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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.

Cover: Specialist wildlife viewing opportunities are outside of what most park agencies would provide, but they must still closely manage how tourism operators provide experiences like 'swimming with dolphins', as managed by the Department of Conservation in a marine protected area of New Zealand. Photo: The Black Cat Group.

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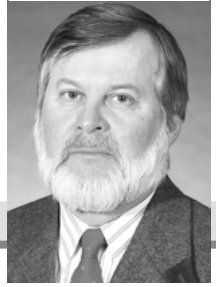
Editorial

PAUL F.J. EAGLES



ALL PARK MANAGEMENT STRATEGIES should make provision for managing visitor/tourism activity. Success rests upon the integration of this component with the planning and management of the environmental and cultural resources of a park. All this is underpinned by effective financial, staff, legal and political management. The interaction of these three aspects of park management is represented by Figure 1.

Park tourism is on the increase and often makes a vital contribution to the economy. Many argue that parks cannot exist without a mobilised constituency that actively supports government action in the field. The best way to create and motivate such a constituency is through ensuring parks provide enriching and satisfying personal experiences as well as by demonstrating the socio-economic benefits of these areas.

The environmental and cultural sites found in the world's national parks and other forms of protected area are important locally, nationally and internationally. There is an emerging consensus that the viewing and appreciation of such areas is a fundamental aspect of citizenship. People have a right to expect such sites to be available for use and have a responsibility to contribute towards their maintenance.

However, there are many accounts that portray tourism as damaging to the environment, frequently through intense or inappropriate use. Sometimes this is indeed the case. Nevertheless, debate on this issue is often skewed and the counter argument of how tourism benefits parks rarely made. There are plenty of examples of parks with little or no use, struggling to justify their existence and others where tourism has resulted in wide public appreciation of and respect for protected areas. Given its critical cultural, economic and ecological roles, too little emphasis is placed upon the role of tourism in sustaining protected areas. This edition of PARKS attempts to address this deficiency.

Figure 1. *The interaction of the three aspects of park management: visitor/tourism activity; planning and management; and effective financial, staff, legal and political management.*

The papers in this volume cover key topic areas important for park managers and for other interested in the parks' endeavour. This special issue of *PARKS* provides six papers on important aspects of park tourism. The editor chose each paper to represent a key field. All papers are written especially for *PARKS* by experts in various aspects of visitor management.

All discussion of park visitation and tourism is underpinned by statistics on volume and distribution. Likewise, secondary calculations of impact (such as economic impact or cultural influence) are based upon basic visitation statistics. The paper by Paul F.J. Eagles outlines principles for the measurement, recording and reporting of park tourism. The substance of the paper is based upon a more extensive document prepared for the WCPA in 1999.

The design of infrastructure, buildings and facilities is clearly integral to the ability of a site to attract and provide for visitors. Proper design enhances utility, improves effectiveness and permits development with minimal impact on the environment. Héctor Ceballos-Lascuráin provides a basic primer to environmentally-friendly park facility design.

Appropriate design is equally vital to the management structure of the park and park agency, if tourism benefits are to be maximised and an economically viable protected area network created. Robert Moos describes the elements involved in the transition of Ontario Parks from a typical government agency to a parastatal form with a more efficient, business-management structure.

In its endeavour to manage increasing numbers of ecotourists, New Zealand's Department of Conservation (DOC) also recognises the value of the business model. Gordon Cessford and Andy Thompson provide a review of DOC's approach to tourism management on public lands in New Zealand. They emphasise the key role of third-party involvement through licenses and concessions and particularly the way in which the private sector provides recreation services without compromising the parks' conservation objectives.

Already well-used and much appreciated by the Finnish people, the popularity of Finland's national parks seems set to increase yet further. Anneli Leivo outlines the innovative new customer-service approach adopted by Metsähallitus, the agency responsible for the management of most of the state-owned protected areas in Finland. The author examines how decisions on future development are assisted by categorising parks according to recreation services provision and describes the Finnish customer service concept and related network and methods of customer monitoring.

The final article turns to Africa where parks and game reserves are prodigious users of land and central to the functioning of the economy in many countries. Giles Mulholland and Paul F.J. Eagles highlight the need for a new model of financial and ecological sustainability to secure a long-term future for Africa's protected area network. This model more strongly emphasises the importance of the contribution of tourism income to park financial management and, perhaps more significantly, to sustaining local communities, without whose support reserves cannot exist. In an African context, the authors counter arguments that tourism degrades the environment by pointing out that alternative land-uses are far more detrimental. Africa is not in a position to conserve wildlife simply for the common good.

The preparation of this special issue of *PARKS* coincides with the publication of a new book by the WCPA on park tourism *Sustainable Tourism in Protected Areas: Guidelines for Planning and Management* authored by Paul F.J. Eagles, Stephen F. McCool and Christopher D. Haynes. It is published by the WCPA as Best Practice Guideline Number 8. Special contributions to the book were made by the World Tourism Organisation, by the United Nations Environment Programme and by Environment Australia. The book is available through the normal IUCN publication distribution channels.

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Tourism-use measurement and reporting in parks and protected areas

PAUL F.J. EAGLES

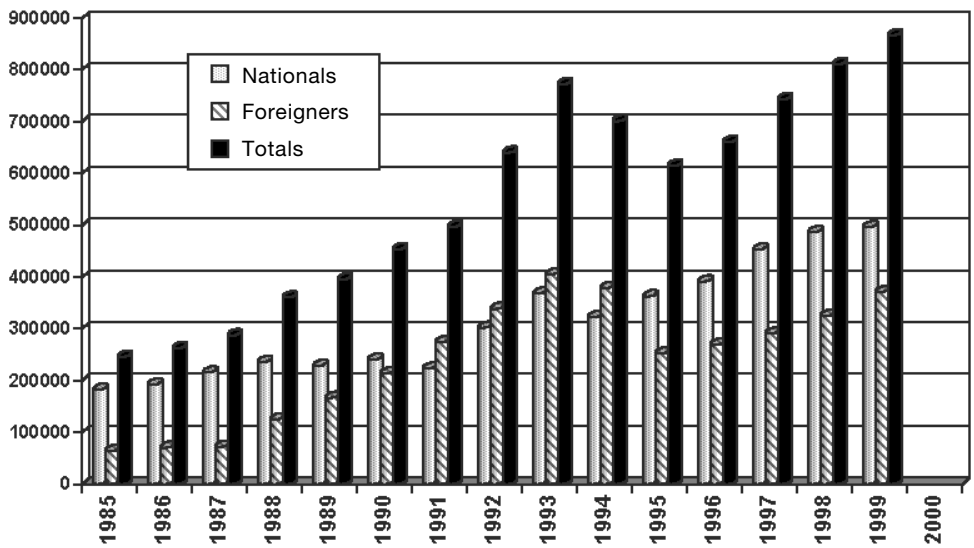
Understanding the visitor-use of parks and protected areas is dependent upon accurate and reliable data on use volumes, locations, activities and timing. The programme to measure and report public-use is a fundamental element of park management and tourism. This paper introduces a standardised approach to this activity, developed by the World Commission on Protected Areas (WCPA) in 1999 (Hornback and Eagles, 1999).

PARK AND PROTECTED AREA VISITORS are important. Their visits have political, economic, social and ecological impacts on parks and local communities. Much of a reserve's staff time and operational funds assist, support and manage human-use and most planning and development activities centre on human factors.

All management is dependent upon information. The better the quality of information, the greater the opportunity for good management. Information about visitors and their activities enables managers to deal with the challenge of increasing volumes of tourism. Therefore, monitoring public-use should be a fundamental management activity. The figures generated are critical indicators of the natural, social and economic functions performed by parks and their caretakers. Such information is also often important to residents as well as the local business community.

Parks and protected areas attract significant public interest. This, in turn, leads to a stream of visitors who invest large amounts of money, time and effort to experience these areas in person. Many factors determine the nature of this experience, such as: the condition of the resource itself, the logistic support available in the park and locally and the attitudes of people

Figure 1. *Public-use of the National Parks of Costa Rica.* Adapted from Baez, 2001.



encountered there (including park staff and other visitors). When visitors return home many become articulate and important voices advocating support for existing parks and the creation of new sites.

Gathering data on visitors is far from straightforward though. The very factors that make parks and protected areas unique and exciting also make measurements of use difficult. Where great distances are involved, staff time is consumed by the logistic demands of transportation to monitoring sites. Park boundaries may enclose villages and residences as well as roads and trails, necessitating the mathematical adjustment of measurements to ensure they are comparable. In addition, local residents may visit parks and protected areas in high numbers, but carry out activities distinctly different from those of foreign tourists. The parks' complex human geography demands careful visitor studies as well as more basic volume counts.

Figure 1 shows park usage figures over time for the national parks of Costa Rica. From 1985 to 1999 the volume of use increased almost 800% (despite a downturn in the early 1990s). The Costa Rica national park system collects data on the identity of each visitor in order to separate domestic from foreign use. Such data can be used as a base for the calculation of economic impact, with each day of visitation multiplied by expenditure per visitor.

The data can only show meaningful trends if they have been carefully collected with an eye to truthfulness and reliability and, indeed, the question of data accuracy is always a central issue when conducting analysis. What is the error rate in the data in Figure 1? How much of the data represents real field counts as opposed to gross estimates? How many visitors were not counted because their entrance was not detected? Conversely, were any visitors counted more than once? How accurate was the transfer of the field data from the remote park gate to the park office and then to the head office? Was there any opportunity for park officials to arbitrarily change the data for personal or political reasons? These questions suggest a few of the issues involved in designing an accurate and reliable public-use measurement programme.

Recognising the importance of data on park visitors, the World Commission on Protected Areas developed guidelines for the definition, measurement and reporting of public-use data (Hornback and Eagles, 1999). This paper describes these guidelines and directs the reader to the documentation.

Applications of public-use data

The scope and amount of effort put into the public-use measurement programme should be proportional to park manager information requirements for natural resource protection, maintenance operations, visitor services and protection and general management. Examples of the role of visitation data in each of these categories are outlined below.

General management

All decision-makers need quantitative data on how visitation impacts the park and, conversely, qualitative data on how the protected area impacts the visitor. Visitation data are the basis for the computation of statistical reports on sanitation, public health, accident, fire suppression, criminal acts, search and rescue missions, etc. These data are particularly useful throughout the budgetary process.

Current volume gives an idea of the popularity of various activities and services. Measurements from zones of use and avenues of access indicate optimal fee collection locations and can also inform the allocation of staff resources and possible staging of facilities and services. In addition, when unusual events occur and an idea of visitor impact is needed to deal with the unexpected (sometimes even emergencies) accurate and comparable historical data is suddenly crucial. In other words, current visitation data often becomes critically important at some later point in time.

Talum Mayan City, Mexico. Accurate measurement of public-use is a fundamental component of all social, economic and cultural impact of tourism studies. Photo: Paul F.J. Eagles.

Current public-use volumes, overnight stays by type, visitor turnover, comparisons with other areas/competing tourist sites etc. are also of value to local residents, businesses, tourist (and other) agencies as well as for general government records. Readily convertible into economic effects (e.g. tourism sales, jobs, taxes), visitation data can reveal the park's contribution to the economy in the same terms as alternative land-use activities (e.g. agriculture, mining etc.). Such data therefore provide useful insight into the importance of the park – especially significant when persuading those who may otherwise relate to protected areas with indifference, even hostility.

Natural resource protection

Visitor-use has a direct and immediate impact on the natural environment of any protected area. Knowledge of public-use activity, location and volume is needed to evaluate, protect and enhance viable natural ecosystems, including endangered and threatened plant and animal species. Hence, visitor-use data (such as visitation rates, level of pressure on sensitive areas, known peak loads at nearby areas, and records of resource erosion at certain volumes) is essential when managing wildlife and their habitats, to ensure resource use remains within acceptable limits (e.g. damage should be minimal and reparable). For example, public-use data may indicate that some visitors are straying from roads and trails. As small changes near these trails often lead to rapid impacts on fragile resources, sensitive wildlife or delicate habitats, swift deterrent measures would be an appropriate response.

Equally, a reasonably accurate picture of planned public-use activity and distribution is necessary to evaluate, protect and maintain cultural sanctuaries, archeological ruins and historical structures. Attention paid to visitor type and volume leads to better awareness of visitor behaviours (ranging from cutting firewood to unsanitary personal hygiene), which may threaten the resource or constitute a hazard to other visitors. Of particular interest is any subsistence-based resource use, such as may be undertaken by local residents. Accurate information on activities can inform preventive measures from signs to facility construction; or, in the case of local subsistence use, can facilitate a negotiated and mutually acceptable solution.

A naturalist (Terry Krause) in a Costa Rican National Park. Costa Rica collects and publishes a yearly summary of national park use. This data is used by a wide variety of agencies, companies and individuals. Photo: Paul F.J. Eagles.

Maintenance operations

Whilst it is possible to perform maintenance operations after damage is evident, the preferable precautionary approach requires knowledge of visitor-use levels. An idea of public-use volume at specific service areas (campsites, fire-pits, benches, tables, roads and trails, parking and staging areas, etc.) is necessary to facilitate daily repair, maintenance and replacement budgeting and scheduling. Short-term usage forecasts are needed to order supplies and maintain minimal inventory of consumables, i.e. soap, toilet paper, paint, gasoline, etc.

Current, peak and seasonal volume at each major development (hardened resources, facilities and functional areas, e.g. parking, staging, road, trail, etc.) reveals changes in utilisation rates relative to facility-capacity, age and useful lifecycle, changing rates of routine maintenance

and replacement cost programming or associated consequences of prolonged use. Records of public-use volume, visual evidence of excessive wear and associated costs help determine when the cost of labour for preventive maintenance (caused by poor design, materials and construction) exceeds the capital costs of redesign and reconstruction or, alternatively, the costs of visitor redistribution through general park-use planning.

Park personnel are often assigned to areas of concentrated visitor activity for cleanup and repair duties. Personnel should be assigned in sufficient number, with the correct equipment and at the right time in order to minimise public complaints. Visitor-use data also facilitate road capacity planning and design. Of particular interest are data associated with locally originating traffic, which may only use certain sections of longer roads or thoroughfares.

Visitor services and protection

The provision of visitor services is dependent on the needs and numbers of visitors, availability of funds, and resource protection concerns, e.g. site hardening, pollution abatement, etc. Establishing and maintaining public-use safety and sanitation standards must be conducted in ratio to actual volume.

Daily operational activities (especially instructional directives to visitors and changes in monitoring and patrol functions) need to be determined according to use-volume as it relates to season, current weather conditions (extreme heat, cold or changeability), resource conditions (fire hazard warning and restrictions) and wildlife control measures (e.g. preventive measures associated with unusual disease threats). Public-use monitoring activities place park staff in a better position to detect, control and correct restricted or illegal activities (poaching, removal of artifacts, destruction of plant materials, etc.).

The park may have legal liability exposure at certain times, such as periods of intense usage or when visitors participate in dangerous activities. Details of such activities (location, timing, visitor numbers) need to be known, communicated to the appropriate people and contingency plans made.

Public-use monitoring activities make staff accessible to the public to address needs or provide impromptu environmental education. The provision of interpretive programmes and information services is frequently tied to anticipated visitor numbers based on records of previous volumes measured. Visibility of park personnel during public-use monitoring activities also has the secondary benefit of deterring vandalism. All these basic areas of work are subject to the availability of resources. If resources for measuring and monitoring public-use are insufficient, it is the responsibility of the area manager to identify that this management function (and other resource protection functions) cannot be performed and to inform the supporting agencies and officials.

Importance of public-use data

Given the importance and extensive applications of public-use data, the WCPA developed guidelines relating to the gathering and handling of such information (Hornback and Eagles, 1999). These guidelines were developed specifically for park and protected area managers. They were designed to provide background and guidance for the development and application of standardised approaches to this important aspect of park management. This paper provides an overview of the components of these guidelines. Watson *et al.* (2000) provide a comprehensive treatment of measurement methods for wilderness areas.

Components of the public-use monitoring system

Any public-use reporting system requires the investment of park staff effort for: 1) collecting data, 2) summarising data, 3) analysing data, and 4) interpreting that data for management action. There are several elements critical to the effective functioning of such a system: standard

terminology, trained staff, acceptable measurement methods, accurate analysis procedures and reporting mechanisms.

All data management systems rely on precisely defined and uniform terms describing data characteristics. Therefore, if park data is to be comparable with general tourism data it is important that the park data is standardised with the tourism definitions used by national government. The WCPA *Guidelines on Public-Use Measurement and Reporting* has a full suite of definitions, a few of which are outlined below:

ENTRANT: ***a person going onto lands and waters of a park or protected area for any purpose.***

Many people enter parks, only some of whom are visitors. Some are park employees. Others may work at a lodge or at a concession in the park or may be just travelling through the protected area. An entrant is any person entering a park, for whatever reason.

VISITOR: ***a person who visits the lands and waters of a park or protected area for purposes mandated for the area (such as recreation participation).***

A visitor is not paid to be in the park and does not live permanently in the park. Note the distinction between an entrant (a person who enters) and a visitor (who enters for purposes directly related to the goal of the park).

The impact of a visitor is partially dependent upon the length of stay. A person who stays in a park for a week has different needs and creates different impacts compared with a person who attends for only a few hours. Therefore data that reports only the number of visitors is incomplete and can be misleading. To clarify this situation the statistic known as the 'visitor day' is used.

VISITOR DAY: ***One person visiting a park or protected area for one day of activity, typically 12 hours.***

However, the number of hours varies among agencies.

Improving parks' capacity for utilising public-use measurement systems

Public-use measurement systems can be classified according to their level of sophistication. Five categories have been created to enable managers to understand the capability of their existing system and to encourage the upgrading of systems to a higher calibre.

The initial level (1) of public-use reporting programme is the most primitive. With increasing sophistication systems move onto basic (2), intermediate (3), developed (4) and advanced (5) levels. Each higher level demands greater accuracy and detail of data and a corresponding increase in required staff time, hardware and funding. A park chooses a level according to its data requirements (which depend upon park size, use levels, facilities layout and user demands) and the human and financial resources available (Table 1).

Table 1. *Levels of programme development.*

Level	Staff	Time of staff	Funding
Initial	1 (assigned while doing other duties)	low, as time permits	low to none
Basic	1 (assigned while doing other duties)	10% allocated	nominal
Intermediate	2 (assigned while doing	25% allocated other duties)	same as small operating department
Developed	1 (dedicated to public-use	100% measurement programme)	same as any operating department
Advanced	2+ (dedicated to public-use	100% measurement programme)	enhanced operating department

Measurement issues

There are a large number of issues to be considered in the collection of data within a public-use measurement system. Even the simplest system requires some level of park staff expertise. If the system is sophisticated, advanced expertise is required in areas such as specialised field measurement, sampling, statistics, data analysis and reporting.

Many parks have multiple entrances and exits. Ideally it would be useful to record the entrance and exit of each person or vehicle, so that length of stay and some idea of travel route could be calculated. This is very seldom done, but some parks require all visitors to sign in and out, thereby enabling such calculations. More recently remote detection equipment has been used to photograph the license plate of every vehicle upon entrance and exit. Such equipment, when working with a database of license plate registrations, enables time and route calculations as well as reporting of the home location of the vehicle owner. Other measurement methods include mechanical vehicle detection devices on roads or optical sensors to record trail use.

However, basic remote sensing devices have an inherent error rate. For example, an infrared beam on a trail can measure foot traffic breaking the beam, but it cannot tell direction or differentiate a moose leg from a human one. Therefore, any remote sensing device must be calibrated to accommodate false readings.

In many circumstances it is not feasible to collect data from all people involved in a programme. In such cases sampling is used to gain a representative sample of the overall population. The design of such programmes needs a sophisticated understanding of sampling design and probability statistics. People are also increasingly wary of providing personal data to surveyors. This makes it very difficult for social scientist researchers to gain information on personal characteristics, needs and concerns. Park visitors must therefore be reassured that their data will be used confidentially and appropriately. Complex social and psychological phenomena, such as environmental attitudes or programme perceptions, require specialised measurement instruments and should be conducted by those formally trained in social survey research.

A good understanding of the strengths and weaknesses of each approach is necessary to gauge levels of accuracy/data reliability and the appropriate application of the data generated. These few examples show the need for well-planned procedures and well-trained staff in public-use measurement programmes.

The recording and dissemination of data

Data generated must be tabulated, checked and reported, taking into consideration the users' needs and ability to understand and interpret the information presented. Data must be timely and the level of accuracy clearly indicated. This should all ensure that conclusions are well-informed and properly drawn. A summary table of statistics is the typical form taken by a report. At intervals more complete reports provide fuller descriptions of methods and more detailed analyses of trends.

Data is increasingly rapidly available to the user. The computerisation of registration systems and remote recording systems makes it possible for managers to gain an on-going and immediate understanding of the state of public-use. For example, well-designed campsite registration systems enable managers in the park and analysts in remote offices to know exactly the number of campsites occupied, the number of people at each campsite and the home location of each camper. The visual presentation of such data using geographical information system mapping enables managers to understand the distribution of campsite-use in the park and is extremely useful when formulating a visitor management plan.

Conclusion: incorporation of public-use data into management

The importance of public-use data is fully revealed when park and tourism managers become reliant on it for their activities. Such managers need the data in the form, and with the timing and

content most applicable to their role and responsibility. For example, the purchasing department needs to know anticipated use numbers of a facility well before the supplies are needed. Conversely, a park warden will want to know immediately which campsite contains a particular family when a lost child provides their name. Therefore, the public-use data system must be designed to provide a wide range of data outputs. This will include reports of summarised data; data for input into other analyses; instantaneous point data and sophisticated analyses. Forecast usage and output approaches are important factors utilised in the design of the programme.

As tourism is becoming an ever more important and influential component of park management, the availability of accurate and timely public-use data is important. Since, better data makes for better decisions, it is important for park managers to adopt the most sophisticated public-use programme possible.

Parks exist within a network of other tourism destinations. Using the system described above, the data from any tourism focal point can be compared with and summarised alongside data from another. If park tourism is to gain the stature that it deserves in the larger political and social arenas, the flow of public-use data must be continuous and have a high level of accuracy. By making available data on their role in the economic and social life of the wider community outside, parks can provide an important justification for their existence and for the creation of other similar protected areas.

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Environmentally-friendly design and planning of sustainable tourism facilities in protected areas

HÉCTOR CEBALLOS-LASCURÁIN

Tourism in parks requires some level of facility, ranging from simple signs and trails through to complex transport and accommodation structures. It is vital that such infrastructure is designed in an environmentally-friendly fashion and that any development on site remains in character with the local area. This can only be ensured if local communities are involved as much as possible in the site planning, design and development process. This paper describes principles for sustainable design, providing three illustrations of where this has been successful: Kapawi, Ecuador; Kingfisher Bay Resort and Village, Fraser Island, Australia and Simunye Zulu Natural Heritage Site, KwaZulu Natal, South Africa. Crawford (2000) reviews other important examples.

SITE PLANNING AND DESIGN is a process that demands the integration of land-use issues, structures, facilities and utilities without negatively impacting the natural and human environment. Sensitive design of infrastructure, master site planning, ecologically and socially-conscious site design, and landscaping are all essential if harmony between tourism developments and environmental protection is to be ensured.

According to the IUCN (The World Conservation Union), ecotourism is "environmentally responsible travel and visitation to relatively undisturbed natural areas, in order to enjoy, study and appreciate nature (and any accompanying cultural features – both past and present), that promotes conservation, has low visitor negative impact, and provides for

Riverside Boardwalk, Fraser Island National Park, Australia. Carefully designed visitor facilities allow use of sensitive natural environments with low levels of negative environmental impact. Photo: Paul F.J. Eagles.

beneficially active socio-economic involvement of local populations" (Ceballos-Lascuráin, 1996). In other words, ecotourism denotes nature tourism with a normative element.

Preserving the special character of a tourism destination requires an in-depth understanding of the natural systems on the site, as well as the way in which the indigenous culture has adapted to the constraints and opportunities they present. If planning is to ensure that all on-site development has a minimum negative impact on the natural and human environment (Ceballos-Lascuráin, 2001), a new holistic and sustainable approach to site design is required. Ideally this should lead not only to a better integration of physical tourism facilities with their surroundings, it should also contribute to mitigating any environmental damage already present.

The success and sustainability of any tourism facility, including ecolodges (appropriate ecotourism accommodation), depends greatly upon the initial process of site selection. The chosen location should support the lodge within natural and biophysical resource limits while offering ecotourists the opportunity to experience and enjoy nature (Ceballos-Lascuráin, 1996). Careful evaluation may sometimes reveal that the site is not suitable for tourist facilities. Site plans themselves can also indicate the appropriateness or otherwise of a development. Plans should represent the project graphically (to scale) and must clearly show location, layout, general size and shape, and orientation of the different elements.

In the light of increasing visitor numbers to natural parks and other wilderness areas and the associated impacts on surrounding ecosystems, it would seem prudent to select sites outside reserves for the development of ecotourism facilities. A well-conducted site evaluation can assist developers in finding alternatives to developing in protected areas. However, this is not always possible since some reserves are very large. When there is no alternative to developing inside the reserve, 'zoning' can be a suitable compromise. This is the process of applying different management objectives and regulations to different parts or zones of a protected area.

Frequently, the isolated and remote locations desirable for eco-lodge development lack basic infrastructure (such as access by paved highway, public transportation services, electric and

The elevated walkway in the Valley of the Giants in Walpole-Nornalup National Park in Western Australia was very carefully designed and constructed. The walkway allows park visitors to experience the upper reaches of a forest of giant tingle trees. Since construction of the Tree Top Walk in the national park, regional tourism has increased in the local area, and the environmental impact due to forest soil trampling has been reduced. Photo: Paul F. J. Eagles.

Chaa Creek Cottages, Belize. Many private nature reserves contain attractive facilities that are culturally and ecologically sustainable. Photo: Paul F.J. Eagles.

telephone lines, piped potable water, sanitation, refuse disposal, school and medical services, shopping areas, etc.). Such sites present a challenge to planners and provide a unique opportunity to experiment with environmentally-sensitive design and operation. Determining the proportion of infrastructure to be provided by the local authorities and by the private sector is an immediate priority. Since the extra service demand is often seasonal, and takes precedence over use by local communities, tourism providers must invest in their own infrastructure needs, although both local communities and the tourism sector stand to benefit from infrastructure development.

Eco-design of tourism facilities

If we are serious about not further defacing or damaging our environment, a new approach to architecture and physical facilities planning is needed, and not only in the tourism sector. This approach should be based on the concept of *eco-design*, which may be defined as "any form of design that minimises negative environmental impacts, by integrating itself into the surrounding ecosystem" (Ceballos-Lascuráin, 1997).

Frequently located in areas of great scenic beauty and ecological significance, ecotourism facilities should be designed in a particularly environmentally benign way (National Park Service, 1993). The application of appropriate waste treatment methods and the use of alternative energy sources (especially in remote locations) are especially important. Physical facilities should be technologically viable and adequate, and also socially acceptable and economically feasible. Joint ventures and working with funding agencies can assist with addressing the costs involved. It is important to remember that the long-term economic benefits from environmentally-friendly facilities and technologies are very great, even if the initial outlays are higher (Eagles and McCool, 2002). Hence, physical planning and building should always be long-term endeavours (Tourism Council Australia, and CRC Tourism, 1998).

Before designing and building an eco-lodge, it is very important to identify the specific characteristics of isolation and define the desired level of functional, energy and food self-sufficiency (Boele, 1996). Many nature tourists do not expect to find the facilities typical of rich cities and beach resorts in a poor rural area. Some enjoy roughing it for a while, and are even prepared to pay more for the privilege! Certain standards will always remain non-negotiable though, especially security and basic hygiene.

Three examples of successful eco-design tourism facilities

Kapawi, Ecuador

Kapawi is an ecotourism/eco-lodge project undertaken with community participation in a rainforest locality of the Amazonian region of Ecuador. It provides a model of environmentally-friendly design and also a model of how private capital investments can be integrated with local community goals, with minimum cultural and environmental impacts. Kapawi offers a model, which avoids the integration/destruction paradox that faces many indigenous Amazonian groups (Rodríguez, 1999).

Living in the remotest area of southeastern Ecuador, the Achuar community had practically no contact with Westerners before the arrival of Christian missionaries in the late 1960s. Even today western influence is minimal and the Achuar remain nearly self-sufficient in their territory, still able to obtain most of what they need from the forest. Traditional Achuar architecture represents an ancient knowledge of technologies and concepts that have evolved in response to the conditions imposed by the tropical rainforest. The structure is simple and harmonious with the environment.

To ensure the tourism facilities were in character with the surrounding environment (both natural and cultural), these traditional architectural techniques (carried out only by members of the Achuar community) were used to construct the Kapawi Eco-lodge. The original Achuar design was modified only slightly, mainly where there was a requirement for non-traditional materials (such as wires, cement etc.) or facilities (e.g. electrical systems powered by solar energy, bathrooms with sanitary facilities, metallic mosquito netting, modern waste management systems, organic black water treatment works were all installed). In addition, individual rooms were partitioned off inside the lodges, something that is not typical of real Achuar homes.

The Kapawi Eco-lodge was built on stilts to ensure minimal impact on the surrounding vegetation. Situated on the edge of a lagoon, it accommodates a maximum of seventy people, including guests and staff (this being not larger than a medium-size Achuar village). The eco-lodge consists of 21 huts (double rooms), each room with private bathroom and a terrace facing the lagoon. The complex includes kitchen, dining room, bar, reading room and boutique; staff accommodation; storage rooms for food, camping equipment and fuel, a workshop; two docks (one at the nearby river, another at the lake) and shelter for backup generators.

A well supplies sediment-free water which is pumped into five plastic reservoirs of 2,000 litres each, at a rate of 15 litres per minute. Impurities are extracted by a carbon filter, where a silver-nitrate element kills micro-organisms. Submersible solar-powered pumps pressurise the system and distribute the water to different parts of the eco-lodge. Sun showers provide ten litres of warm water per tourist at the end of the day. Throughout the day there is unlimited cold water.

Kingfisher Bay Resort and Village, Australia

Kingfisher Bay Resort and Village is located in Fraser Island, Australia, a World Heritage site located 250 km north of Brisbane. The site encompasses 65 ha and includes a 152-room hotel, 75 self-contained villas, a 114-bed wilderness lodge, a day-visitor pavilion, staff village, three restaurants and conference rooms for up to 300 people. Although due to its scale not strictly an eco-lodge, Kingfisher Bay was built to stringent environmental guidelines with the aim of offering a modern resort to blend harmoniously with the island's sensitive ecosystem.

Before construction began, extensive environmental impact assessments were performed. Striving for a high level of environmental integration, roads and buildings were planned around the major trees as far as possible; colours reflect the surrounding vegetation; buildings are limited to two levels and are below the tree line; all timber used is from common, native species;

Kingfisher Bay Resort, Fraser Island, Australia. Many ecoresorts are located near to national parks. In this locale they provide additional and usually more upscale accommodation and services complementary to those existing within the park. Photo: Paul F.J. Eagles.

the hotel centre complex is designed without air-conditioning – natural convection currents are created by windows and vents at the upper and lower levels of the building; impacts on the dunes and marshlands are minimised through the use of either hardwood boardwalks or woodchip walking tracks; the resort has an on-site sewage treatment plant. The design of the resort is estimated to save over 500,000 kW of energy each year – equivalent to the annual energy consumption of 100 households. A number of typical ecotourism activities are organised and conducted by expert staff nature guides, including birdwatching walks, botany excursions, whale watching and coral reef snorkeling.

Simunye Zulu Natural Heritage Site, South Africa

Simunye Zulu Natural Heritage Site, in KwaZulu Natal, South Africa, is a tiny and as yet little known Zulu heartland tucked away in the bend of a river. It makes for a very interesting ecotourism experience, providing an eco-lodge entirely in character with the tribal village. Simunye's virtues lie not only in its unique physical facilities (which, although rustic, are of a very high architectural quality), but in its overall concept of ecotourism development as an effective mechanism for sustainable development and integration of local communities.

Simunye is a joint effort between the local villagers and Barry Leitch, aka the "white Zulu", who was born in the region (being a descendant of a European religious preacher) and who grew up within the Zulu culture, speaking their language perfectly. The Simunye Eco-lodge was constructed about 500 m from the village using local materials and building traditions. There was no preconceived architectural design – the local villagers simply began to build according to their local customs and their own tastes. The results are extremely pleasant, with an attractive combination of riverbed stone, wood, bamboo and thatch. The adjoining cliff, with its huge boulders, has also been appropriately utilised as part of the architectural expression. The bathtubs inside the huts are carved out of the native rock and water is heated in pots and poured by hand by village women. Toilets have wooden flush levers and use anaerobic septic pits. There

is a total of seven tourist huts, plus six others in the nearby village, with a total capacity of 24 tourists. Electricity is not available. In the public areas kerosene lamps and campfires are used at night. This atmosphere of rusticity seems to charm the foreign visitors who are in fact often looking for this type of back-to-nature experience.

Conclusion

Hopefully, in the not too distant future, ecotourism activities and facilities will all become more environmentally-friendly and make a significant contribution to the conservation of our natural and cultural heritage.

If adopted, the paradigms and models of ecotourism and eco-lodge design and development are likely to affect the way other types of more traditional tourism are carried out. All tourism – including mass tourism – would then benefit from more ecologically appropriate travel and lodging, and every type of tourist could expect to enjoy a cleaner and less disturbed environment.

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Ontario parks – a successful business operating model

ROBERT MOOS

The Province of Ontario, Canada, has an extensive and popular provincial park system. Today there are 278 parks occupying 7.1 million hectares with over 19,000 developed campsites and 7,000 backcountry campsites. In 2001 parks received more than 10 million visitor-days of activity.

Faced with fiscal, social and demographic challenges, the Government of Ontario established Ontario Parks in 1996 as a business model for managing the provincial park system. Ontario Parks was given special authorities to be run on a more commercial basis. The key authority is that all revenues from parks can be reinvested. Revenue retention authority allows Ontario Parks to undertake initiatives that improve customer service and generate income, provided that revenues equal or exceed associated costs. Some of the successful initiatives undertaken include marketing ventures, market-based park fees, corporate partnerships, sales of souvenir merchandise, construction of new campgrounds and introduction of a central campsite reservation system with internet reservation capability.

Since Ontario Parks was established in 1996 the annual net appropriation for provincial parks was reduced to CDN $8.5 million, a saving to the government of $6.1 million or 42%. Concurrently, customer service was improved and annual operating expenditures increased by $11.6 million, to $48.5 million. Revenues now account for over 80% of total operating expenditures, up from 56% in 1996.

THE PROVINCE OF ONTARIO, Canada, established its first provincial park, known then as Algonquin National Park, in 1893. Today, Ontario manages one of North America's most extensive park systems. There are 278 provincial parks with an area of 7.1 million hectares, more than 19,000 developed campsites, 7,000 backcountry campsites and more than 10 million visitor-days of activity in 2001. An effective policy framework is in place, based on four key objectives:

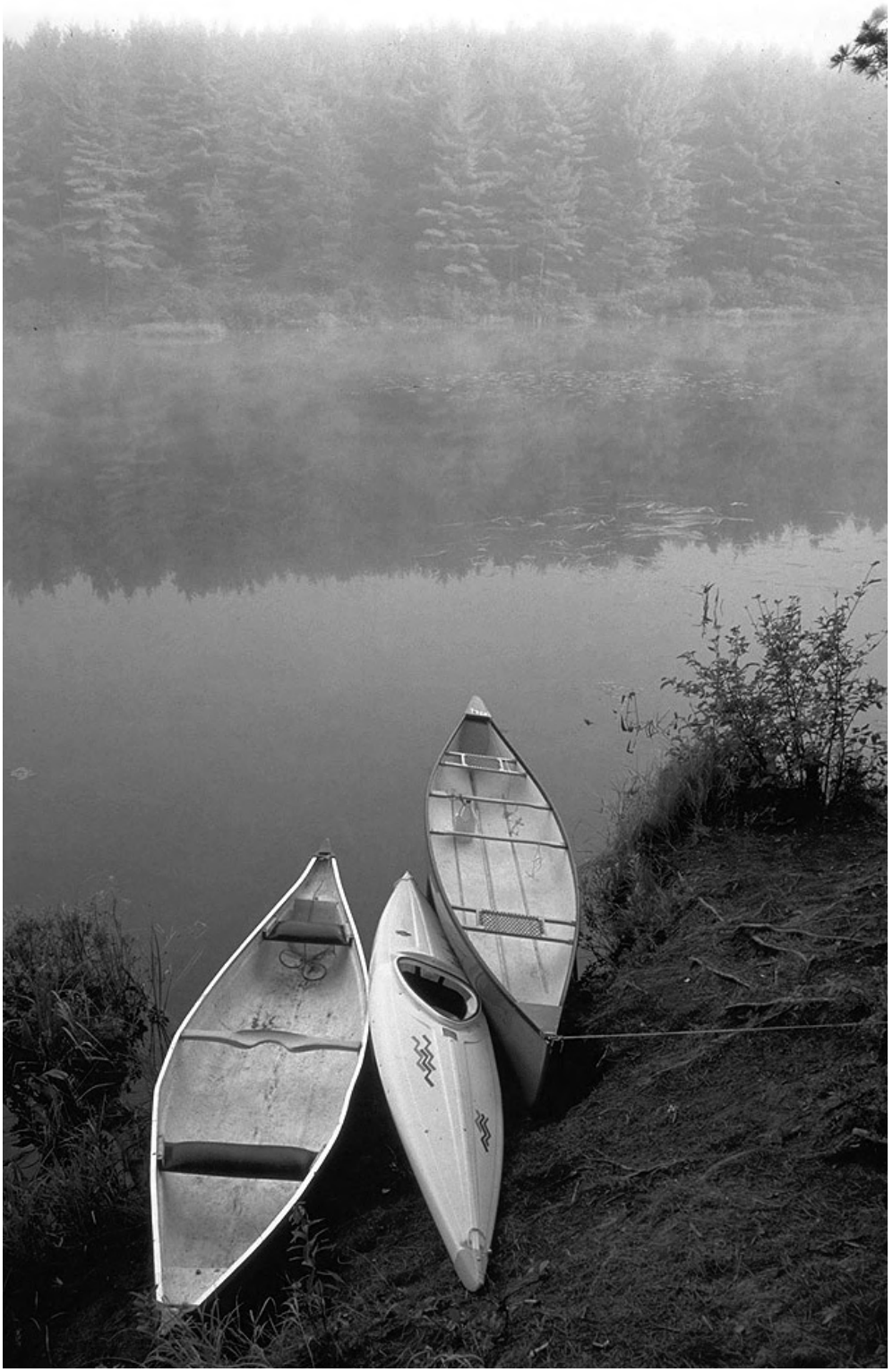
- to protect provincially significant elements of the natural and cultural landscape of Ontario;
- to provide outdoor recreation opportunities ranging from high-intensity day use to low-intensity wilderness experiences;
- to provide opportunities for exploration and appreciation of the natural and cultural heritage of Ontario; and
- to provide Ontario residents and out-of-province visitors with opportunities to discover and experience the distinctive regions of the province.

Provincial parks (regulated under the Provincial Parks Act), and Conservation Reserves (regulated under the Public Lands Act), constitute the cornerstones of Ontario's protected areas network. In Ontario four national parks, managed by Parks Canada, an agency of the federal government, complement the province's more extensive protected areas system.

Ontario's Provincial Parks Centennial, in 1993, was an opportunity to consider not only past accomplishments, but also new challenges. A lingering recession reduced government revenues and resulted in funding reductions for many government programmes. Visitor demands for services placed pressure on decreasing park operating budgets. Environmental organisations and conservation-minded individuals supported completion of Ontario's parks and protected areas network and were backed up by the World Wildlife Fund's Endangered Spaces campaign. Demographic change, specifically the ageing of the baby-boomer cohort and a population growing more ethnically diverse and urban-centred, pointed to the need for new measures to retain and attract park visitors.

Both inside and outside government there was recognition that park managers needed new tools to deal with these challenges. As a result, action was taken to develop a business model to take Ontario's provincial park system into the 21st century. This paper outlines Ontario Parks' achievements in making this business model work. It does not provide a

Canoes in Pog Lake, Algonquin Provincial Park, Canada. Ontario provincial parks provide some of the best wilderness canoeing in the world. Photo: Paul F.J. Eagles.



complete picture of Ontario Parks. In particular, efforts to protect natural heritage are mentioned only in passing.

Ontario Parks was announced in May 1996, as a business operating model for managing the provincial park system and had several important features:

- provincial park revenues were retained in a Special Purpose Account for spending on purposes related to provincial parks;
- a straight-line organisation was created, with Parks Superintendents reporting to five Zone Managers who, along with the Algonquin Provincial Park Superintendent, report directly to the Managing Director, Ontario Parks;
- park fees were established by the Minister of Natural Resources (rather than approved by Cabinet, as was previously the case);
- legal ability was granted to receive grants, bequests or gifts; and,
- the Ontario Parks Board of Directors was established to provide advice to the Minister.

Ontario Parks remained a branch of the Ontario Ministry of Natural Resources (MNR). MNR is responsible for managing the Province's public lands, waters, forests, fish and wildlife. Continuation of the strong, traditional links between MNR and the provincial parks programme was seen as a means to support identification and establishment of new parks, management of park resources, and ecologically sustainable management of greater park ecosystems.

Revenue retention

The most important feature of the business model is the authority to retain park revenues for spending on parks-related purposes. Before 1996 they were deposited in the government's Consolidated Revenue Fund, along with other revenues collected by the Province such as taxes, driver license fees, and fines. This made it difficult to undertake any provincial park initiatives that increased costs, because resulting revenues were not available to offset them. The emphasis was on controlling expenditure, not on increasing revenues.

Now initiatives that increase costs can be undertaken, provided associated revenues equal or exceed them. For example:

- a new campground can be constructed when the camping fees collected offset operating expenses;
- firewood, ice or groceries can be sold to park visitors because revenues can be used to restock inventories;
- additional services, such as canoe rentals or new forms of accommodation, can be provided, because revenues can offset operating costs; and
- marketing initiatives can be undertaken, because they attract more visitors and thereby generate offsetting revenues.

Revenue retention has encouraged Ontario Parks to introduce a form of internal business planning. Park Superintendents, who each manage one or more parks, prepare local business plans. These plans identify revenue producing initiatives, along with associated capital and operating costs, revenues, and net financial returns. Cost-benefit analyses are completed for initiatives that require capital funding.

Local business plans are then reviewed by Zone Managers, who select the most promising initiatives and submit these to the Managing Director for consideration. After comparison with initiatives submitted by other Zone Managers, the most promising initiatives are selected for implementation. Projected expenditures and revenues are incorporated into the corporate business plan for the following year. Parks that receive approval for their initiatives receive the requisite capital and operating funding and their revenue target is increased accordingly.

Revenue retention has allowed Ontario Parks to undertake a wide range of new activities to improve financial self-sufficiency and serve park visitors more effectively. These are discussed

below in two categories: marketing initiatives and operating/capital initiatives. These categories overlap. For example, market research may encourage delivery of a new service, which may require a capital investment and increase expenditures.

Marketing initiatives

Prior to the 1996 establishment of Ontario Parks, limited attempts were made to market provincial parks. Marketing was then considered counterproductive because it encouraged more use of parks which merely strained existing budgets, with little prospect of increased funding to cover higher costs. The granting of revenue retention authority brought a positive, aggressive attitude to marketing provincial parks. Since 1996 the newly established Marketing and Communications Section of the agency has led a number of successful Ontario Parks marketing initiatives.

Market research has been undertaken for the first time since the 1980s. An initial consumer survey was conducted by telephone in 1997. This was followed up in 2000 by a similar survey aimed at updating consumer response and determining how successful Ontario Parks had been in meeting its marketing objectives.

Based on the results of market research, a strategic marketing plan was produced. Key goals were to enhance awareness of Ontario Parks, increase use of parks each year, and exceed visitors' service expectations, without compromising the ecological integrity of the provincial park system. This was to be achieved by encouraging visits to under-used parks, increasing the number of core park users (visitors who use parks frequently), encouraging non-users to visit parks, and using corporate partnerships to enhance marketing efforts.

An Ontario Parks visual identity programme was developed and implemented. This was seen as critical to development of a distinct "brand" and as a means to support sale of souvenir merchandise. Currently the line includes more than 50 items, many featuring the Ontario Parks visual identity and customised with a park name. All items are of a quality and character considered appropriate for sale in provincial parks. Merchandise is sold at 85 park locations and gross sales now total about CDN $1 million annually.

A number of significant corporate partnerships were developed. These range from a sole-source cold beverage supply agreement, to co-operative marketing agreements with recreational equipment manufactures. The total cash and in-kind benefits of these partnerships were estimated to be about CDN $2 million in 2001.

The Ontario Parks Guide, the premier marketing publication for Ontario Parks, was improved and expanded. Circulation increased from 300,000 copies in 1996 to more than 750,000 copies in 2001. Corporate partners' advertisements in the Parks Guide, and associated in-kind benefits, now pay the bulk of production and printing costs.

The Ontario Parks website (www.OntarioParks.com) became an important communications channel. The award-winning website first became operational in 1996. Since that time its popularity has exploded. The year 2000 consumer survey showed that almost half of potential park visitors would use the Internet to obtain information about provincial parks, compared to less than 1 in 10 in 1997. In 2001 an enhanced version of the website was introduced. Significantly, it is now linked to Ontario Parks' central campsite reservation service.

Operating/capital initiatives

Operating and capital initiatives support delivery of services to park visitors and the majority of Ontario Parks' staff (particularly at the park level) are involved in this. This type of activity is not new and predates the 1996 establishment of the Ontario Parks business model. Yet park agencies that lack revenue retention authority are often forced to contract out service delivery, with contractors retaining the revenues collected. Ontario Parks now has the luxury of employing contractors only where it makes good business sense (whereas beforehand it was a way of coping

Camping in Bon Echo Provincial Park, Ontario, Canada. Over the last five years increases in camping fees in Ontario were associated with better visitor services. Photo: Paul F.J. Eagles.

with shrinking budgets). On this basis, services can be contracted out where net savings will be achieved or specialised expertise is needed (e.g. the operation of a lodge or large store). Revenue retention authority and the related ability to undertake income generating customer service activities has allowed Ontario Parks to develop numerous new initiatives (the most important of which are discussed below).

Starting in 1996, park fees were adjusted upwards to match those charged by the private sector for similar facilities, and to mirror more closely the cost of delivering services. While this may not be seen as a direct benefit to visitors, it has allowed park managers to maintain and enhance services in an era of financial constraint. For example, higher fees combined with revenue retention made feasible the construction of new campgrounds in Ontario's provincial parks for the first time since the 1970s. Today, park fees are on average about 40% higher than they were in 1996, but they are tailored to local markets. Hence fees for less popular, more remote parks are lower, providing an incentive for campers to visit these less heavily-used parks. Higher fees have not brought reductions in park use. In fact, visitor numbers have increased significantly since 1996. This is due to improved service in the many areas to fulfil customer demand. For example, the reservation service for campers means more certainty in vacation planning and resulted in higher campsite utilisation.

A five-year capital strategy was developed. Initially this focused capital spending on revenue-producing projects. For such projects, business cases are prepared and reviewed to ensure that capital funds are allocated on the basis of likely investment return. Notwithstanding the desire to increase revenues, Ontario Parks must also meet its obligations to protect the environment, public health and safety and long-term viability of an infrastructure valued at CDN $800 million. Accordingly, capital funds are also allocated to upgrade or replace existing facilities, especially water and sewage systems.

Recent customer service enhancements include:

- electrical service added to more than 2000 campsites, with a long-term goal of providing such service on 30% of developed (automobile-accessible) campsites;
- new campgrounds built in Sandbanks, Awenda, Bronte Creek and Bass Lake provincial parks, all close to the densely-populated Toronto metropolitan area;
- firewood, ice and camper supplies sold, and recreational equipment (such as canoes and bicycles) now available for hire in many parks;

- interpretive programmes enhanced at several parks;
- staff provided with customer service training and a new, more customer-friendly uniform.

Prior to 1996, with few exceptions, the only form of overnight accommodation available in Ontario's provincial parks was traditional camping. It was recognised that other forms of accommodation might be needed to appeal to the ageing baby boomer cohort and ethnic groups not accustomed to camping. Since 1996, Ontario Parks has introduced a number of alternatives to traditional camping, including yurts (permanent tent-like structures that are erected on existing campsites), cabins, pre-equipped campsites and seasonal leases of campsites in some parks in Northern Ontario.

Ontario Parks introduced a central campsite reservation service in 1999 in response to camper demands and emerging business trends. Reservations can now be made by calling a single toll free telephone number, year-round, 16 hours a day, up to five months in advance. For the 2000 season, Internet reservations were added to the service and over 30% of reservations are now made in this way. This award-winning new central reservation service is popular with campers, who make more than 295,000 reservations annually. Park managers credit the service with increasing visitation to less heavily-used parks and encouraging more campers to book in advance.

Assessment of the Ontario Parks business model

The Ontario Parks business model is not an end in itself. Its success must be judged by the results achieved.

Level of park use

Ontario experiences highly variable weather, including during the summer season when parks are used most heavily. Consequently, weather affects park use significantly and makes year-to-year comparisons of use rather difficult. Considering park-use statistics for three-year periods minimises the variable effects of weather on usage:

- for the period from 1994 through 1996 (the three-year period leading to establishment of Ontario Parks) total annual park visits averaged 8,291,964 and camper-nights averaged 4,321,119;
- for the period from 1999 through 2001 total annual park visits averaged 9,476,197 and camper-nights averaged 5,022,390;
- from the first period to the second, total visits increased 14.3% and camper-nights increased 16.2%.

Summer weather has been warmer and drier than average during two of the past three summers. Other factors may also have affected levels of park use. Nonetheless, it is believed that effective marketing and improvements to customer service, both enabled by the business model, played a significant role in attracting more visitors.

Customer service

Camper and day user surveys are undertaken every second year in half of the operating parks (those that provide services to the public). The surveys ask questions about a number of subjects, including customer satisfaction. The 1996 and 2000 surveys allow comparisons to be made, because the same set of parks was surveyed. Results show that the proportion of satisfied to very satisfied day users increased from 83% to 86% and of satisfied to very satisfied campers increased from 83% to 85%.

Ontario Parks' 2000 consumer survey showed that 95% of park users were satisfied to very satisfied. Another more broadly-based survey, Citizens First 2000, compared satisfaction levels for a variety of public and private services. Ontario's provincial parks had a 72% satisfaction

rating, second highest among provincial government services (behind only museums and art galleries) and higher than many private services, such as banks and department stores. Only supermarkets, often seen as the free enterprise system's greatest success, scored more highly, with a 73% rating. Based on the information outlined above, there is evidence that levels of satisfaction are relatively high and may be rising.

Financial performance

The establishment of Ontario Parks in 1996 was driven in part by the need to implement a business model that would allow the provincial parks programme to move forward in an era of government fiscal constraint. In the early 1990s park budgets were reduced due to falling government revenues during a recession, and in the mid to late 1990s by pressures to fund rising costs of health care, education and social services, while at the same time capping provincial taxes as a stimulus to economic growth.

Consequently, from the outset, one of Ontario Parks' objectives was to reduce reliance on provincial funding by making provincial parks more financially self-sufficient. This has been achieved by:

- increasing park fees;
- collecting fees more aggressively and eliminating free use where practicable;
- taking measures to increase use of parks, especially low-use parks;
- introducing new products (yurts, cabins) and services (canoe and bicycle rentals);
- selling Ontario Parks souvenir merchandise, firewood, ice and camper supplies;
- entering into corporate partnerships;
- moving towards market value with respect to fees for leases of park lands (only a few parks have leases, and policies do not permit additional lands to be leased);
- contracting out services where it makes good business sense to do so; and,
- undertaking capital projects that increase revenues, such as new campgrounds and installation of electrical service on campsites.

Figure 1. *Ontario parks financial performance – 1996/97 to 2001/02 fiscal years.*

Fiscal year	Operating expenditures (CDN$ millions)	Capital expenditures (CDN$ millions)	Revenue (CDN$ millions)	Appropriation (net vote) (CDN$ millions)	Revenue as % of operating
1996/1997	36.9	9.7	20.7	14.6	56.1%
1997/1998	41.0	9.8	21.6	13.0	52.7%
1998/1999	45.0	12.1	31.5	11.1	70.0%
1999/2000	48.4	13.7	34.9	9.9	72.1%
2000/2001	46.7	19.7	37.3	8.5	79.9%
2001/2002	48.5	14.0	39.5	8.5	81.4%

Notes:

1. In the Ontario Public Service the fiscal year extends from April 1 to March 31 of the following calendar year.
2. Based on Ontario Public Accounts, except for 2001/2002 fiscal year which is based on forecasts per 31 January 2002.
3. Operating expenditures for 1999/2000 include funding provided to Ontario Parks to rehabilitate damage to parks caused by a major ice storm affecting all of Eastern Ontario and a major windstorm.
4. Operating expenditures do not include youth programme funding provided by another ministry, and used to hire students to work in parks.

Excellent results have been achieved. In fiscal year 1996/97 provincial park revenues were equivalent to 56% of total park operating expenditures. In 2001/02 park revenues are forecasted to be equivalent to 81% of park operating expenditures.

Total operating expenditures rose from CDN $36.9 in 1996/97 to a forecasted $48.5 million in 2001/02. This increase is due primarily to increased use of parks, spending in support of revenue-enhancing initiatives, and inflation.

Most importantly, the net amount of provincial government funding appropriated to the provincial parks programme (known in Ontario as the "net vote") declined from CDN $14.6 million in 1996/97 to $8.5 million in 2001/02. This is a saving to the government of almost 42%. This was achieved in conjunction with customer service enhancements, expansion of camping opportunities, and establishment of new parks. From a fiscal standpoint, the Ontario Parks business model is an indisputable success.

Other considerations

Ontario Parks' foremost objective is: "to protect provincially significant elements of the natural and cultural landscape of Ontario". The character of the park system reflects this emphasis. Only 103 of Ontario's 278 provincial parks are operating parks that provide formal services to visitors. Less than 1% of the provincial park system's area is within recreation class parks, while almost 68% of the area is within wilderness class parks, in which development is strictly limited.

Some observers expressed concerns that revenue retention, and a focus on being businesslike, would encourage Ontario Parks to lose sight of its protection objective. This has not been the case. Increased financial self-sufficiency has allowed Ontario Parks to continue funding planning, resource management and research initiatives during a period of fiscal constraint, while serving millions of park visitors effectively.

Ontario Parks' managers understand, and consumer research has confirmed, that visitors do not want provincial parks to be overtly commercial. Care has been taken to ensure that this does not occur, while providing visitors with the services they want, such as electrical service, cold beverages, ice and souvenir merchandise. Few visitors have objected to vending machines in parks (the only notable manifestation of Ontario Parks' new approach). Many visitors respond favourably to the fact that by paying higher fees and buying Ontario Parks merchandise they provide financial support for provincial parks.

The prospect of inappropriate development was seen by some as another potential pitfall. This has not occurred. Park development can only proceed if it is consistent with an individual park's management plan and in accordance with permitted uses policies. Preparation of management plans involves extensive public consultation, exposing any potentially inappropriate proposals to public scrutiny, and any development must be consistent with both corporate and park-specific goals and objectives. Consequently, commercial developments, such as hotels, water slides or marinas, have not been considered for provincial parks.

Ontario Parks in the 21st century

In 1999 Ontario's government signalled its commitment to completing a protected areas network by approving the *Ontario's Living Legacy Land Use Strategy*. This land use strategy provides high-level direction for management of public lands in almost half of the province. It identifies 378 new protected areas, with a total of area of 2.4 million hectares, which will increase the portion of the planning area that is protected in regulation to 12%. Included are 61 new provincial parks and 45 additions to existing parks.

These new provincial parks are being added to 271 previously-existing provincial parks. Other new parks, acquired in cooperation with partners such as the Nature Conservancy of Canada, will be added to the provincial parks system. Within a few years Ontario Parks will be responsible for managing more than 330 provincial parks with a total area of 8.1 million hectares.

This restored ranger cabin in the interior of Algonquin Provincial Park is available for rent by park visitors. The availability of an all-weather rustic cabin that can only be reached by canoe in the hot summer period, or cross-country skis in the cold winter period, is very popular with a segment of the park's visitors. Such all-weather facilities extend the park's overnight utilisation during the colder times of the year, and into older sectors of the interested public who may prefer not to camp in tents. Photo: Paul F.J. Eagles.

Park managers recognise that it may not be possible for park revenues to continue growing at the rate experienced since 1996. Many of the most obvious and effective revenue-producing initiatives have been implemented. Provincial parks within a 3-hour drive of population centres are heavily-used, and there are limits to how far visitors will travel to reach more distant parks that continue to have vacant campsites. Most of the 61 new parks identified through the *Ontario's Living Legacy Land Use Strategy* (Ontario, 2001) will not generate revenues.

Clearly, the 21st century has brought formidable challenges. However, with six years experience as a business operating model, Ontario Parks has a record of significant achievements. Managers and staff can build on these achievements to ensure that Ontario's citizens have a provincial park system they can be proud not only today, but also at the dawn of the 22nd century. Protecting natural heritage is work for a generation, and for generations to come.

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parks

Managing tourism in the New Zealand protected area system

GORDON CESSFORD AND ANDY THOMPSON

The Department of Conservation (DOC) manages around 80,000 km^2 of public conservation lands, comprising around 30% of New Zealand's land area. The 14 national parks, 20 conservation parks and around 3500 special reserves represent a significant international natural resource, with a combined area of almost completely untouched wilderness similar in size to places such as Austria, Scotland, Panama, or South Carolina, USA. While New Zealand's population is small (3.7 million) and highly urbanised in coastal cities, there is a strong cultural tradition of active outdoor recreation. This has resulted in a significant infrastructure supporting public access to high quality natural areas. In an international setting where the proportion of protected natural areas is under 10% and where there is long history of human occupation, use and development of such areas, the types of nature-experience opportunities available in New Zealand are relatively unique and highly reputed. Consequently, many international and domestic visitors are attracted, and tourism is a major issue for DOC. This paper describes the main means by which DOC makes provision for tourism in its conservation management. DOC management of the visitor service infrastructure is briefly described, and particular attention is paid to commercial provision of recreation opportunities.

TOURISM IS A SIGNIFICANT and rapidly growing component of New Zealand's economy and society. Around 2 million international visitors came to New Zealand in 2001, representing an increase of 85% since 1990. Projections forecast 3.2 million in 2010 (TSG 2001). National statistics indicate that with a total tourism expenditure of over $NZ13 billion for 1999/2000, tourism accounts for almost ten per cent of GDP. At 16% of national export earnings, this represents one of the largest earners of foreign exchange (SNZ, 2001). To place this in context with New Zealand's other main export earners, one international visitor to New Zealand is worth the equivalent of 1000 kg of beef, 880 kg of butter, 1.5 ha of plantation forest timber or the wool of 150 sheep (OTSP, 1999). This value also represents one job in ten, and provides the basis for almost 17,000 small tourism enterprises, most of which employ less than five people, and many of which are dispersed beyond the main urban areas. Tourism is a particularly important component of regional and rural economies, where the significance of DOC's role in managing access to conservation lands is particularly relevant.

Tourism and the Department of Conservation

While the economic and social importance of developing tourism is widely recognised in New Zealand, the importance of a sustainable tourism industry is also acknowledged. A critical aspect of this sustainability is maintaining and protecting the natural resource on which the tourism is founded. As primary manager of most of this resource, the Department of Conservation (DOC) is widely acknowledged as having a key role to play. Like most other park management agencies worldwide, DOC has the responsibility for protecting natural, historic and cultural heritage values, while at the same time allowing their use for recreation and tourism.

As laid out in DOC's main controlling statute, the Conservation Act (1987), its key functions are:

- to manage land and other natural and historic resources;
- to preserve, as far as practicable, all indigenous freshwater fisheries, protect recreational fisheries and freshwater habitats;
- to advocate conservation of natural and historic resources;
- to promote the benefits of conservation;
- to provide conservation information; and

Figure 1. *The shaded areas show the protected lands managed by the Department of Conservation. The extent of New Zealand is shown relative to Great Britain and Ireland.* Map: Chris Edkins, DOC.

- to foster recreation and allow tourism, to the extent that use is not inconsistent with the conservation of any natural or historic resource.

Balancing primary conservation objectives with secondary recreational and educational objectives is a typical mandate for a protected area management agency. But DOC also recognises that the management actions it takes to fulfil these functions contribute to a wider range of social outcomes. In its Statement of Intent (DOC, 2001), DOC states that its actions contribute to a number of key Government goals, including:

- to protect and enhance the environment; and
- to grow an inclusive, innovative economy for the benefit of all.

While the former goal is self-evident and pre-eminent, the latter represents a direct link with the tourism industry. The tourism industry also recognises the key role that DOC plays as a destination manager. One of the specific themes in the tourism industry research strategy is: 'The nature and extent of Department of Conservation resources, facilities and management practices and their impacts on tourism growth' (TRCNZ, 2002). DOC's main function here is facilitating access for the public and commercially-provided recreation opportunities in the conservation lands.

When considering opportunities for recreation provision, particularly in the context of their commercial recreation component, it is useful to characterise visitors by their degree of facility and service dependency (Table 1).

Visitors oriented toward the more independent styles of activity will require different management consideration than those more dependent on various services and facilities for their activities. Commercial opportunities will generally be greater among the more dependent visitors, who will have greater information, access, equipment and capability requirements. However, it is important to recognise that even the most independent visitors will still require access to some services. The main distinction for protected area managers to consider is the extent to which visitor needs may be met from the core visitor service and information infrastructure, and the extent to which additional provision may be appropriate. To manage for recreation in any protected areas, managers will often need to combine two different approaches:

- direct provision of visitor service and facility infrastructure by the management agency and partners; and
- indirect provision of supplementary visitor services and facilities by allowing operations by commercial recreation providers.

Table 1. *Characterising recreation style according to dependency.*

Independent style	**Dependent style**
Self-sufficiency high	Self-sufficiency low
Information rich	Information poor
Knowledge rich	Knowledge poor
Experience/skill rich	Experience/skill poor
Equipment/resources rich	Equipment/resources poor
Accessibility options high	Accessibility options low
Time independent	Time dependent
Few dependent others	Many dependent others
No onsite service needs	High onsite service needs
Low support service needs	High support service needs
Low commercial opportunity	High commercial opportunity
More domestic visitors	More international visitors
Totally free experiences e.g. wilderness hiking	Programmed packages e.g. sightseeing, specialist use (rafting, caving)

The Department of Conservation provides infrastructure for a range of recreational needs. Photo: Gordon Cessford, DOC.

The DOC visitor infrastructure

DOC's primary means of providing for tourism is through a visitor infrastructure of walking tracks, roads, huts, campsites, and visitor centres. Around 45% of DOC's NZ$ 150 million budget is spent on visitor needs. To sustain core levels of service and to cater for projected growth in tourist numbers, DOC's main response has been based on organising, maintaining and enhancing this visitor service infrastructure. This is a significant challenge, as it was built up over many years by a variety of public land management agencies for different purposes. Therefore, when DOC was established in 1987 to consolidate the conservation and recreation functions of all these agencies, it inherited a highly diverse and uncoordinated recreation resource. The costs of its overall maintenance far exceeded any available or foreseeable budgets and some effective means of systematically managing these assets in a sustainable manner was required. To maximise the maintenance outcomes and infrastructure quality with its limited funds, DOC developed the Visitor Asset Management Programme (VAMP), based on three main components:

- Visitor Groups – are the keystone of the VAMP approach. They are based on delivering a range of recreation opportunities. Visitors are classified according to their facility and service needs; their setting, activity and experience preferences and the degree of risk accepted in their activity. The groups are Short-Stop Travellers, Day Visitors, Overnighters, Backcountry Comfort Seekers, Backcountry Adventurers, and Remoteness Seekers (DOC, 1996).
- Visitor Sites – are management units that are spatially defined places providing services for priority visitor groups, including nodes such as huts, campsites, road-ends and viewpoints, and specified sections of tracks. Each site can incorporate a collection of different visitor assets, and can be grouped with other sites into larger management units.
- Visitor Assets – these are a variety built facilities for visitor needs, including structures such as huts, bridges, signs, boardwalks and jetties. Each asset is uniquely numbered, management data about it is recorded and maintained and it is linked with a particular visitor site.

The development and ongoing operation of the VAMP system has required:

- an accurate inventory of all visitor assets;
- status reporting programmes on physical condition of assets;
- application of a life-cycle modelling approach for each asset, to predict maintenance and replacement costs, and specify work schedules;

- definition of the visitor sites at which the assets are located;
- specification of other key management information relating to each site (e.g. key natural and cultural values, impact issues, priority visitor groups, management plan specifications, publication resources etc.);
- a site-scoring process incorporating public consultation processes, to indicate the importance of each visitor site, and the related priorities for funding asset management and maintenance at each;
- incorporation of all data and information about each site and its assets in a centrally managed Visitor Asset Management System (VAMS) database, accessible to managers throughout DOC.

These tasks are still underway and extensive effort continues to be required. But the approach has resulted in systematic asset management (VAMP), based on a comprehensive site-specific database (VAMS). This generates the best available environmental, social and financial information required to provide sustainable visitor services without losing sight of conservation priorities. Realistic costs for asset maintenance and replacement can be determined and decisions made with reference to site priority scores and associated environmental and social values. While these co-ordinated information resources provide decision-makers with effective tools to guide their choices, there is ongoing need for improved knowledge about values and impacts in recreation-environment interactions.

By applying this VAMP approach, DOC's intention is to maintain a sustainable core tourism network that allows for provision of the optimum range of recreation opportunities. However, this is a challenging task. At January 2002, the overall visitor service infrastructure comprised 32 visitor information centres and an extensive network of over 3,700 visitor sites. Over 35,000 visitor assets are present at these sites, including approximately 1,000 huts; 300 campsites; 12,000 km of walking tracks; 2,200 km of roads; 550 car parks; 13,500 signs; 1,600 toilets;

A high-use hut on a major backcountry route. Photo: Gordon Cessford, DOC.

14,500 structures (e.g. bridges, boardwalks, jetties, boat-ramps); 400 amenity areas (e.g. car parks, picnic areas, viewpoints) and 1,100 other buildings. While there are many ongoing questions about managing for appropriate visitor numbers and the mix of visitor groups/activities at different sites, the bulk of basic visitor needs will continue to be met from this infrastructure.

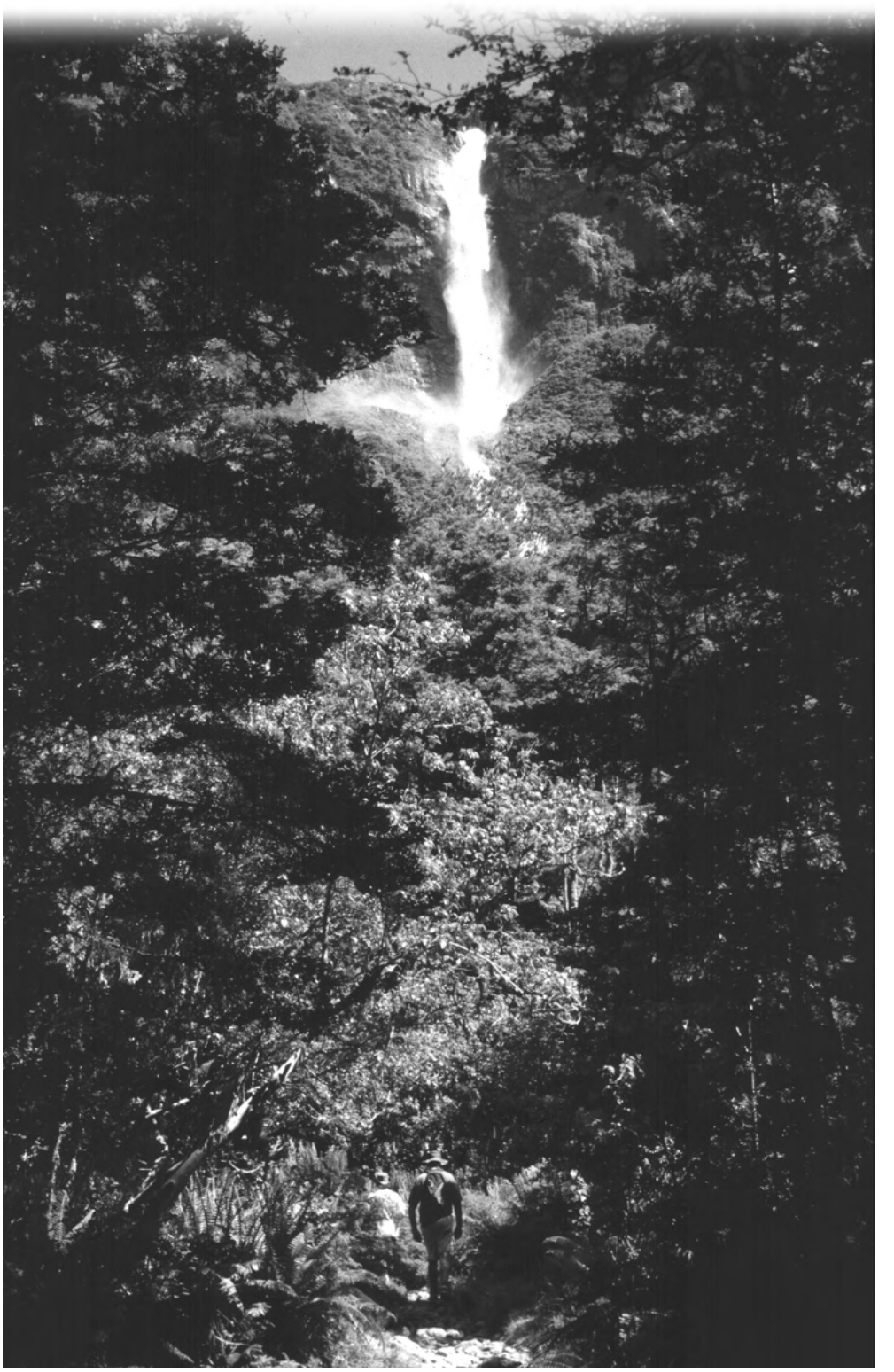
Supplementing DOC provision of facilities and services

Provision of this core recreation network is done directly by DOC using its own budgets and staff resources. However, these resources are limited and some needs cannot be fulfilled in this way. For example, there are some facilities that are important to particular groups, but do not make an effective contribution to the core network and are low priority for maintenance and replacement. There are, of course, some valid recreation opportunities that cannot be provided by DOC's core facilities and services alone. In this respect, DOC does not see itself as having sole responsibility for providing appropriate facilities and services, but instead views its role as leader, guide and facilitator in a range of partnerships with other groups (DOC, 1996). The two main types of partnerships that have been identified are through community involvement and commercial enterprise.

The role of community involvement relates mainly to voluntary contributions of time and resources to assist with a variety of DOC conservation tasks, some of which include visitor facility maintenance and visitor information programmes. While much of this activity concerns one-off small-scale projects using groups of individual volunteers, some involves more organised groups from the community, engaged in ongoing work. Such tasks often demand longer-term commitment from community groups. Terms, conditions, roles and responsibilities can be formally specified as official management agreements within the VAMP (DOC, 1998). These usually provide for community involvement in maintaining visitor sites or assets not of high

A typical backcountry hut in a remote area. Photo: DOC.

Sutherland Falls on the Milford Track, Fiordland National Park, New Zealand. Photo: Gordon Cessford, DOC.



priority in the core recreation network. Most examples in New Zealand involve hiking and climbing clubs in the maintenance of remote huts. Occasionally, parts of the community are interested in maintaining core sites and assets or developing new ones (perhaps due to some particular recreational, historical or cultural connection). These management agreements are developed on a case-by-case basis according to a variety of community interests and are not a systematic part of the mainstream VAMP development. However, they are a useful and important means of building relationships with the community, and of stimulating interest in other possibilities for collaboration.

Commercial enterprise in tourism concessions is the other main means of supplementing visitor services, facilities and opportunities and the significance of this role is specifically acknowledged by DOC in its Visitor Strategy (DOC, 1996). Here, the goal of DOC is '..in managing the range of visitor opportunities, to allow the private sector to provide visitor facilities and services where they do not compromise the intrinsic natural and historic values of areas managed by the department and do not compromise the experiences of other visitors'. The main management issues that DOC has to deal with in managing concessions to achieve this goal include (DOC, 1996):

- how to identify the type and extent of commercial tourism operations that are appropriate in different department-managed areas and what standards they should follow in providing facilities and services to visitors;
- how to take a co-ordinated approach to granting concession to tourism operators to provide facilities and services for visitors. (In particular, avoiding reacting to proposals in an ad hoc way and preventing an over-provision of concessions); and
- how to monitor conflicts between commercial tourism operations and other visitors.

To address these issues, DOC has developed a specific concessions management system that can facilitate the involvement of commercial recreation and other visitor service providers, whilst also minimising any negative environmental and social effects.

The DOC concession system

A concession is primarily an environmental protection mechanism that gives official authorisation (usually with specific operating conditions and commercial fee charges) to conduct private and commercial activity on conservation lands. The operations of tourism businesses are among the range of different commercial activities that may require a concession (e.g. telecommunication sites, grazing, site access easements, public works, filming and many others). But there is a fundamental difference between recreation concessions and others. The approved services provided by tourism businesses usually directly complement DOC's own recreation management objectives. Recreation concessions may include accommodation and transport services, equipment hire, special facilities (e.g. ski-fields) and guiding services that range from passive sightseeing to specialist activity such as climbing, caving or rafting. In this respect, the management of recreation concessions is simply an extension of wider recreation planning processes, as demonstrated previously in Figure 1. Recreation managers value recreation concessions because:

- they provide services and facilities for a wider range of visitors than would otherwise be possible;
- impact assessment processes are built in to concession application processes;
- research and monitoring processes can be built into concession conditions;
- specific operating conditions for concessions can be set to minimise environmental impacts, social impacts, and visitor safety issues;
- the concessionaires are well-placed to communicate appropriate information, behaviour protocol and conservation messages to their clients; and
- revenues from concession fees can supplement agency budgets for managing visitor sites and other conservation projects.

Accepting that allowing some commercial provision of recreation services is a valid management option, the main principle driving DOC's concession management system is that any application should be considered according to its environmental and social impacts. The requirement for concession applicants to undertake environmental impact assessment (EIA) is integral to concession applications, and is supplemented by a management review in each case. Formal public consultation requirements may also be included in application processes, particularly where significant effects are anticipated, long terms of operation are sought, or applicants are seeking exclusive use of an area. These requirements are built in to the steps that must be carried out by DOC in managing any concession application, as summarised below:

- **pre-application** – ensure applicants have access to correct application material and associated information resources; provision of specific advice, as required;
- **receive and process application** – lodge receipt of application and prepare a processing plan for applicant (with estimates of time, cost and steps to be taken);
- **further research** – work with applicant to gather the range of information required to inform decision-maker, including effect assessment tasks;
- **draft report** – develop a draft report to decision-maker for provisional approval (subject to public submissions), allowing applicant the opportunity to comment on process to date, and to check that all application details are provided;
- **public notification and submissions** – if this stage is required, initiate public consultation and submit final report on outcomes to decision-maker; and
- **final decision** – once the decision is made, notify applicant and finalise concession documentation.

These steps summarise the concession application process, but additional ongoing management tasks accompany the operation of the concession activity. The first of these is the normal management of concession contracts, involving activity reporting and collection of commercial rents. The second is to review any effect-monitoring processes that may be part of

Track facilities give access to many natural features. Photo: Gordon Cessford, DOC.

the concession agreement. This may include additional concession negotiation if monitoring results indicate some action is required. These management steps and on-going administration, monitoring and review processes represent the overall concession management system for any one concession. In each case, all information associated with the concession application and processing, and any operational management tasks associated with it, is recorded in a Permissions Database. This is currently under development and will be closely linked to the VAMS database, bringing the management of visitor infrastructure and concession operations closer together.

The main feature of concession agreements arrived at using this process is that managers can set agreed conditions of operation for the activities concerned. This allows the concession activities to be carried out in the manner most compatible with the environmental and social values in the conservation lands involved. For example, where protected areas are zoned according to systems such as the Recreation Opportunity Spectrum, concessions will be allowed only where activity corresponds to existing zone standards. Concessions consistent with frontcountry areas will not normally be acceptable in wilderness settings, and vice versa.

Concession conditions may also be set to assist managers resolve any outstanding questions and issues associated with environmental and social effects. Where questions about the effects of activities are unresolved, concession conditions may require concessionaire involvement in research or monitoring processes. For example, a monitoring programme for aircraft noise in Aoraki/Mount Cook National Park funded by the aircraft-operators identified moderate levels of visitor annoyance. Taking note of these results, and without any requirement from managers, the aircraft operators developed industry codes of conduct and voluntarily changed their flight paths and practices in ways that reduced this negative effect. In another example, boat operators running nature cruises in Akaroa Harbour pay a levy to a research fund managed by DOC, which is dedicated to research on the ecology and impact sensitivity of the endangered Hectors Dolphin, which is a key focus species of these trips. These concessionaires also assist DOC with general species monitoring, and by conveying a large amount of conservation information to their visitors from their own experience and resources, and using educational material provided by DOC.

Where such monitoring and research processes identify clear impact effects, negotiation with concessionaires may enable practical solutions that satisfy both management and concession needs. For example, concerns were raised that the route of New Zealand's premier alpine multi-sport race event took mountain runners through key habitat for an endangered alpine duck in Arthurs Pass National Park. Working with DOC, the event concessionaire funded construction work to shift the key section of alpine trail to a less sensitive route. And where good relationships are built between managers and concessionaires, new opportunities can be identified. For example, the large number of skiers concentrated on the Mount Hutt ski-field offered a particular opportunity for conservation advocacy, and the concessionaire worked with DOC to establish conservation information panels in their new day shelters on the field.

As well as providing a pro-active management tool, the extra revenue generated from concessions for conservation purposes can be substantial. For example, in 2001, there were 3,645 concessions operating on conservation lands (of which 1,134 were tourism-based). Subtracting approximately $NZ 2.3 million in management costs from the total concessions revenue left approximately $NZ 6 million net revenue available for other conservation purposes.

Ongoing management challenges

These examples suggest that well-managed concession operations can significantly complement and offer material assistance to the conservation and recreation objectives of protected area management agencies. But managing them still represents a major challenge to such agencies, and demand for new concession tourism opportunities is growing rapidly. Tourism concessions

have increased by over 100% in the last decade and 40% in the last two years. They are forecast to increase by more than 100% in the next decade. This reflects wider patterns of tourism growth in New Zealand, which feature an increasing proportion of international visitors. Their visit characteristics feature more activity dependency on services and facilities than is the case for domestic tourists, suggesting greater opportunities and demands for further commercial recreation services, as well as greater pressures on existing visitor infrastructure.

A natural tension will always exist between the needs of the tourism industry to grow and diversify and for individual commercial enterprises to generate a return, and the fundamental role of conservation management agencies to minimise negative environmental effects. Many concession operations in New Zealand are run by small operators, on which heavy administrative and effect assessment processes can place a significant burden. The time, funds and expertise to assess effects, for example, may exceed the capacity of many small operators. Reducing their compliance costs and application-processing times, while improving the information assistance provided in the application process are important ongoing considerations for DOC – and DOC still has the management challenge of identifying where different commercial concessions may be appropriate (or not), and what operating conditions may be necessary in different places. For example, many recreation participants have simple philosophical objections to commercial recreation provision in general. These are common ongoing issues for any protected area managers who are balancing the positive and negative aspects of different tourism and conservation objectives.

While the DOC visitor asset and concession management systems represent solid frameworks for providing infrastructure and balancing different interests, they depend on continually improving sources of information on environmental and social effects, on developing more efficient concession application and processing systems, and on having more systematic guidelines for choosing activities appropriate to different places. Environmental and social research, business management and informed recreation planning are all necessary disciplines that must continually operate in association with such management systems. Effective co-ordinated input from these disciplines can significantly enhance the value of tourism visitor management systems to managers who will always have to make the definitive decision in trade-offs between the multiple objectives of protected areas.

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Customer management in Finland's protected areas

ANNELI LEIVO

In Finland there is a single state organisation, Metsähallitus, responsible for the management of most state-owned protected areas. Recreation pressure on these areas is generally not too high due to Finland's relatively small population compared with geographical size and the public right of access to privately-owned uninhabited areas. Customers are therefore seen more as a resource benefitting nature protection than a hindrance. Over the last ten years efforts have been made to increase recreational and educational use and to improve customer management of protected areas. Five customer management methods or tools used at national level are presented: 1) classification of protected areas according to recreation and education service provision; 2) customer service chain model; 3) standardised customer counts, surveys and monitoring; 4) customer value creation process; and 5) customer service concept.

FINLAND LIES IN NORTHERN EUROPE and is rather sparsely populated with only five million inhabitants in some 337,000 km^2 of territory. One quarter of the land area is state-owned and most of this consists of less productive forests, mires and treeless fells. Nearly all this land is managed by a single state organisation, Metsähallitus (formerly called the Forest and Park Service). Within Metsähallitus (2002), the Natural Heritage Services (NHS) are responsible for the management of nearly four million hectares, including national parks (which comprise 32 of Finland's 33 parks), other protected areas, national hiking areas and recreation areas, as well as rights of way on state land. This management is financed by the Ministry of the Environment (protected areas) and the Ministry of Agriculture and Forestry (hiking and other recreation areas). There is no entrance fee to the areas or to most of the visitor centres.

Duckboards are used on bogs and other damp places to prevent damage to vegetation and to make walking easier. Using duckboards was also the traditional way to cross a wet bog or mire in Finland at a time when there were no roads to all villages and farmhouses. Photo: Marja Raappana.

It is estimated that there are 2.5 million visits per year to NHS areas and about 4.5 million visits to all state land, including commercial forests. High visitor concentrations are avoided partly due to a public right of access permitting people to go freely nearly everywhere in Finland outside inhabited areas and fields (although not in motor vehicles). Protected areas are an important part of the infrastructure for nature tourism (especially in eastern and northern Finland, where the population is low). In southern Finland the parks serve largely as recreational areas for local people.

Over the last decade there has been a major change in the NHS attitude to visitors. Hitherto, park visitors were considered a potential menace and merely tolerated, but now a satisfied visitor is viewed as an ally for nature protection. It is acknowledged that not only could most of Finland's protected areas receive more visitors without negative environmental impact, but also that increased visitor numbers can actually bolster the long-term prospects of the areas. Hence, enhancing the tourists' experience of parks has become one of the major management goals, with the word 'customer' replacing 'visitor' ever more frequently in NHS communications.

As a nationwide organisation is responsible for the administration and management of protected areas, it was necessary to create and adopt national-level management principles (e.g. Metsähallitus, 2000). Some customer management protocols have been in use for several years whilst others have only recently been put in place. The following five principles are used in Finland where protected areas are still frequented well within their carrying capacity, but they may well be transferable to a different situation.

Principle 1: Classification of protected areas according to recreational and educational service provision

In Finland there is a network of 33 national parks and several hundred other protected areas, varying in size and conservation status. Some areas were designated decades ago, others only recently and there are still a great number to be established in the near future. Local people and the municipalities are increasingly keen to develop these areas as attractions for nature tourism.

To direct the public debate and to unify its approach, the NHS prepared a general "role" plan, which categorises all of its areas into five classes according to present and planned recreational and educational services. Class 1 status has been awarded to only a small number of areas with the best services in terms of range and number. Most protected areas are without any services (e.g. trails, camping sites) and fit into Class 5. The plan was prepared using local experience and the best available ecological knowledge. The growing educational, recreational and tourism pressures were also assessed.

The aims of the role plan were:

- to identify areas with high visitor pressure and with at least minimum qualifications for the development of customer services;
- to manage the whole network in a cost-effective way;
- to identify the need for new investments (e.g. to enable some areas to be raised from the present class to a higher one) and to estimate future development and maintenance costs;
- to identify areas without recreational pressure (where no new infrastructure will be developed); and,
- to make the final decisions on the role of each area during a participatory management planning process.

Experiences based on these principles and classification are very positive. The system has been especially useful in terms of facilitating the cooperation between the NHS and the Ministries. Classification has also proved useful during operational work, being used as a tool for the development of marketing strategies.

Principle 2: Customer service chain model

The NHS has 13 visitor centres within or near national parks, two visitor centres in national hiking areas and five other customer service points, mainly situated in towns. As opposed to visitor centres, there is no auditorium and nor any (or only a very small) exhibition in the other customer service points, and their services mainly include information on visitor facilities and the natural and cultural heritage of the areas. There are over half a million visits per year to visitor centres and customer service points. This is equivalent to ten per cent of the population of Finland. Nearly 20% of the visitors come from other countries.

Visitor centres and customer service points work closely together in a tight-knit network (Leivo, 2000). The personnel have a common email group, training courses, use the same databanks for information and share a joint national marketing system, a common website and a nationwide customer service phone number.

Through this service chain (which is not a franchise) customers are reached and served better than through separate visitor centres. For example, a central service allows recommendations to be made on areas to visit according to specific customers needs (e.g. parks that can accommodate disabled persons or families with small children). Other general information can also be provided e.g. guidelines for park users etc.

Principle 3: Standardised customer counts, surveys and monitoring

It is now widely accepted that information on customers is as important for effective protected area management as ecological information. It is also a tool that facilitates public participation in park management, giving visitors a sense of ownership of the parks.

The NHS, the University of Helsinki and the Finnish Forest Research Institute Metla have together produced manuals for conducting both customer counts and customer surveys in protected and recreation areas (Erkkonen, 2001). The manuals go into great detail, providing

Most of Finland is covered by boreal forests dominated by Siberian spruce or Scots pine. This kind of heath forest vegetation is fairly tolerable to recreational use compared to other biotopes. Photo: Tage Lampén.

step-by-step instructions. For customer surveys there is a standard questionnaire and MS Excel-based software for the analysis of the data generated. The results and reports of the surveys are all standardised.

The benefits of standardisation are:

- cost effectiveness;
- consistent quality of information;
- comparable information on different areas; and
- standard annual information on any single area to be used for monitoring.

Carrying out customer counts and surveys in Finland is part of the designated role of protected areas but these are only executed regularly in areas of higher rank (i.e. in areas with a higher number of visits).

Customer surveys can help identify and meet customer requirements and thereby improve customer satisfaction. On the other hand, survey results can also be used for the benefit of the protected areas (e.g. control customer flow, to develop information and interpretation), to ensure financing and public support and to develop long-term management policies.

However, recognising customer needs does not necessarily mean that all the needs should be met in or by the park itself. The NHS decides on which services to offer. The important thing is having reliable information on which to base decisions.

Principle 4: Customer value creation process

A key aim of management is to create added value for the protected area visitor. Familiarity with customers is therefore paramount e.g. their age, socio-economic status, interests and requirements. Typical customer profiles should be constructed and their 'journey' to the park outlined – these may sometimes overlap. Four main phases can be recognised: purchase phase, travel or access phase, visit itself and after-visit phase. Plenty of questions and needs arise at each stage and the nature of these depend upon customer type (e.g. an experienced hiker, a family with small children, a school class or a group of senior citizens all have different interests, needs and abilities).

Examples of questions arising during the purchase phase of a person interested in hiking may be:

- How do I want to spend my leisure time?
- Where can I obtain information on hiking?
- What information is available on where to hike?
- How can I choose the appropriate area for my needs?
- Where can I get more detailed information?
- Where can I buy maps?
- Where can I stay overnight?
- What else can I do there?

This process analysis helps to identify obvious needs that could or should be met automatically to improve customer management. Metsähallitus has recently adopted this tool to evaluate and improve customer services.

Principle 5: Customer service concept

At present the NHS is trying to develop a holistic approach to customer management. Customer services are being standardised to form one concerted action of many units and individual staff. This single service concept includes such things as the website (a virtual customer service point), information and interpretation services, visitor centres and customer service points, protected and hiking areas and routes and a whole range of other services.

Individual services should complement and support each other and all the services should have the same message for customers. This can be very challenging as many services (e.g. transportation, accommodation) are provided by a third party.

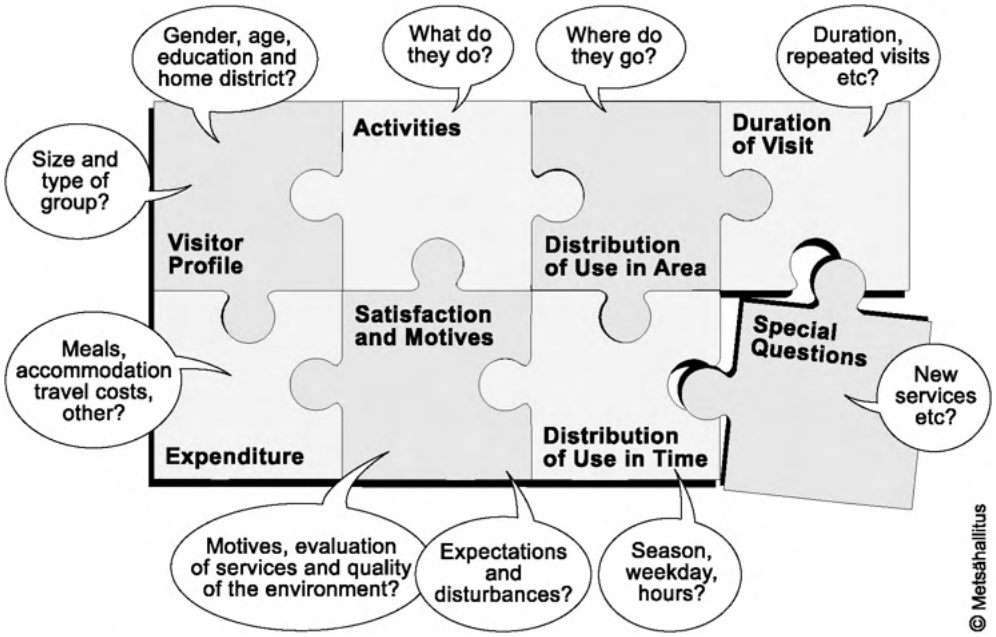

Figure 1. *The most important information solicited by the customer survey.*

The NHS continually evaluates its customer service performance on the basis of the fulfilment of customer needs and the associated impact on the environment.

Customer management indicators

All five methods are examples of how diverse management activities can accommodate different needs. To evaluate management results, clear indicators are needed. These already exist to measure flows between areas and gauge customer satisfaction. But perhaps the most important indicators of all are still under development: those which should enable park authorities to determine whether customer management is ecologically, economically and culturally sustainable.

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parks

African parks: combining fiscal and ecological sustainability

GILES MULHOLLAND AND PAUL F.J. EAGLES

Conservation is only possible with sufficient finance. Throughout Africa the fiscal arrangements of most parks and protected areas do not provide enough income for sustainable park management or for building support in local communities. This results in an uncertain future for many parks, as growing local community needs force much of the land to be turned over to agriculture. This paper argues that far higher visitor numbers, greater financial returns and more efficient financial management structures are needed in Africa if its parks and reserves are to survive in the long-term. The most ecologically-appropriate fashion to earn this income is through much better managed nature-based tourism.

TOURISM IS ONE OF THE MOST IMPORTANT export industries in Africa (Dieke, 2001). Given the nature of the development of the Western world with its efficient industries and sophisticated information technology, Africa is unlikely to be able to compete in these fields in the near future. The economic survival of most African countries depends on foreign exchange earnings from the export of raw materials and tourism. Without this income they cannot repay their loans to Western banks or purchase new capital equipment to help increase exports. Tourism is an exceptional African export industry in that it is (theoretically) sustainable, based on renewable natural resources – most notably the continent's impressive wildlife (Wade *et al.* 2001). This contrasts with the mineral export industry, essentially founded on finite supplies of oil, gold and diamonds.

In Africa, vast tracts of land have been set aside as national parks, game reserves, and other forms of protected area. In several countries these reserves cover over 25% of the country's total area. This is a substantial sacrifice considering a very high proportion of the population relies on agriculture for survival – setting aside so much land can cause life-threatening hardship. Sensibly, some reserves permit locals limited grazing or farming, where this does not compromise the ecological goals of the park. Nevertheless, the existence of reserves sometimes has a significant negative impact on the ability of the local communities to feed themselves.

The situation is exacerbated by the demographics and predominant communal structures of Africa. Village populations are rarely static and need a steadily increasing area of land to support themselves. As the majority of the most economically viable land is already being farmed (albeit not always intensively or effectively), locals are looking to the wetlands and forests (often areas of crucial ecological importance) to provide for their needs. Equally, until they derive sufficient benefit from them, communities will continue to demand the return of reserves to subsistence agriculture. Parks find it incredibly difficult to withstand such pressure.

At the same time, maintaining (let alone defending) a protected area system is expensive. Park financing typically comes from government grants, foreign aid or tourism. But throughout Africa grants are small and declining and foreign aid, although useful for capital construction, is rarely effective for daily operating costs. Tourism, therefore, seems the best source of long-term finance for park operating expenses (Eagles and Higgins, 1998), whilst also having the potential to generate income for and thereby appease disgruntled local communities.

However, at present revenues and benefits to local people are limited by the reluctance of reserves to allow effective tourism competition – almost all provide exclusive licenses to operators to build lodges or run tours. There is an obvious niche for larger tour groups and for more budget-oriented tourists, but to exploit this gap in the market, parks must sacrifice exclusivity to open competition. South African National Parks have recently gone through a

major tendering process for park facilities and programmes and now have at least nine levels of pricing for accommodation, thereby allowing use by a wider sector of the public. The success of this programme should be carefully evaluated and its positive features emulated elsewhere.

Throughout Africa, with the exception of South Africa and Tanzania (see below), the running of safaris and other organised tourism activities is often the monopoly of foreign companies. Consequently, the majority of tourism income stays with the foreign company and quickly leaks out of Africa. Even where a national or local company runs a tourist operation, profits tend to end up in major cities with pitifully little going to the local community. While some locals may earn some money from tourists, they do not gain as much as they could or as politically desirable. Usually they are involved only in developing campsites with basic facilities, rarely in establishing and running higher-value tourist accommodation. This combination of high leakage from park tourism and low income to local people turns the community against the reserve.

There are many reasons for the foreign domination of the African tourism industry: the predominance of hotels and other tourism services in foreign ownership; the generally low level of tourism training and expertise in African park agencies versus the high degree of expertise necessary to service nature-based tourists; the lack of foreign confidence in the legal system of African countries to handle disputes; the availability of trip insurance coverage to Western tourism corporations and the high profile of many European and North American ecotourism and nature-tourism operators.

In some areas government park agencies manage reserves and park tourism facilities. Unfortunately, more often than not, the local community is still excluded from contributing to park management. In addition, where governments are responsible for all aspects of the reserve, it is generally not run on a genuinely commercial basis, resulting in a further economic drain. Hence few parks and game reserves in Africa can support themselves let alone a protected area system.

Elephant viewing in the Sabi Sabi Private Game Reserve in South Africa. Ecotourism is an important economic activity to most of the countries of eastern and southern Africa. Photo: Paul F.J. Eagles.

In some countries foreign or central government domination in the tourist sector is beginning to be challenged. However, this is far from straightforward and requires substantial capital, training and institutional change. Nevertheless, Tanzania is a notable exception to the typical scenarios described above. The national park system runs an operational surplus each year, with a substantial amount of money devoted to local community development. Each park has a community officer, whose job it is to liaise with local communities and ensure the park grants are applied to tangible and worthwhile local needs.

If African parks are to be conserved, they should be run with the Tanzanian model in mind. They must benefit local communities and encourage local involvement in tourist infrastructure development (as often advocated by foreign-funded aid projects). This could range from employing locals as reserve staff; using local labour to build offices, staff accommodation and construct roads; to encouraging locals to act as guides.

Recent observations in eastern Africa

Recent dramatic drops in park tourism in some parts of eastern Africa highlight the importance of the economics of tourism to conservation. The following examples demonstrate that park and community income from tourism must be given much higher priority in park management throughout Africa.

One of us, Mulholland, lives in South Africa. In 1995 he toured Uganda and Rwanda, and subsequently all the other southern and eastern African countries. During June and July 2001 another visit to Rwanda and Uganda helped develop further appreciation of the relationship between tourism and conservation in Africa. The other author, Eagles, visited Kenya, Tanzania, South Africa and Lesotho, on various trips throughout the 1990s.

Recent events have created a tourism crisis in some parks of eastern and southern Africa. Volumes of park tourists are down substantially. Civil unrest in Kenya (and Zimbabwe), civil wars in Rwanda and Uganda have all contributed to a national decline in tourism and to a regional image of insecurity. It is true that in many areas parks and reserves have provided cover for guerilla fighters at one time or another. The terrorist attacks in the USA on 11 September 2001 and resultant drop-off in global tourism has served to compound the problem. The authors' observations trace the on-the-ground impacts of this downward trend.

A visit to Rwanda and Uganda in 2001 found a significant lack of tourists at some of the most impressive parks. The Nyungwe National Park in Rwanda is the largest remaining tract of montane forest in the Albertine Rift valley, yet was averaging only one overseas tourist per week. The Bwindi-Impenetrable Forest in Uganda, now the only place that habituated mountain gorillas can be seen, had fewer than 10 visitors per day. In Murchison Falls National Park one of the main lodges was empty, and Mulholland was the only tourist in the Kidepo National Park for the two days he spent there.

Through much of Rwanda, as well as to the Bwindi Forest, Semuliki NP on the border of the Democratic Republic of Congo and the Kidepo NP Sudanese border, Mulholland experienced no security problems. The Rwandan government allocated troops to patrol the main tarred road through the Nyungwe Forest to the DRC border to ensure safety. Uganda provided a small escort in Bwindi, the location of a widely-publicised massacre of foreign tourists by armed guerillas in 1999. In Semuliki, Mulholland and his guide had ten soldiers accompany them on a walk into the forest because of an attack on the army six months previously. It was clear that these governments were doing everything practicable to ensure the safety of tourists. Realistically, the chance of a tourist being attacked or injured in either of these countries is probably as low as anywhere in the world, and certainly safer than most cities.

Yet Ugandan tourism has still not recovered from the 1999 incident, and parks and government officials are well aware of the implications of further incidents. This situation has created a fiscal crisis in Uganda that has hit the parks particularly hard – the long-term prospects for the

financial survival of the park agency may be in doubt. Simultaneously the local and regional economic benefits of parks have declined making the alternative – agriculture – appear much more attractive to national governments and to local people.

The roles of parks and game reserves

Ideally, reserves should be created to conserve a specific ecosystem, or perhaps a specific assemblage of species of fauna and flora. However, in most cases, they are established in areas where it is practical to do so, often to fulfil specific political needs. Nevertheless, an important role is still species conservation and, wherever possible, augmentation.

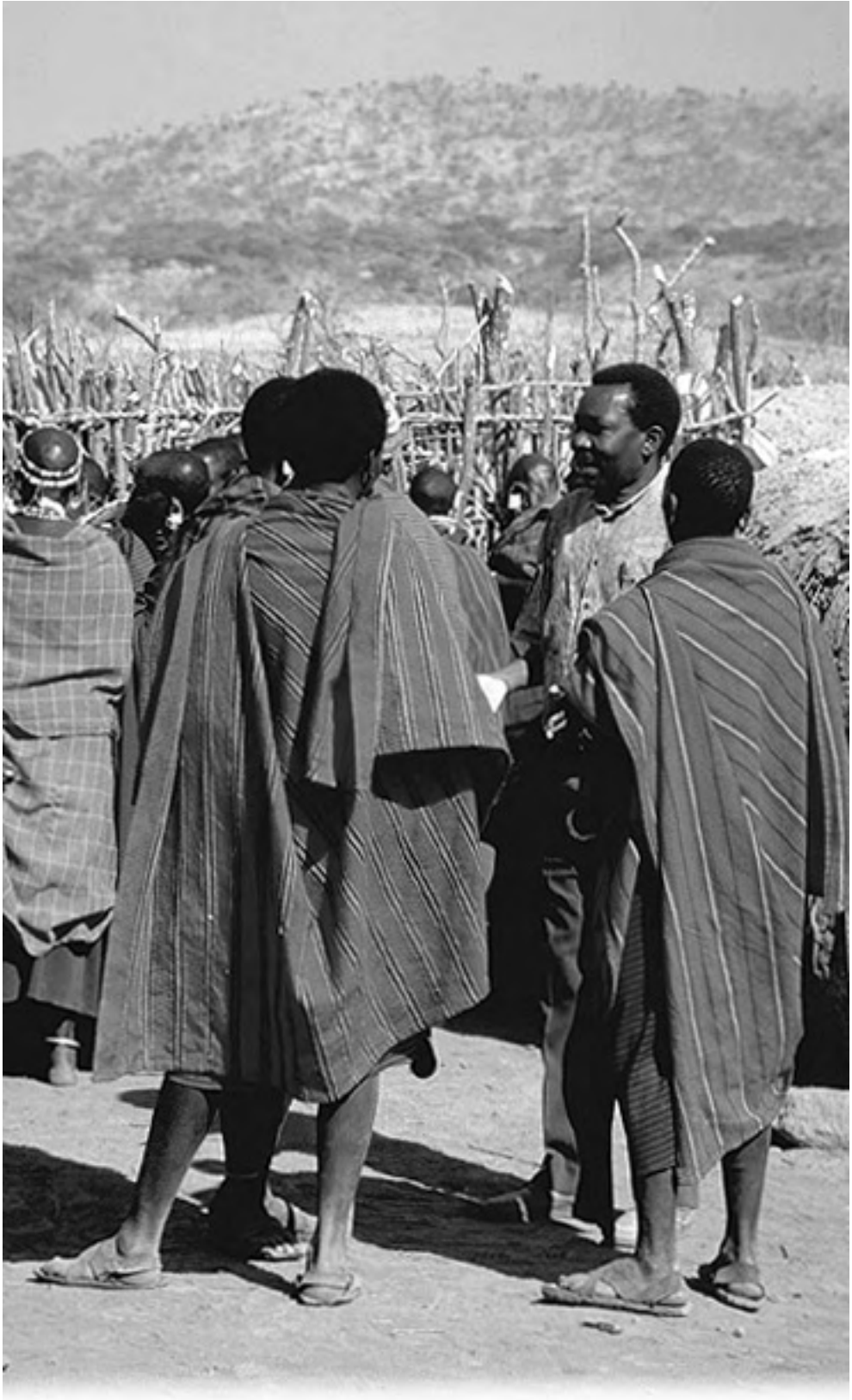
Another role of reserves is to provide employment for locals through the provision of visitor services. However, when the reserve's primary focus is ecological protection, tourists are sometimes viewed by park staff as little more than a nuisance. They are resented by administrators for increasing workloads and by ecologists for impeding conservation goals. This is illustrated by Mulholland's experience in Bwindi National Park. The new reserve manager instructed him to stop birdwatching in a certain section of the park insisting it was against regulations, when in fact, it was not. What was the manager trying to achieve? He was certainly not facilitating visitor satisfaction or encouraging more tourists. Unfortunately, this small incident may be indicative of the general attitude of park managers towards tourism.

It should be obvious to all (including park managers) that Africa cannot afford to protect the environment for the global common good. Any surplus money needs to be spent on repaying foreign debt, basic infrastructure and trying to raise the standard of living in the continent as a whole. Parks and reserves must therefore pay their own way and, in general, one reserve cannot be expected to subsidise another. In Africa there are only two aspects of an eco-reserve that can generate income, namely tourism and the sale of resources. The alternative is to turn it over to agriculture. From an ecological perspective, tourism must be the preferred option but low volume high-cost ecotourism alone is often unable to generate the revenues required to alleviate community pressure on reserves.

If the survival of African parks and game reserves depends on their capacity to provide for the local population, there is going to have to be a shift in focus to the high-number, low-budget tour parties discussed earlier. A small African reserve is usually several hundred km^2 in size and there are quite a number that reach into the tens of thousands km^2. Many, if not most, reserves substantially under-perform in terms of what they offer tourists. Fewer than ten National Parks in Africa have even a single tarred road (other than trunk roads passing through) and many have a road use policy not permitting more than one vehicle per kilometre of road. Constructing large rest camps able to accommodate a thousand people would have a minimal environmental impact in such large undeveloped areas.

Yet despite the fact these reserves probably see far less than one per cent of the tourist numbers handled by most European parks (on a visitor per km^2 basis), Western conservationists continually warn of the threat tourism presents to Africa's protected areas. They seem unable to comprehend that maintaining African parks as total wilderness areas is not realistic (although larger reserves may be able to afford to set aside certain 'core zones'), any more than it is in the West. African conservation needs tourism and even if it were to increase ten-fold, the damage caused by tourists would still be less than that caused by the impact of insufficient financial resources. The environmental degradation resulting from a reversion to agriculture would be much more serious.

Far from only negatively affecting conservation, the private tourism sector can be seen as a robust supporter of reserve protection. Firstly, it has an interest to preserve the natural resource that draws its clients (namely reserves' fauna and flora). Secondly, it contributes to the local economy, thereby indirectly winning community support for the reserve. On the other hand, it is to the advantage of individual tour operators to maximise their own financial returns. This



Tanzanian National Parks Director, Lota Melamari, talks to local men in the Ngorongoro Conservation Area, Tanzania. Good relations with local people are important to park tourism success throughout the world.
Photo: Paul F.J. Eagles.

sometimes results in a focus on immediate income generation, with little concern for other tourist operations, general environmental impacts or the sustainability of the operation. The result may be a 'tragedy of the commons' effect. It is therefore critically important that reserve managers retain overall responsibility for balancing the financial and conservation goals and hence the ability to regulate tourist operations.

Some intervention may also be necessary to ensure tourism does bring benefits to the local community. Unfortunately, as noted above, current local involvement often contributes little real income (especially true if the foreign tour operators keep the numbers down and the low-income tourists away). The decrease in tourist numbers from 1999 through to 2001 seems to have been sufficient for most community-run projects in Uganda to stall and for locals to begin reconsidering their options. During Mulholland's visit, none was making a profit, and so will not be able to continue providing tourism programmes or facilities.

This does not mean that community-based tourism is a bad thing, quite the opposite. But one wonders if those advocating it ever carried out a proper economic feasibility study beforehand. Too many failures give the concept a bad name. Greater emphasis needs to be placed on the economic viability of the projects before the local community is encouraged to participate – even well-designed community-based tourism operations can only succeed if tourist numbers are sufficiently large.

Other proven methods of getting the locals on side are: permitting controlled grazing, collection of water and firewood, and even limited logging where it does not have a negative impact on the reserve. Tanzania's example of providing grants (to the local community) when money is available, is a particularly good one.

Bamburi Beach, Mombasa, Kenya. One of the many local people who strive to make a living by selling art and craft items to tourists. They need a permit to sell their wares on the private beaches belonging to the hotels.
Photo: Brian Peart.

The financial carrying capacity

Conservationists and natural resource administrators often assess the ecological carrying capacity of reserves in terms of wildlife and other natural resources. Seldom is this discussion extended to the financial viability of the reserve.

It might be useful to consider a minimum financial carrying capacity, below which the park management is not viable. This minimum will depend upon the number of tourists and the financial benefit they provide. Funds from donors and aid agencies, when available, can supplement the tourism income. This will complement the maximum capacity (purely theoretical in Africa, but an issue much debated in the developed world) at which point the negative damage done by tourists becomes unacceptable. The acceptable range of park-use level is the difference between the minimum financial return necessary and maximum environmental impact allowable (Figure 1). We make the argument that throughout most of Africa the present situation sees much too little positive financial impact, therefore much more tourism income is needed.

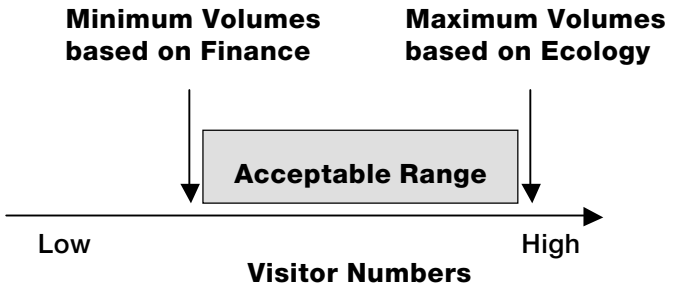
Having identified this fiscal carrying capacity, one must consider how to handle the increased number of tourists in terms of flights from overseas, internal transport, accommodation and guides. If the numbers cannot be increased to allow the reserve to achieve its optimal fiscal carrying capacity (or at least bring it up to a profitable level), then the core issue must be faced: can the reserve survive in the long term? In Tanzania the entire national park system runs a single operational profile, with the lower-earning reserves being subsidised by the higher-earning ones. Tanzania's success and experience could be a model elsewhere in Africa (Eagles, 2002). South Africa's successful mix of public and private involvement in nature tourism also provides useful and innovative examples.

A country must examine all its reserves, and look hard at the option of closing some, to allow the remaining reserves and overall system to become economically viable. If management fails to concentrate on the long-term financial sustainability of the reserve system as a whole, fewer reserves will have a long-term future.

This is not a typical way of looking at African nature protection, but it appears that conservation interests want to preserve 'wilderness' without providing sufficient financial resources to do so. Considerable aid goes into research and community projects – both essential – but an insufficient amount contributes to normal operating expenses of parks. A greater proportion of grants should be directed towards park tourism development and management.

Given the opportunity, virtually every visitor to Africa's magnificent national parks and game reserves would return again, although many would prefer better facilities. This is a positive sign of an industry with potential. The large increase in foreign tourism visits to South Africa in the last decade shows the potential of a professionally-operated tourism industry working closely with park management agencies. Much better fiscal operation of parks and park

Figure 1. *Model of financial and ecological sustainability.*



tourism is needed and Africa should draw lessons from the experience of other countries such as the emerging operations in East Asia (Athanas, *et al.* 2001).

Conclusion

In much of the park literature, a dominant management issue is one of parks and reserves being damaged by tourism, yet in Africa many reserves are in danger of being destroyed by its absence. Too little tourism has been proven to be far more damaging to the African environment, than too much.

Hence, the best conservation for the national parks and game reserves of Africa in the long-term will be effective tourism management. Furthermore, unless these reserves can attract sufficient money, local communities will ultimately convert them to a more productive use – typically agricultural. It is essential that better relationships are forged between park tourism and park finance. In the immediate future we need to see much higher domestic and international emphasis placed on the development of financially-viable park tourism industries throughout Africa.

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Résumés

Mesure et analyse de la fréquentation touristique dans les parcs et les aires protégées

PAUL F.J. EAGLES

Pour comprendre la fréquentation par les visiteurs des parcs et des zones protégées, il faut des données exactes et fiables sur les volumes, les lieux, les activités qui caractérisent cette fréquentation et sur sa répartition dans le temps. Le fait d'avoir un programme pour mesurer et analyser la fréquentation par le public constitue un élément fondamental de la gestion des parcs et du tourisme de parc. Cet article présente une approche standardisée de cette activité, développée en 1999 par le Commission mondiale sur les aires protégées (Hornback et Eagles, 1999).

Conception et élaboration respectant l'environnement d'aménagements de tourisme durable dans les aires protégées

HÉCTOR CEBALLOS-LASCURÁIN

Le tourisme dans les parcs naturels nécessite un certain niveau d'aménagements, allant de simples panneaux et sentiers à des structures complexes de transport et de logement. Il est vital que de telles infrastructures soient conçues dans le respect de l'environnement et que tout développement du site reste fidèle à l'environnement local. Ceci ne pourra être possible que si les communautés locales sont impliquées autant que possible dans les processus de planification, de conception et de développement des sites. Cet article expose des principes de conception durable et fournit trois illustrations où cette dernière a été une réussite: Kapawi en Equateur, la station et le village de la baie de Kingfisher en Australie et le site patrimoine naturel Simunye Zulu en Afrique du Sud.

Les parcs d'Ontario : un modèle d'exploitation commerciale réussi

ROBERT MOOS

La Province d'Ontario au Canada possède un système de parcs provinciaux étendu et très apprécié. Il y a actuellement 278 parcs occupant une surface de 7,1 million d'hectares et comportant 19000 campings bien aménagés et 7000 campings d'arrière-pays plus rustique. En 2001, les parcs ont bénéficié d'une activité de plus de 10 millions de visiteurs par jour ouvrable.

En 1996, faisant face à des contraintes fiscales, sociales et démographiques, le Gouvernement de la province d'Ontario a réagi en fondant Ontario Parks en tant que modèle commercial de gestion du système des parcs de la province. Ontario Parks s'est vu attribuer des pouvoirs spéciaux lui permettant de fonctionner de façon plus commerciale, le pouvoir principal étant l'autorisation de réinvestissement de toutes les recettes tirées des parcs de la province. Ce pouvoir de rétention des recettes permet à Ontario Parks de mettre en place des initiatives qui améliorent le service fourni aux clients et génèrent des revenus, pourvu que les recettes soient égales ou supérieures aux coûts qui y sont associés. Parmi les initiatives réussies, on peut citer des projets de marketing, les prix d'entrée fixés selon la loi du marché, des partenariats d'entreprises, la vente de souvenirs, la construction de nouveaux campings et la création d'un système de réservation centralisé des campings avec la possibilité de réserver par Internet.

Depuis que Ontario Parks a été créé en 1996, le budget annuel net affecté aux parcs de la province a été réduit pour ne plus représenter que 8,5 million de dollars CND, soit une économie de 6,1 million de dollars CDN ou de 42% pour le Gouvernement. Parallèlement, le niveau de service fourni au client s'est amélioré et les coûts de fonctionnement annuels se sont accrus de 11,6 millions de dollars pour atteindre 48,5 millions de dollars. Les recettes couvrent à présent plus de 80% des coûts de fonctionnement totaux, pourcentage en augmentation par rapport aux 56% de 1996.

La gestion du tourisme dans le système de aires protégées de la Nouvelle-Zélande

GORDON CESSFORD ET ANDY THOMPSON

Le Ministère de la Conservation gère environ 80000 kilomètres carrés de terres protégées appartenant à l'Etat. Celles-ci représentent environ 30% de la surface totale de la Nouvelle Zélande. Les 14 parcs nationaux, les 20 parcs protégés et près de 3500 réserves spéciales représentent une ressource naturelle considérable à l'échelle internationale ainsi qu'une

étendue sauvage presque intacte dont la surface totale est comparable à celle de l'Autriche, de l'Ecosse, du Panama ou de la Caroline du Sud aux Etats-Unis. Bien que la population de la Nouvelle-Zélande soit peu nombreuse (3,7 million d'habitants) et que celle-ci soit très concentrée dans des cités côtières, il existe une forte tradition culturelle de loisirs actifs de plein air. C'est cette tradition qui a entraîné la mise en place d'une infrastructure importante permettant l'accès du public à des zones naturelles de haute qualité. Dans un contexte international où la proportion d'aires naturelles protégées se situe en dessous de 10% et où l'occupation par l'homme de ces zones, leur utilisation et leur développement remontent loin dans l'histoire, la Nouvelle Zélande offre des possibilités de découverte de la nature presque uniques et hautement réputées. Par conséquent, il est naturel que ce pays attire de nombreux visiteurs internationaux et nationaux et que le Ministère de la Conservation accorde une attention toute particulière au tourisme. Cet article présente les moyens principaux dont il s'est doté pour prendre en compte le tourisme dans sa politique de gestion de la conservation. Il décrit succinctement la façon dont le Ministère de la Conservation gère les infrastructures de services à destination des visiteurs et aborde de manière plus approfondie la question de l'offre de loisirs par des acteurs du secteur privé.

La gestion de la clientèle dans les aires protégées de la Finlande

ANNELI LEIVO

En Finlande, c'est un organisme public unique, Metsähallitus, qui est responsable de la gestion de la plupart des aires protégées appartenant à l'Etat. Ces aires ne subissent en général pas tellement les pressions du tourisme, en raison de la faible population de la Finlande par rapport à la taille géographique du pays et du droit d'accès dont jouit le public dans les zones privées inhabitées. La clientèle est donc considérée comme un instrument plutôt que comme un obstacle à la protection de la nature. Ces dix dernières années, des efforts ont été fournis pour accroître la fréquentation des aires protégées à des fins de loisirs et d'éducation et pour améliorer la gestion de la clientèle dans ces zones. Cinq méthodes et outils de gestion de la clientèle utilisés au niveau national sont présentés: 1) la classification des zones protégées en fonction du niveau de service fourni en termes de loisirs ou d'éducation, 2) un modèle de chaîne du service fourni à la clientèle, 3) des méthodes de comptabilisation de la clientèle, d'enquêtes et de contrôle standardisées, 4) le processus de création de valeur pour la clientèle et 5) la notion de service fourni au client.

Les parcs africains: combiner la durabilité financière et écologique

GILES MULHOLLAND ET PAUL F.J. EAGLES

La conservation est seulement possible avec des fonds suffisants. Dans toute l'Afrique, les dispositions financières de la plupart des parcs et des aires protégées ne génèrent pas suffisamment de revenus pour permettre une gestion durable des parcs et pour obtenir le soutien des communautés locales. En conséquence, l'avenir de nombreux parcs n'est pas assuré, l'augmentation des besoins des communautés locales conduisant à la reconversion des terres vers l'agriculture. Cet article soutient qu'un nombre de visiteurs beaucoup plus élevé, des rendements financiers plus importants et des structures de gestion financière plus performantes sont nécessaires en Afrique pour garantir la survie à long terme des parcs et des réserves. Pour générer ces revenus de la façon la plus appropriée possible du point de vue écologique, il faudra passer par l'intermédiaire d'une meilleure gestion du tourisme basé sur la nature.

Resumenes

La medición e informe del uso de parques y áreas protegidas por parte del turismo

PAUL F.J. EAGLES

Para comprender el uso de parques y áreas protegidas por parte de los visitantes, es necesario una información exacta y fidedigna acerca del volumen, localización, actividades y tiempos. El programa para medir e informar sobre el uso público es un elemento fundamental en el manejo del parque y del turismo. Este informe introduce una aproximación estandardizada hacia esta actividad que ha sido desarrollada por la Comisión Mundial de Areas Protegidas en 1999 (Hornback y Eagles, 1999).

Diseño y planeamiento ecológico de facilidades sostenibles para el turismo en las áreas protegidas

HÉCTOR CEBALLOS-LASCURÁIN

El turismo en parques requiere un cierto número de facilidades que varían desde simples señales y pistas hasta complejas estructuras de transporte y alojamiento. Es vital que tal infraestructura esté diseñada de un modo ecológico y que cualquier desarrollo “in situ” permanezca en carácter con el área local. Las comunidades locales deben ser incluídas en todo lo possible, durante el proceso de planeamiento del área,el diseño y su desarrollo. Este informe describe los principios para un diseño sostenible y provee tres ejemplos de tal diseño, Kapachi en Ecuador, Kingfisher Bay Resort and Village en Australia y Simunye Zulu Natural Heritage Site en Africa del Sur.

Los parques de Ontario – una empresa exitosa de un modelo en operación

ROBERT MOOS

La provincia de Ontario, Canadá, tiene un sistema provincial de parques extenso y popular. Hoy en día hay 278 parques con 7.1 millones de hectáreas, más de 19.000 campings desarrollados y 7.000 áreas de camping en el campo. En 2001 los parques recibieron más de 10.000.000 de días por visitante de actividades.

Enfrentado con desafíos fiscales, sociales y demográficos, el gobierno de Ontario estableció, en 1996, los Parques de Ontario como un modelo de empresa para el manejo del sistema provincial de parques. La clave principal es que todos los ingresos de los parques provinciales pueden ser reinvertidos. El permiso para retener los ingresos permite a los Parques de Ontario tomar iniciatitivas para mejorar el servicio al cliente y aumentar los ingresos, siempre y cuando estos ingresos sean iguales o excedan los costos asociados. Algunas de las iniciativas exitosas tomadas incluyen: operaciones de mercado, precios de entrada al parque basados en el precio del mercado, corporaciones asociadas, venta de recuerdos, la construcción de nuevas áreas de acampada y la introducción de un sistema de reserva central y con la ventaja de hacer reservas a través del Internet.

Desde que los Parques de Ontario fueron establecidos en 1996, la partida neta anual para los parques provincials ha sido reducida a $8.5 millones de dólares canadienses, un ahorro para el gobierno de $6.1 millones de dólares canadienses o sea del 42 %. Al mismo tiempo, el servicio al cliente fue mejorado y los gastos anuales de la operación aumentaron $11.6 millones de dólares canadienses llegando a $ 48.5 millones de dólares canadienses. Los ingresos ahora toman cuenta del 80% del total de los gastos operacionales, superior al 56% en 1996.

Manejando el turismo en el Sistema de Areas Protegidas de Nueva Zelanda

GORDON CESSFORD Y ANDY THOMPSON

El Departamento de Conservación (DOC) administra alrededor de 80.000 kilómetros cuadrados de tierras públicas de conservación que comprenden alrededor de 30% de la superficie de Nueva Zelanda. Los 14 parques nacionales, 20 parques de conservación y alrededor de 3.500 reservas especiales, representan un recurso natural de significado internacional, con un área combinada de jungla casi inexploradas de un tamaño similar a lugares como Austria, Escocia, Panamá o Carolina del Sur en los EEUU. Mientras que la población de Nueva Zelanda es pequeña (3.7 millones) y

altamente urbanizada en las ciudades costeras, hay una tradición cultural de activa recreación al aire libre. Esto ha resultado en una infraestructura significante que da soporte al acceso público a las áreas naturales de alta cualidad. En un entorno internacional donde la proporción de áreas protegidas es de menos del 10% y donde existe una larga historia de ocupación humana y de uso y desarrollo de tales áreas, los tipos de oportunidades para experimentar la naturaleza en Nueva Zelanda son relativamente únicos y de alta reputación. Muchos visitantes domésticos e internacionales están atraídos por tales oportunidades y el turismo es un asunto de gran importancia para el DOC. Este informe describe los principales medios por los cuales el DOC provee para el turismo y la administración de su conservación. La administración de la infraestructura de servicios para el visitante por parte del DOC se describe brevemente y se paga una atención particular a la provision comercial de oportunidades recreativas.

El manejo de la clientela en las áreas protegidas de Finlandia

ANNELI LEIVO

En Finlandia hay una organización estatal, Metsähallitus,responsable por el manejo de la mayoría de las zonas protegidas que son propiedad del estado. Como es un país de pequeña población en comparación con su tamaño geográfico y el público tiene derecho a acceder a las áreas deshabitadas que pertenecen a dueños privados, la presión de la recreación en las áreas protegidas no es generalmente muy alta. La clientela es, por lo tanto, vista como un recurso en lugar de un obstáculo para la protección de la naturaleza. Se presentan cinco métodos o instrumentos de manejo de la clientela a nivel nacional: 1) Las diferentes áreas protegidas juegan un papel diferente en relación con sus servicios educativos y recreacionales; 2) Una cadena de modelos de servicio al consumidor; 3) El control, inspección y escrutinio de la clientela; 4) La creación de un proceso de evaluación de la clientela; 5) El concepto de servicio al cliente.

Los parques africanos: combinando el sostenimiento fiscal y ecológico

GILES MULHOLLAND Y PAUL F.J.EAGLES

La conservación es posible solamente con suficiente financiamiento. En toda Africa, los arreglos fiscales de la mayoría de los parques y de las áreas protegidas no proveen suficiente recaudación para el manejo efectivo a largo plazo de los parques o para edificar un apoyo gradual de las comunidades locales. Como resultado, el futuro de muchos parques es incierto, ya que las necesidades crecientes de las comunidades locales les obliga a utilizar mucha de la tierra para la agricultura. Este informe sostiene que en Africa se necesita un número mucho más alto de visitantes, más altos márgenes de rendimiento y más estructuras para la administración financiera si es que las reservas han de sobrevivir en el futuro. La forma más ecológica de obtener esta remuneración es a través de un turismo de la naturaleza mejor administrado.

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Founded in 1948, The World Conservation Union brings together States, government agencies and a diverse range of non-governmental organisations in a unique world partnership: over 950 members in all, spread across some 139 countries.

As a Union, IUCN seeks to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable.

The World Conservation Union builds on the strengths of its members, networks and partners to enhance their capacity and to support global alliances to safeguard natural resources at local, regional and global levels.

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WCPA is the largest worldwide network of protected area managers and specialists. It comprises over 1,300 members in 140 countries. WCPA is one of the six voluntary Commissions of IUCN – The World Conservation Union, and is serviced by the Protected Areas Programme at the IUCN Headquarters in Gland, Switzerland. WCPA can be contacted at the IUCN address above.

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L'UICN, en tant qu'Union, a pour mission d'influer sur les sociétés du monde entier, de les encourager et de les aider pour qu'elles conservent l'intégrité et la diversité de la nature et veillent à ce que toute utilisation des ressources naturelles soit équitable et écologiquement durable.

Afin de sauvegarder les ressources naturelles aux plans local, régional et mondial, l'Union mondiale pour la nature s'appuie sur ses membres, réseaux et partenaires, en renforçant leurs capacités et en soutenant les alliances mondiales.

UICN – Unión Mundial para la Naturaleza

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La Unión Mundial para la Naturaleza fortalece el trabajo de sus miembros, redes y asociados, con el propósito de realzar sus capacidades y apoyar el establecimiento de alianzas globales para salvaguardar los recursos naturales a nivel local, regional y global.

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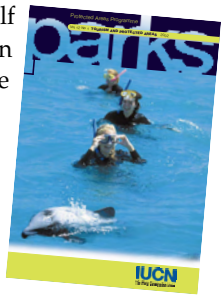

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