-being

As mentioned above, the Municipality of Quijos Township has declared ecotourism a priority and is actively seeking ways to increase tourist numbers and their length of stay in the region. The lack of cash resources, business knowledge and experience, and contacts with the tourism industry however, are inhibiting its success. Designating the Quijos river valley as an IUCN Category V Protected Landscape would increase the visibility of the area as a cultural and natural tourism destination. This would attract more visitors, therefore providing more jobs and income for residents and perhaps encourage some of them to make the transition from more destructive land uses, such as logging and cattle ranching, to more sustainable ones such as ecotourism. The designation would also empower the Quijos river basin township to enforce land uses that are compatible with the conservation goals of a Protected Landscape, by encouraging residents to adopt land stewardship practices and to restore degraded lands. The international designation would also give more power to the Quijos Municipality to confront destructive projects currently underway in the valley that are a threat to local human and environmental health, are scarring the landscape and therefore are antagonistic to ecotourism.

Accommodation of diverse management regimes

Much of the tourism activity in the valley is currently occurring outside of public protected areas, in adjacent private reserves, on common-owned lands and in areas that are considered open-access. A Protected Landscape designation would provide a common framework for the region's stakeholders to guide the development of ecotourism under each of the land management regimes. Finally, since the Protected Landscape accommodates a diversity of land regimes, the model would also include the existing decisions and the decision-making mechanisms that

underlie each management regime. Therefore, under common-property regimes, the traditional ecological knowledge and local customary rights that manage access to, and uses on, these lands would be integrated into the management plan of the Protected Landscape. The same would go for the decisions and resolutions passed by Quijos Township, under the Quijos Township Strategic Sustainable Development Plan.

Conclusion

Community participation and control over tourism development is key to its sustainability (Mitchell and Reid 2001; Scheyvens 1999; Saglio 1979; Joppe 1996). However, the ability of communities to take part effectively in tourism planning, control and management is dependent on many interrelated factors such as level of awareness, interest, technical knowledge and access to markets (Tosun 2000). When examining issues of community control over ecotourism, these challenges seem even larger. This is in part because ecotourism occurs in rural areas where populations do not have access to the same political, economic, or social power and resources as urban populations. This is especially true in Ecuador where Indigenous and rural populations have traditionally been marginalised from politics and decision-making power, largely due to the majority non-aboriginal urban population that elects officials who serve urban interests (Sarmiento 2000).

Equally as important are the often ambiguous and antagonistic property regimes that underlie ecotourism destinations. Researchers examining issues of nature-based or culture-based tourism and sustainability have almost completely ignored this dimension. Property rights have a fundamental influence on how tourism develops and operates in a particular destination. In the Quijos Valley, open access conditions, where property rights are unclear or non-existent, have meant that tourism is evolving spontaneously and is in direct competition with destructive land use practices and resource extraction industries. Meanwhile, under public property regimes such as the National Park, institutional weaknesses in the Ecuadorian National System of Protected Areas (SNAP) are preventing the effective protection of PA resources and ecotourism remains an untapped opportunity.

Participants at the Route Condor Conservation meeting.



Interestingly, it is in the lower profile private reserves and lands held in common that the greatest potential for ecotourism lies. The Protected Landscape designation can be a powerful mechanism to create partnerships for conservation in the Quijos Valley, linking private and public reserves and supporting and promoting land stewardship practices in the inhabited portions of the valley (located at the core of three important public PAs), thereby creating the largest PA of the nation. Its inclusive structure would integrate the customary rights and rules that underlie the common-property regimes and build on existing initiatives, such as the Quijos Strategic Sustainable Development Plan, that seek to make the Quijos valley more sustainable. For these reasons then, the Protected Landscape is arguably the best approach to solving current paper park illnesses affecting the Quijos river valley and to ensure that ecotourism in the area flourishes.

Discussion

Ecotourism is usually associated with the higher profile IUCN categories for PAs (Category I, II, III). Lawton (2001) argues that the numerically higher categories such as the Protected Landscape have been largely ignored by ecotourists due to:

1. the significant presence of humans and human activity in these areas;
2. a resulting landscape that has been modified by these activities; and
3. low market awareness.

From this review of the Quijos river valley, all three of these 'barriers' to ecotourism are found. However, as has been demonstrated, human intervention and presence do not necessarily equate with an unattractive landscape. In some cases, the aesthetic quality of the landscape and the rich biological communities it supports are a direct result of human intervention. This is the case in the Sacred Valley of Pizac, Peru, another area that is being advanced as a Protected Landscape, where centuries of farming have given rise to an astounding 280 varieties of potato. This is also true for the páramo ecosystem and, to a certain extent, is also applicable for the lower portions of the Quijos Valley where: 'the landscape in these areas is often a visually appealing mix of pastures, fields, trees and forest patches, in which a variety of birdlife can be observed' (Wesche 1995).

In fact, it could be argued that the Quijos river valley is an attractive ecotourism destination precisely because of human presence and activity. This forces a revisiting of the notion of ecotourism, where the goal is not solely to appreciate natural ecosystems but also to appreciate how humans are linked to this system. The adaptive and sustainable societies of Oyacachi and El Tambo are lifestyles that are rapidly disappearing. They merit appreciation and recognition of the important lessons they can teach.

A Protected Landscape is a new approach to PA management for Latin America, one that transcends the nature/culture division and appears well suited for the Andes. Moreover, from a tourism perspective, the proposal to establish a Protected Landscape in the Quijos Valley is compatible with current efforts to develop ecotourism nationwide. As Sarmiento (2002) points out 'Protected Landscape Category V is biodiversity conservation with a purpose, a must-have for a developing country with rich cultural and natural heritage'.

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Résumés

Paysages protégés : leur rôle dans la promotion de l'utilisation durable des terres agricoles

PETER OGDEN

Le fait que les terres agricoles soient soumises à de fortes pressions dans le but de produire des aliments est une question d'importance mondiale. Dans de nombreux pays, la production alimentaire est caractérisée par des pratiques agricoles très intensives et mécanisées, tandis que dans d'autres, même si les quantités produites sont modestes, c'est la perspective de réussir à produire ces quantités de nourriture qui constitue un puissant moteur pour l'agriculture. Tandis que les disparités sociales et économiques des systèmes de l'agriculture intensive d'une part, et de l'agriculture de subsistance d'autre part, s'accroissent, les Paysages protégés (aires protégées de Catégorie V) prouvent de plus en plus que certaines techniques de gestion innovantes peuvent permettre de réduire ce déséquilibre de durabilité. La promotion de l'agriculture durable dans les zones qui se distinguent par leurs paysages peut fournir un des moyens principaux de mener à bien cette entreprise difficile. En expliquant comment le concept de Paysage protégé peut fournir un cadre pour l'application des bonnes pratiques en matière d'utilisation durable des ressources, cet article montre que lorsqu'on fait de l'agriculture intégrée et respectueuse de l'environnement, celle-ci peut permettre non seulement d'augmenter la valeur naturelle et culturelle des Paysages protégés, mais elle est également avantageuse pour l'économie et la qualité de vie des communautés rurales qui vivent dans ces zones. À partir d'études de cas de Paysages protégés européens, l'article propose cinq principes de gestion clés et une série de pratiques d'intendance associées à ces principes, qui fournissent collectivement une direction à suivre dans la voie de la promotion de l'utilisation durable des terres agricoles. Tout en reconnaissant que ces approches ont été développées dans une perspective européenne, l'article suggère que ces principes pourraient être appliqués dans un contexte plus large, à condition qu'ils soient adaptés aux circonstances locales et qu'ils en reflètent les points sensibles.

Application du Modèle de paysage protégé dans le sud du Kenya

BOBBY E.L. WISHITEMI ET MOSES MAKONJIO OKELLO

La conservation de la biodiversité en dehors des aires protégées classées comme telles au Kenya devient impossible du fait du manque croissant de terres disponibles, de l'augmentation de la population humaine, de l'aliénation des populations locales, du manque de stimulations socio-économiques pour la conservation, et du manque de modèles appropriés à adopter. Bien qu'il ait permis la création de parcs et de réserves clés au Kenya, le Modèle du parc national ne peut plus être adopté parce qu'il s'intéresse essentiellement aux zones sauvages et à leurs ressources biologiques, et qu'il ne se préoccupe guère de l'expertise, des besoins et du développement au niveau local. Le réseau actuel des aires protégées se trouve donc menacé de toutes parts, il est impopulaire et mal accepté par les communautés locales. Les ressources qui font la biodiversité du Kenya à l'extérieur des parcs et des réserves sont en danger d'extermination, si des efforts ne sont pas faits pour replacer les communautés au centre de l'effort de conservation et pour étudier un modèle approprié d'aire protégée à l'extérieur du réseau actuel de ces aires. Il faudra que celui-ci sache incorporer les volontés locales et opérer dans un contexte de paysages habités, dans lesquels les besoins humains et la conservation des ressources naturelles puissent aller de pair, surtout dans les zones de dispersion de la faune et de la flore, et dans les prairies des communautés pastorales du Kenya. Cet article examine les faiblesses du Modèle de parc national, présente les menaces auxquelles sont soumises les ressources de la biodiversité dans les groupes d'élevages pastoraux Maasai, et plaide en faveur d'une approche qui s'appuierait sur le Modèle de paysage protégé. Celui-ci passe par la promotion d'initiatives utilisant les ressources, du développement et de la conservation.

Une approche de Paysage protégé de Catégorie V pour la gestion des zones tampons au Népal

PRABHU BUDHATHOKI

Les conflits avec les populations locales, qui sont associés à la gestion des ressources, constituent un problème pressant pour les gestionnaires de ressources partout dans le monde. Les stratégies qui ont été adoptées pour résoudre ce problème ont été inspirées du principe des Zones tampons, qui permet d'équilibrer les objectifs des aires protégées à long terme et les besoins immédiats des populations vivant dans ces aires ou dans les zones adjacentes. Bien que l'application du principe de Zone tampon soit relativement récente, celui-ci apparaît déjà comme une stratégie viable permettant d'associer les objectifs écologiques et économiques. Cet article présente une vue d'ensemble des modèles de conservation de la biodiversité et décrit les premières initiatives de mise en place de Zones tampons au Népal. L'article décrit également

les stratégies et les approches adoptées pour passer du concept de Zone tampon à sa mise en pratique. Le programme de gestion des Zones tampons au Népal a adopté une approche de la conservation de la biodiversité, du développement humain durable et du développement communautaire, qui est celle des Paysages protégés de Catégorie V et qui s'appuie sur les principes de mobilisation et d'indépendance des communautés. Ces expériences innovantes de la gestion des Zones tampons au Népal peuvent être utiles dans d'autres pays intéressés par l'approche des Paysages protégés de Catégorie V.

Un système nord-américain de parcs et d'aires protégées en mutation

JESSICA BROWN, NORA MITCHELL ET JACQUELYN TUXILL

Le système des parcs nationaux aux Etats-Unis est en train de changer pour pouvoir admettre plusieurs types d'aires protégées, et toute une gamme d'intendants comprenant des agences gouvernementales, des ONGs, des communautés locales, des propriétaires privés et d'autres groupes qui vivent sur la terre et qui la travaillent. Les nouvelles zones qui sont ajoutées sous l'égide du Service des parcs nationaux des Etats Unis (USNPS) comprennent de plus en plus des désignations « non traditionnelles », qui s'appuient sur des partenariats, comme par exemple les aires du patrimoine naturel et culturel et les couloirs, ainsi que les parcours de grande randonnée. Les objectifs de gestion de ces zones de partenariat correspondent en général assez bien à ceux des Paysages terrestres et marins protégés de Catégorie V. Cet article considère les expériences de plusieurs régions des Etats Unis, dans lesquelles des objectifs de conservation sont réalisés dans des paysages habités, grâce à la collaboration de différents partenaires, dont le USNPS et les communautés locales. L'article examine les conclusions d'un groupe de travail qui s'est réuni récemment sur le thème des zones de partenariat. Alors qu'il y a un intérêt grandissant pour le principe d'un système de parcs et de zones de conservation à l'échelle nationale, les auteurs envisagent que le Service des parcs nationaux aura à travailler de plus en plus avec d'autres groupes pour assurer l'intendance du paysage américain.

Un candidat au titre de Paysage protégé dans les Andes tropicales en Ecuador

ERIC CHAURETTE, FAUSTO O. SARMIENTO ET JACK RODRÍGUEZ

L'étude de cas de la vallée de la rivière Quijos, dans l'est de l'Ecuador, en Amérique du sud, sert de point de départ pour l'analyse de l'approche qui consiste à intégrer culture et nature dans la protection de la biodiversité dans les paysages culturels. Ce site a été proposé comme candidat en Catégorie V, étant donné qu'il a souvent été reconnu comme étant le seul site de l'Amazonie à avoir le statut de Site de patrimoine culturel national. Nous analysons la gamme actuelle d'aires protégées publiques et privées et leur fonctionnement en ce qui concerne les questions du libre accès et des droits de la propriété commune dans les Andes tropicales. Nous argumentons en faveur d'une révision des approches actuelles de la conservation et expliquons les raisons des candidatures de l'agglomération de Baeza et de la vallée de la rivière Quijos dans son ensemble, à la désignation de Paysages protégés.

Resúmenes

Los Paisajes Protegidos: su papel en la promoción del uso sostenible de la tierra agrícola

PETER ODGEN

Las demandas colocadas en la tierra agrícola para la producción alimenticia es un asunto global. En muchos países, estas prácticas agrícolas están caracterizadas por las prácticas de cultivo altamente intensivas y mecanizadas, mientras que en otros la oportunidad de producir alimentos, aunque sea en pequeñas cantidades, provee un foco convincente en la labranza. A medida que las diferencias entre los sistemas de agricultura intensiva y de subsistencia se agrandan, los Paisajes Protegidos (Categoría V de las Áreas Protegidas) están demostrando más y más que las técnicas innovativas de manejo pueden ayudar y reducir este déficit de sostenimiento. Una dimensión importante asociada con este desafío, es la promoción de una labranza sostenible en áreas caracterizadas por el carácter distintivo de sus paisajes. Con la ilustración de cómo el concepto de Paisaje Protegido provee el marco para una buena práctica, el artículo muestra que el cultivo, cuando se practica de un modo integrado y simpático con el medio ambiente, no sólo destaca los valores naturales y culturales de los Paisajes Protegidos, sino también beneficia la economía y la calidad de vida de las comunidades rurales dentro de estas áreas. Usando casos estudiados de los Paisajes Protegidos Europeos, el artículo sugiere cinco principios de manejo claves y una serie de prácticas de asociación administrativa que colectivamente ofrecen una guía para promover el uso sostenible de la tierra agrícola. Aún cuando reconoce que los enfoques surgen de la perspectiva europea, se sugiere que los principios tienen una aplicación más amplia si se los adapta para que reflejen las sensibilidades de las circunstancias locales.

La aplicación del Modelo de Paisajes Protegidos en el sur de Kenia

BOBBY E.L. WISHITEMI Y MOSES MAKONJIO OKELLO

La conservación de la diversidad por fuera de las áreas protegidas designadas de Kenia se está convirtiendo en algo imposible debido a la reducción del espacio de tierras disponibles, el aumento de la población humana, la alienación de la gente local, la falta de incentivos socio-económicos para la conservación y la falta de modelos adecuados que se pueden adoptar. El Modelo de Parques Nacionales tradicionales, a pesar de haber provocado el establecimiento de parques y reservas claves en Kenia, no pueden ser adoptados más, ya que enfatizan mayormente la jungla y sus recursos biológicos y se concentra menos en las necesidades, el desarrollo y la pericia local. Como resultado, la red actual de áreas protegidas está bajo muchas amenazas, no es popular y es resentida por las comunidades locales. Los recursos de la biodiversidad fuera de los parques y reservas de Kenia, están bajo peligro de exterminación a menos que las comunidades sean devueltas al centro de la conservación y se explore un modelo apropiado de área protegida por fuera de la red de áreas protegidas. Este modelo de área protegida debe incorporar los deseos locales, tener éxito en su trabajo en paisajes donde la gente vive y presentar un lugar de encuentro para las necesidades humanas y la conservación de recursos naturales, especialmente en las áreas de dispersión de la fauna y de la flora y las comunidades de las praderas pastoriles de Kenia. Este artículo habla de los puntos débiles del Modelo de Parques Nacionales, presenta las amenazas enfrentadas por los recursos de la biodiversidad en los ranchos de los grupos pastoriles y propugna una aproximación al Modelo de Paisajes Protegidos a través de la promoción de empresas basadas en los recursos, el desarrollo y la conservación.

Una aproximación del Paisaje Protegido de Categoría V hacia el manejo de zonas parachoques en Nepal

PRABHU BUDHATHOKI

Uno de los desafíos urgentes que los administradores de recursos han estado enfrentando en todo el mundo, es el conflicto con las comunidades locales en lo que se refiere al manejo de los recursos. Los conceptos de Zonas Parachoques han sido adoptados como una estrategia para tomar en cuenta estos asuntos, balanceando los objetivos a largo plazo de las áreas protegidas y las necesidades inmediatas de la gente que vive dentro y al lado de estas áreas. A pesar de que la aplicación del concepto de zona parachoque es bastante nuevo, ha comenzado a surgir como una estrategia viable para unir los objetivos económicos y ecológicos. Este artículo presenta una vista general de los ejemplos de la conservación de la biodiversidad y la aparición de las iniciativas de zonas parachoques en Nepal. También describe las estrategias y las aproximaciones adoptadas para poner en práctica el concepto de las zonas parachoques. El programa administrativo de las Zonas Parachoques de Nepal ha estado adoptando la Categoría V de la aproximación de los Paisajes Protegidos hacia la conservación de la biodiversidad, el desarrollo humano sostenible y el desarrollo de la comunidad

basados en los principios de la movilización de la comunidad y el auto-mantenimiento. Las experiencias novedosas de Nepal, en cuanto a lo que se refiere a la administración de las zonas parachoques, puede ser útil para otros países interesados en seguir la Categoría V de la aproximación hacia los Paisajes Protegidos.

Un sistema en desarrollo de parques y áreas protegidas en los EE.UU

JESSICA BROWN, NORA MITCHELL Y JACQUELYN TUXILL

Se ha estado desarrollando un sistema nacional de parques de los Estados Unidos para incluir muchos tipos diferentes de áreas protegidas y una variada selección de administradores, incluyendo agencias públicas, empleados nacionales de gobierno, comunidades locales, terratenientes privados y otros que viven y trabajan en la tierra. Más y más, las áreas nuevas que se han ido añadiendo bajo los auspicios del Servicio Nacional de Parques de los EE.UU. (USNPS) abarca designaciones "no tradicionales" que confían en la asociaciones, tales como las áreas de patrimonio, los corredores y los senderos de larga distancia. Los objetivos administrativos para estas áreas asociadas a menudo se traslapan estrechamente con las de los Paisajes Marinos y Terrestres de la Categoría V. Este artículo examina las experiencias de varias regiones de los Estados Unidos donde los objetivos de la conservación han sido logrados en paisajes donde vive gente, a través de la colaboración entre los distintos asociados, incluyendo el USNPS y las comunidades locales. Estudia los descubrimientos de un taller reciente sobre áreas asociadas. Teniendo en cuenta el creciente interés en el concepto de un sistema de parques y de áreas de conservación que cubra todo el país, los autores preveen un papel más amplio para el Servicio de Parques Nacionales en el trabajo con otros para la administración del paisaje americano.

Un candidato para un Paisaje Protegido en los Andes tropicales

ERIC CHAURETTE, FAUSTO O. SARMIENTO Y JACK RODRÍGUEZ

La aproximación para integrar la naturaleza y la cultura dentro de la protección de la diversidad en los paisajes culturales se analiza con un caso estudiado en el valle del río Quijos, en el este de Ecuador, América del Sur. Se propuso este sitio como un candidato para la Categoría V, como reconocimiento consistente de ser el único lugar amazónico que posee el estado de Patrimonio Cultural Nacional. Nosotros examinamos la variedad de Áreas Protegidas públicas y privadas y el énfasis en su operación, ya que se relaciona con las cuestiones de los espacios abiertos y los derechos a la propiedad común de los Andes tropicales. Nosotros presentamos el argumento para la necesaria revisión de las aproximaciones corrientes hacia la conservación y proveemos un análisis amplio del municipio de Baeza y del valle del río Quijos como candidatos para su designación de Paisajes Protegidos.

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