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5 November 2014

Tourism and Visitor Management in Protected Areas

Guidelines for sustainability

Edited by Yu-Fai Leung, Anna Spenceley, Glen Hvenegaard and Ralf Buckley,
in collaboration with 54 contributors, Craig Groves, Series Editor



Developing Capacity for a Protected Planet
Best Practice Protected Area Guidelines Series No. XX



IUCN WCPA's BEST PRACTICE PROTECTED AREA GUIDELINES SERIES

IUCN-WCPA's Best Practice Protected Area Guidelines are the world's authoritative resource for protected area managers. Involving collaboration among specialist practitioners dedicated to supporting better implementation in the field, they distil learning and advice drawn from across IUCN. Applied in the field, they are building institutional and individual capacity to manage protected area systems effectively, equitably and sustainably, and to cope with the myriad of challenges faced in practice. They also assist national governments, protected area agencies, nongovernmental organisations, communities and private sector partners to meet their commitments and goals, and especially the Convention on Biological Diversity's Programme of Work on Protected Areas.

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IUCN PROTECTED AREA DEFINITION, MANAGEMENT CATEGORIES AND GOVERNANCE TYPES

IUCN defines a protected area as:

A clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values.

The definition is expanded by six management categories (one with a sub-division), summarised below.

Ia Strict nature reserve: Strictly protected for biodiversity and also possibly geological/ geomorphological features, where human visitation, use and impacts are controlled and limited to ensure protection of the conservation values

Ib Wilderness area: Usually large unmodified or slightly modified areas, retaining their natural character and influence, without permanent or significant human habitation, protected and managed to preserve their natural condition

II National park: Large natural or near-natural areas protecting large-scale ecological processes with characteristic species and ecosystems, which also have environmentally and culturally compatible spiritual, scientific, educational, recreational and visitor opportunities

III Natural monument or feature: Areas set aside to protect a specific natural monument, which can be a landform, sea mount, marine cavern, geological feature such as a cave, or a living feature such as an ancient grove

IV Habitat/species management area: Areas to protect particular species or habitats, where management reflects this priority. Many will need regular, active interventions to meet the needs of particular species or habitats, but this is not a requirement of the category

V Protected landscape or seascape: Where the interaction of people and nature over time has produced a distinct character with significant ecological, biological, cultural and scenic value: and where safeguarding the integrity of this interaction is vital to protecting and sustaining the area and its associated nature conservation and other values

VI Protected areas with sustainable use of natural resources: Areas which conserve ecosystems, together with associated cultural values and traditional natural resource management systems. Generally large, mainly in a natural condition, with a proportion under sustainable natural resource management and where low-level non-industrial natural resource use compatible with nature conservation is seen as one of the main aims

The category should be based around the primary management objective(s), which should apply to at least three-quarters of the protected area – the 75 per cent rule.

The management categories are applied with a typology of governance types – a description of who holds authority and responsibility for the protected area. IUCN defines four governance types.

Governance by government: Federal or national ministry/agency in charge; sub-national ministry/agency in charge; government-delegated management (e.g. to NGO)

Shared governance: Collaborative management (various degrees of influence); joint management (pluralist management board; transboundary management (various levels across international borders)

Private governance: By individual owner; by non-profit organisations (NGOs, universities, cooperatives); by for-profit organisations (individuals or corporate)

Governance by indigenous peoples and local communities: Indigenous peoples' conserved areas and territories; community conserved areas – declared and run by local communities

For more information on the IUCN definition, categories and governance type see the 2008 *Guidelines for applying protected area management categories* which can be downloaded at: www.iucn.org/pa_categories

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International Union for Conservation of Nature (IUCN)
IUCN helps the world find pragmatic solutions to our most pressing environment and development challenges. IUCN works on biodiversity, climate change, energy, human livelihoods and greening the world economy by supporting scientific research, managing field projects all over the world, and bringing governments, NGOs, the UN and companies together to develop policy, laws and best practice. IUCN is the world's oldest and largest global environmental organisation, with more than 1,200 government and NGO members and almost 11,000 volunteer experts in some 160 countries. IUCN's work is supported by over 1,000 staff in 45 offices and hundreds of partners in public, NGO and private sectors around the world. www.iucn.org



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Convention on Biological Diversity (CBD)
The CBD, which entered into force in December 1993, is an international treaty for the conservation of biodiversity, the sustainable use of the components of biodiversity and the equitable sharing of the benefits derived from the use of genetic resources. With 193 Parties, the Convention has near universal participation among countries. The Convention seeks to address all threats to biodiversity and ecosystem services through scientific assessments, the development of tools, incentives and processes, the transfer of technologies and good practices, and the full and active involvement of relevant stakeholders including indigenous and local communities, youth, NGOs, women and the business community. The tenth meeting of the Conference of the Parties to the CBD, held in 2010, adopted a revised and updated Strategic Plan for Biodiversity for 2011- 2020, comprising five strategic goals and 20 Aichi Biodiversity Targets. The Plan is the overarching framework on biodiversity, not only for the biodiversity-related conventions, but for the entire United Nations system. www.cbd.int



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The views expressed in this publication do not necessarily reflect those of IUCN, GIZ, the Secretariat of the Convention on Biological Diversity, BMZ, or the French Ministry of Foreign Affairs.

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Foreword (to be added)

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Preface

This Sustainable Tourism Best Practice Guidelines book (ST-BPG) contains eleven chapters that provide guidance to all major aspects of tourism and visitor management in protected areas. The document is illustrated by best practice examples from over 45 countries in all continents. As such, this document is intended to be a global collection of wisdoms that fosters the professionalism and capacity in tourism and visitor management through building a 'community of practice'. This community consists of protected areas colleagues distributed around the world who share experiences (what worked and what did not) and learn collaboratively. They all care about integrating tourism and visitor use into protected areas with the purpose of achieving conservation, community development and other societal goals.

The target audience is protected area professionals, including administrators, managers and planners. They may come from government agencies, non-government organizations, community groups, private land owners, or other entities. The book can also serve as a background reading for academic training or provide teaching material for capacity building programmes.

This book differs from the previous two editions in two key ways. The first key difference is that we took a deliberately collaborative approach to this project, inviting participation as contributors or reviewers from the IUCN WCPA Tourism and Protected Areas Specialist (TAPAS) Group members, subject matter experts, and other protected area and tourism professionals. We recognize that the 58 contributors (including the four editors) by no means cover all best practices or wisdoms happening globally, the practices and lessons contributors shared nonetheless offer a geographically balanced view of what best practices are currently available on various aspects of tourism and visitor management. The second key difference is the reorganization of the Guidelines to emphasize topics with growing importance, such as governance, sustainable finances, and capacity building, and monitoring.

This project was initiated by the TAPAS Group, Knowledge and Dissemination Subgroup. It was approved and authorized by the IUCN WPCA Executive Committee in 2012 with commitment of a modest WCPA operations fund. Further funding was received Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) on behalf the Federal German Ministry of Economic Cooperation and Development (BMZ), and the French Ministry of Foreign Affairs. These additional funds enhanced the quality of production and allowed translation of this book into German, French and Spanish languages.

To implement the collaborative approach, we sent out an open call for participation through the TAPAS social media sites and other professional listservs, such as the International Ecotourism Society website. Workshops were conducted at the 2012 World Conservation Congress in Jeju, Republic of Korea and the 2013 George Wright Society Conference in Denver, Colorado, USA to solicit initial input on the book's organisation and contents. Presentations about this project were

made in China and Japan (1st Asia Parks Congress) and additional case studies were sought through these connections. A final round of input was sought from the audience at the 2014 IUCN World Parks Congress held in Sydney. The suggestions and comments received helped the editors in clarifying and substantiating the contents as well as in recruiting additional contributors.

There are several types of contributors. There are chapter coordinators, section contributors and case study contributors. They are recognized in the Contributors List and Appendix I. Readers are strongly encouraged to identify the contributor(s) to a specific session or case study box and cite the reference appropriately.

To facilitate the sharing of knowledge in this community of practice, a supporting Online Resource Directory (temporary URL: iucn.oscar.ncsu.edu) was developed, which not only provides online readings and detailed information of the ST-BPG, but also invites submission and sharing of new references, such as guidelines, handbooks, manuals and articles.

While this is a comprehensive document, it needs to be updated in the future. Suggestions for improvement are welcome. Please send them through the ST-BPG website or to the editors directly.

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IUCN World Commission on Protected Areas (WCPA) has offered strong support for this project since the revision proposal was submitted by the WCPA Tourism and Protected Areas Specialist (TAPAS) Group. The WCPA leadership provided overall guidance, facilitated reviews, and secured initial funding from the WCPA Operating Funds to make this project possible. Specific thanks go to IUCN WCPA Best Practice Protected Area Guidelines (BPG) Series former editor Peter Valentine and current editor Craig Groves for their support and guidance. Members of IUCN Publications Committee offered support and input. They include David Reynolds, Kathy MacKinnon and Sue Stolton. Other IUCN colleagues also provided advice on the contents, the BPG production process, and event planning for the 2014 World Parks Congress. They include Trevor Sandwith, Tim Badman, Giulia Carbone, Deborah Murith, Ewa Magiera and Xenya Cherny-Scanlon.

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This is a collaborative project and a global collection of wisdoms. We thank the other 54 contributors (listed in the Front Matter, at the end of each chapter, and Appendix I) from 23 countries and territories who were willing to share their experience and spent precious time in preparing their contributions. The organization and contents of this book were substantially enhanced by constructive and prompt feedback from WCPA peer reviewers and TAPAS members. Special thanks go to Jim Barborak, Robyn Bushell and Elizabeth Halpenny who helped in moderating two ST-BPG workshops at the 2012 IUCN World Conservation Congress in Jeju Island, South Korea, and the 2013 George Wright Society Conference in Denver, Colorado, USA. The attendees of these two workshops are recognized for their active participation and valuable input. Ron Mader is recognized for his tireless efforts to use various social media, such as Planeta.com, to

engage colleagues around the world on sustainable tourism issues, including new publications such as the ST-BPG.

The editors would like to thank NCSU project assistants Chelsey Walden-Schreiner and Anna Miller for their dedicated support throughout this book's production process, including proofreading, formatting, creating maps, and contributing contents to the book and its accompanying online resource directory. NCSU doctoral students Shuangyu Xu, Wei-Lun Tsai and Ginger Deason offered voluntary help in translation (Chinese) and information. John Bass from ITng at NCSU provided technical support for the online resource directory. Additional support in formatting, translation and photos were provided by Pei-Ying Lee, Reda Neveu (French), Jessica Dittmer (French and German) and Mei-Yee Yan.

Abbreviations and Acronyms

ARM	Adaptive Resource Management (management framework)
CBD	Convention on Biological Diversity
CBNRM	Community-based Natural Resource Management
CCA	Community Conserved Areas
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CMS	UNEP Convention on Migratory Species of Wild Animals
COMPACT	Community Management of Protected Area Conservation Programme
EIA	Environmental Impact Assessment
FTE	Full-time equivalent (employee)
GEF	Global Environment Facility
GGN	UNESCO Global Network of National Geoparks
GSTC	Global Sustainable Tourism Council
HPHP	Healthy Parks Healthy People Programme
ICCA	Indigenous and Community Conserved Areas
IUCN	International Union for Conservation of Nature
LAC	Limits of Acceptable Change (management framework)
LEED	Leadership in Energy and Environmental Design
NGO	Non-governmental organisation
NPS	U.S. Department of the Interior, National Park Service
OECD	Organisation for Economic Co-operation and Development
PA	Protected Areas
PPA	Private Protected Areas
RAMSAR	The Ramsar Convention on Wetlands of International Significance
SGP	UNDP/GEF Small Grants Programme
SEA	Strategic Environmental Assessment
TOMM	Tourism Optimization Management Model (management framework)
UNDP	United Nations Development Programme
UNEP	United Nations Environmental Programme
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNF	United Nations Foundation
UNWTO	United Nations World Tourism Organisation
USAID	U.S. Agency for International Development
USFS	U.S. Department of Agriculture, Forest Service
VAMP	Visitor Activity Management Process (management framework)
VERP	Visitor Experience and Resource Protection (management framework)
WCPA	IUCN World Commission on Protected Areas
WHO	World Health Organisation
WHS	UNESCO World Heritage Site
WPC	IUCN World Parks Congress
WTO	World Tourism Organisation
WWF	World Wide Fund for Nature

Executive Summary

Tourism is a large global industry. With its enormous volume of visitor flow, infrastructure needs, employment and human services, and economic, social, cultural and environmental ramifications, tourism can play a significant role in addressing the globe's grand challenges or exacerbating these same challenges if tourism's negative impacts are not effectively managed.

Tourism and visitation have been intricately linked to protected areas since their conception in the modern era. Tourism is a critical ecosystem service that has the potential to contribute directly to protected areas as a global conservation strategy, including meeting the Aichi Targets related to conservation, community development and public awareness (CBD, 2012). This Guidelines book seeks to critically examine ways to make protected area tourism a positive force in global conservation.

Tourism is a complex phenomenon. Its interactions with protected areas occur in unique historical, cultural and geographical contexts involving multiple values and stakeholders. Effective management of protected area tourism for environmental, social and economic sustainability requires an appreciation and understanding of such contexts and how they change over time. Chapter 2 illustrates this complexity of protected area tourism as a socio-ecological system in which resources, resource users, infrastructure and infrastructure providers are key components that interact to shape how tourism is developed in and around protected areas. The increasing diversity in values and expectations from our society is posing challenges to tourism and visitor management in protected areas, but it also provides unique opportunities to increase the relevance of protected areas in tackling contemporary social issues.

The complexity and diversity of protected area tourism is reflected by different pieces of legislation, governance models and policies outlined in Chapter 3. Good governance, legislation and policies for protected area management in general should also apply to tourism so that management decisions are made fairly, transparently and efficiently, with adequate stakeholder participation in the decision process. Four major governance models of protected area management are described that affect who makes management decisions and how stakeholders and their partnerships are involved in tourism development and management.

Tourism and visitation in protected areas generate a host of impacts on the environment, economy, local communities, and the visitors themselves (Chapters 4 and 5). These impacts can be positive and negative, and they can be perceived very differently by stakeholders who hold different values. Documentation and communication of these impacts support balanced evaluation of tourism in protected areas and help formulation of strategies and actions to maximize the net positive impacts of tourism.

The recognition of needs for managing tourism and visitor management in protected areas has led to focused research on this topic in the past decades. Lessons learned from research and practical experiences have yielded management principles that, if applied, would more likely lead to effective management decisions with public and community support. The ten overall principles of tourism and visitation management and principles for managing specific tourism groups and

community engagement are presented in Chapter 6. Management decisions can be made more consistently and defensibly if they are developed through a specific management framework or otherwise accountable process. Several common management frameworks for protected area tourism and visitation are presented in Chapter 6, followed by implementation examples of management planning processes designed to resolve existing problems or engage community participation in anticipation of future tourism development.

Informed management decisions typically include application of broad strategies supported by specific management actions or tools. Major management strategies and myriad management tools available to managers are presented in Chapters 7 and 8, illustrated by case examples from around the world. Partnerships and concessions as management tools are emphasized in this book as their fast-growing and worldwide applications need from guidance and support. An essential component of any application of a management strategy or tool is a commitment to monitoring, which is a coordinated effort to track current conditions and evaluate efficacy of management actions.

As management innovations are conceived and technology advances, it is increasingly recognized that the key barrier to effective management of protected area tourism is the limited capacity of managers, communities and other stakeholders to manage visitation, their partnerships, and the revenues generated through tourism. The new Chapters 9 and 10 focus on the critical issues of capacity building and sustainable finances if tourism and recreation are to serve a role in conservation and community development. A variety of capacity building programmes and protected areas sustainably financed through tourism illustrate that effective solutions to tourism and visitor management are possible regardless of ecosystem types, geographic regions, governance models, and development status. However, the most effective solution likely looks different from protected area to protected area and country to country.

Continuing global changes such as population and climate are shaping tourism demand, activity type and use patterns in protected areas, challenging managers to identify adaptation, mitigation and communication strategies (Chapter 11). Some protected areas, organizations and government agencies have started to formulate these strategies. It is hoped that this Guidelines book and its accompanying Online Resource Directory will serve as a resource to support protected area managers with technical know-how in the era of change, and more importantly, to facilitate a *community of practice* in which best practices are shared and communicated globally through various platforms and media.

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1. Introduction

1.1 Background and Purpose

The primary purpose of this book of Guidelines is to inform sustainable management of commercial tourism and recreation visitation in support of conservation, community and societal goals of protected and managed areas. This purpose is achieved by a global collection of examples presented to illustrate that best practices of sustainable tourism and visitor use exist and should be pursued within different environmental, social, political and cultural contexts. This book is written principally for protected area managers, although the contents are relevant to all stakeholders who care about the sustainable future of tourism in our protected areas. Though a sharing of best practices we hope to stimulate critical and innovative thinking of the managers as they seek effective and appropriate strategies, tools and techniques for their protected area system.

Tourism is a large global industry. The World Tourism Organisation reports that international tourist arrivals exceeded 1 billion in 2012, generating over US\$ one trillion in international tourist receipts and 9% of the world's GDP (UNWTO, 2013). The same report estimates that international tourism will continue to grow at an annual rate of 3.3% through 2030. International tourism is eclipsed by 5-6 billion domestic tourists. With such volume of visitor flow, infrastructure needs, employments and human services, and economic, social, cultural and environmental ramifications, tourism can play a significant role in addressing the globe's grand challenges through the multitude of their positive impacts. However, tourism can pose real threats and exacerbate the already-mounting challenges if its negative impacts are not effectively managed. These Guidelines are about ways to make protected area tourism a positive force in global conservation.



Baboons as a tourist attraction at Simien National Park, a UNESCO World Heritage Site in Ethiopia (Left). ©Mei-Yee Yan. Hiking at the Potomac Gorge near Washington DC, USA (Right) © Yu-Fai Leung

Protected areas are defined by IUCN as “clearly defined geographical spaces, recognised, dedicated and managed, through legal or other effective means, to achieve long-term conservation of nature with associated ecosystem services and cultural values” (IUCN, 2014a). These areas come in various sizes and shapes, resource and social characteristics, and management categories (Chape et al., 2008; Dudley, 2013). Table 1.1 provides a brief description of major IUCN management category and governance types. *Managed areas* are a broader concept that embraces an ecosystem-based approach to natural area management, for which sustainable resource use is a common goal and conservation may or may not be the primary objective. This concept has been largely applied to marine and coastal zones (Orbach & Karrer, 2010). The vast number of protected and managed areas collectively form the key part of national and global conservation strategies.

The current 2011-2020 IUCN Strategic Plan affirms the role of protected areas as nature’s solutions to global challenges, including biodiversity loss, community development, hunger and poverty alleviation, nature resource shortage and degradation, increasing disconnect between urbanised populations and natural places (IUCN, 2014b). This Strategic Plan recognises 20 Aichi Conservation Targets set forth by the Convention on Biological Diversity (CBD) (CBD, 2012). Protected areas, through their ecosystem services, are integral to many measures taken to reach these Targets by 2020 (IUCN, 2014b). Tourism, because of its scale and magnitude of influence, is a critical ecosystem service that has the potential to contribute directly to those Aichi Targets related to conservation, community development and public awareness (Buckley, 2012a; Hvenegaard et al., 2012). In 2004 the CBD adopted *Guidelines on Biodiversity and Tourism Development* and continues to promote their use (CBD, 2004b). Many of the examples of good practice contained in this book are relevant to the application of the CBD Guidelines.

Table 1.1. IUCN Protected Area Categories and their relevance to tourism and visitor use

IUCN Protected Area category *	Primary goal and protected value(s)	Relevance to tourism and visitor use
<i>Ia - Strict Nature Reserve</i>	Biodiversity or geoheritage protection (ecological and scientific values)	<ul style="list-style-type: none"> • Most visitor use (commercial tourism or recreation visitation) is prohibited • Public access only possible through organised scientific, citizen science or volunteer service programmes
<i>Ib - Wilderness Area</i>	Protection of the natural character and condition of unmodified or slightly modified areas (wilderness and ecological values)	<ul style="list-style-type: none"> • Low-density visitor use is often a management objective • Restricted public access in terms of amount of use, group size, activity type, etc. • Commercial tourism activity limited and highly regulated (e.g., special use permit)
<i>II - National Park</i>	Protection of an ecosystem and its large-scale ecological processes (ecological, recreation and community values)	<ul style="list-style-type: none"> • Visitor use and experience is often a management objective • A range of recreation opportunities are typically provided through zoning, facility development and visitor

		services
<i>III - Natural Monument</i>	Conservation of specific natural features (ecological, recreation and community values)	<ul style="list-style-type: none"> • Visitor use and experience is often a management objective • Recreation opportunities are typically provided to facilitate feature protection and public understanding
<i>IV - Habitat/Species Management Area</i>	Conservation through management intervention (ecological, community and recreation values)	<ul style="list-style-type: none"> • Recreation visitation and commercial tourism is usually a management objective • A range of recreation opportunities is provided with associated facilities and services • Commercial tourism common
<i>V - Protected Landscape/Seascape</i>	Landscape/seascape conservation (community, ecological and recreation values)	<ul style="list-style-type: none"> • Recreation visitation and commercial tourism is usually a management objective • A range of recreation opportunities is provided with associated facilities and services • Commercial tourism common
<i>VI - Managed Resource Protected Area</i>	Sustainable use of natural ecosystems (community, recreation and ecological values)	<ul style="list-style-type: none"> • Recreation visitation and commercial tourism can be a key objective • A range of recreation opportunities is provided with associated facilities and services • Commercial tourism common

*Dudley (2013).

Tourism and visitation has been intricately linked to protected areas since their modern-era conception. Table 1.1 identifies the relevance of each IUCN Category of protected areas to tourism and visitor use. Protected areas under international designations (also see Table 3.1), such as UNESCO Biosphere Reserves, UNESCO World Heritage Sites and Ramsar Wetlands, are recognised by their unique values that need to be connected with and appreciated by stakeholders and the public at large. Recreation, tourism and other forms of public visitation help build such connections. Unlike other industries and human activities, tourism in protected areas has unique characteristics that make it a potential positive force. In the fundamental sense, tourism in protected areas is about a process in which visitors connect with, experience from, and learn about natural and cultural heritage. Such experience can be transformative for personal growth, social bonding, and an increased sense of stewardship and ownership at the local level. Tourism operations, and to a lesser extent, recreational visitation, involves multiple sectors and can generate revenues in support of local and regional, and sometimes national economy. As such, tourism influences politics and public policies about the future of protected areas. Tourism also brings guests to interact with local residents directly. Such interactions may lead to positive and negative outcomes.

The importance of tourism in protected area conservation has been recognised in the past few World Parks Congresses and World Conservation Congresses (Bushell & Eagles, 2007). The past two editions of Sustainable Tourism Best Practice Guidelines, published in 1992 (McNeely et al., 1992) and a decade later (Eagles et al., 2002), were intended specifically to meet this learning and

capacity building need, guiding protected area managers in understanding tourism issues and formulating locally appropriate actions.

Since the last edition (Eagles et al., 2002) was published, much has changed in the field of protected area tourism with respect to visitation characteristics, governance, policy initiatives, science and technology, natural resource conditions and other important topics. This version of *Guidelines* provide substantial updates on best practices in protected area tourism to ensure that they remain relevant to protected area stakeholders globally in the 2010s and beyond. Specifically, this revision incorporates new research, theoretical frameworks, planning and management strategies, current case studies, and specific guidelines and recommendations that are relevant to at least the next ten years.

1.2 The Tourism Challenges

Managing the development and operation of tourism in protected areas has a series of challenges and opportunities associated with it. Some of these are double-edged, such as the importance of reducing negative impacts of development on the natural environment (e.g. avoiding developing in sensitive ecological areas), while maximizing the benefits for conservation (e.g. generating revenue to finance conservation activities, alternative livelihoods for local communities). Some of these are outlined in Table 1.2. Ensuring that there are net-benefits from tourism in protected areas, both tangible and perceived, is a key objective.

Table 1.2. Opportunities and challenges for tourism management in protected areas

Opportunities	Challenges
Maximizing conservation benefits through sensitive infrastructure planning, remediation of damage caused, and visitor mitigation techniques (e.g. trail hardening).	Negative impacts on the environment such as pollution (e.g. waste disposal, carbon emissions), unsustainable resource use (e.g. water), and damaging sensitive areas (e.g. through poorly developed or sited infrastructure).
Improving the social and cultural impacts of protected areas by promoting and conserving their cultural attractions, showcasing local culture (e.g. stories, craft, design, music, food), providing appropriate interpretive services and educational opportunities.	Negative impacts on local people, such as commodification of culture, crime, overcrowding, displacement of local communities to accommodate tourism development, and pressures caused by extreme temporal fluctuations in levels of visitation. High cost of living and inflation emanating from tourism affect ordinary people most.
Stimulating local economic linkages through local ownership of tourism assets, management of tourism businesses, employment, alternative livelihoods and entrepreneurship in the tourism supply chain (e.g. guiding, craft, food and beverages, transport etc.).	Lack of economic linkages, due to a lack of information, opportunity, access to finance, adequate policies, or consistency. In some developing countries, a lack of basic education can also be a challenge.

By contrast, many protected areas face problems caused by a lack of visitation. This may happen for a variety of reasons, but which can have a series of consequences (Table 1.3). While the lack of visitation may mean less direct use pressure and is apparent good news to the conservation goal

of protected areas, it can lead to larger long-term problems with reduced political and public support as the social relevance of protected becomes unclear.

Table 1.3. Lack of visitation to protected areas: issues and consequences

Issues and reasons	Consequences
<ul style="list-style-type: none"> • Lack of market awareness with the tourism sector and among travellers of the protected area. • Difficult, costly, time consuming access to the protected area. • Lack of tourism infrastructure (e.g. access, accommodation, information facilities) • Lack of support services and facilities (e.g. restaurants, retail, transport). • Lack of attractions, both natural and cultural • Lack of unique selling propositions, with better competing destinations elsewhere. • Poor quality of tourism experience. • Products and services are not matched to market demand. • External factors, such as political instability, civil wars/conflicts, security, terrorist threats and human rights issues 	<ul style="list-style-type: none"> • Low revenue from entrance fees due to low visitation. • Visitors go to more cost effective destinations that are quicker and easier to reach. • Low revenue due to short length of stay. • Lack of economic benefits to local people, meaning that the area is not valued by them. • Uncompetitive destinations, and tourists go elsewhere. • Visitors go to alternative, special, places. • Word of mouth means friends and family also learn about poor experience, and do not travel to the protected area. • Low levels of visitation, and subsequent lack of political support. • Visitors go to protected areas in countries that are perceived as peaceful and safe.

1.3 Some Key Concepts

There are many different forms of tourism that can be distinguished from one another by their contrasting components. They include mass; small scale; green; alternative; appropriate; nature; responsible; eco-; (Gilbert et al., 1994); academic; adventure; agro-; anthro-; archaeo-; cottage; culture; ecological; environmentally friendly; ethnic; risk; safari; scientific; soft; trekking; truck; wilderness; and wildlife tourism (Sinclair & Stabler, 1997).

In the year that the Brundtland Report was published and the term 'sustainable development' was coined, Krippendorff argued that the world needed a new, less exploitative form of tourism that could be evaluated in relation to its capacity to contribute to *gross national happiness*, by measuring, " . . . *higher incomes, more satisfying jobs, social and cultural facilities, and better housing*" (Krippendorff, 1987). The concept of 'sustainable tourism' has evolved since Krippendorff's statement was made. Butler (1993: 29) defined it as tourism, " . . . *in a form which can maintain its viability in an area for an indefinite period of time.*" However, Butler (1993) also defined 'sustainable development in the context of tourism' as:

"tourism which is developed and maintained in an area (community environment) in such a manner and at such a scale that it remains viable over an indefinite period and does

not degrade or alter the environment (human and physical) in which it exists to such a degree that it prohibits the successful development and wellbeing of other activities and processes” (ibid).

None of the formal definitions of sustainable tourism really address the commercial nature of tourism, although it is undeniable that tourism is an industry, and that tourism enterprises must be commercially viable in order to be ‘sustainable’; especially given competition and changes in market demand. This is interesting because the ‘triple bottom line’ of sustainable development suggests that companies not only need to be commercially viable, but also need to invest in the future and be socially responsible (Elkington, 1997).

Sustainable tourism should be regarded as an adaptive paradigm that must address widely divergent situations, different goals and different mechanisms of utilisation (Hunter, 1997). The concept also touches on a wide range of issues such as economic development policy, environmental matters, social factors, the structure of the international tourism system (Tosun, 1998), and community driven strategic planning (Simpson, 2001). Inevitably different academics and institutions have derived different definitions for ‘sustainable tourism’ that incorporate similar ideas (e.g. WTO, 1995; Tosun, 1998).

One of the outcomes of the Rio Earth Summit was a global action plan called Agenda 21. Approved by 182 countries, Agenda 21 integrated the goals of environmental protection and economic development into an action plan for sustainable development, based on free market principles (McCormick, 1997). In relation to tourism, Agenda 21 promoted the, “ . . . *formulation of environmentally sound and culturally sensitive tourism programmes as a strategy for sustainable development*” (United Nations, 1992). The sustainability rhetoric of UN agencies, commissions and the private sector has evolved over time, but the implementation and evaluation of sustainable tourism in reality has been slow. Reasons for this include that asking whether tourism is, or is not, sustainable is not very practical because, “ . . . *sustainable tourism is not an inherent characteristic of any existing form or situation, but a goal that all tourism must strive to achieve*” (Clarke, 1979: 224). Instead of searching for finite answers, Clarke (1979) suggests that we should look into how tourism can *develop* sustainably.

Some of these complexities with the concept of ‘sustainable tourism’ led to the promotion of ‘responsible tourism’. Responsible tourism places the onus on tourism developers to demonstrate that they are operating in a responsible manner, given current knowledge and best practice. If enterprises monitor and report on responsible activities (e.g. reducing waste and purchasing local produce) over time, they can cumulatively contribute to a more sustainable tourism industry. Therefore practicing ‘responsible’ tourism on an operational basis becomes the mechanism by which ‘sustainable’ tourism can be achieved in the long-term (Spenceley, 2003).

In protected areas, it is important to integrate tourism and visitation with conservation and socioeconomic goals. Tourism should not take place at the expense of biodiversity loss, or mean that local people have more limited livelihood opportunities. The tourism within a protected area should be an asset within the local economy, and should contribute towards its conservation objectives. It is also important to consider the sustainability issues related to different facilities and services required by tourists (who stay for at least one night) and visitors (who visit for part of

a day). The main difference is that accommodation is required for tourists. This can be provided in many low-impact forms, both within and outside the protected area.

For tourism to be an effective conservation and community development tool, the quality of the tourism 'product' – visitor experience - must be maintained (McCool, 2006). Visitor experience is defined as 'a complex interaction between people and their internal states, the activity they are undertaking, and the social and natural environment in which they find themselves' (Borrie & Roggenbuck, 1998, p.115). High-quality visitor experience is produced through the fulfilment of motivation for participating in certain recreation opportunities, which can range from physical challenge to learning to social bonding. It is useful for protected area managers to know what natural, social and managerial elements are important in facilitating appropriate visitor experiences (McCool, 2006).

1.4 Scope and Layout

Tourism and visitation in protected areas is a very broad topic and some limits are necessary to keep this book to a reasonable size. The primary focus of this book is on *terrestrial protected natural areas*, though there is occasional discussion of coastal and marine protected areas or cultural sites. Such a terrestrial emphasis does not imply any less importance of coastal or marine protected areas in global conservation strategies. The readers are encouraged to consult guidelines developed for coastal and marine protected areas (Kelleher, 1999), such as the management toolkit for South Asia (IUCN et al., 2008). Many examples contained in this book are directly relevant to coastal and protected areas, as well as to managed areas and cultural sites. There are a few more features about this document:

This book is a *best-practice* guide. Exemplary practices on various aspects of tourism operations in various countries are highlighted in this document. These examples were selected because (1) they were considered by the editors and contributing authors as best practices in their respective implementation, and (2) they were considered to have broader applicability beyond the immediate case presented. However, due to the cultural, political and environmental differences, a *best* practice in one country may be merely one of the *good* options for another protected area system. A critical evaluation is therefore essential if and when a best practice is being considered for adoption in another protected area in a different context. Figure 1.1 shows the geographic distribution of 'best practice' examples illustrated in *Case Boxes* in this book. Examples from other countries are also provided throughout different sections.

It is not intended to be a full catalogue of good practices happening around the world. For further information about certain aspects of tourism and visitor management the readers will be directed to other IUCN Best Practice Guidelines publications or external resources. Examples include sustainable financing, governance, community involvement, facility design, and urban protected areas.

This book is *not* a cookbook. It does not provide standard prescription to each management issue. Rather, the book helps managers frame their management problem, identify key factors that influence the problem, and formulate potential management actions, which vary in different contexts even though the problem is similar (e.g., congestion).

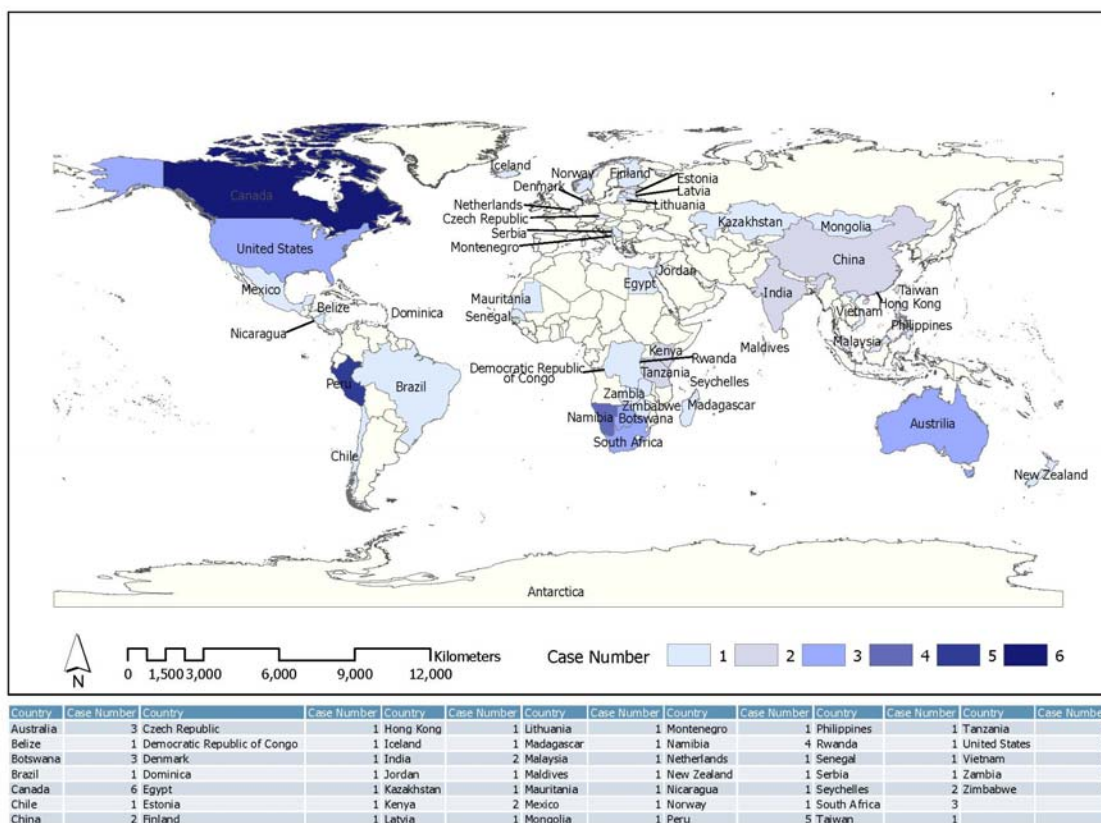


Figure 1.1. **Geographic distribution of best practice examples included in the case study boxes.**

This book is a *facilitator* reading. It is accompanied by an online resource directory (temporary URL -- <http://iucn.oscar.ncsu.edu/>) that provides literature resources and a feedback mechanism for readers to report and share new good practices. In this sense a part of these Guidelines is live, inviting collaboration to generate new contents.

This book is an *advocator* reading. The discussion throughout the chapters and the selection of case studies convey a message that for all protected areas where visitor use is considered to be appropriate, sustainability practices can and should exist regardless of political systems, development stages, economy, culture or ecosystems. These best practices are manifestations of the technical know-hows as well as the attitudes, efforts and commitments of managers, tourism sector, communities and tourists themselves, using tourism as a means to achieve protected area goals.

This book consists of eleven chapters that cover most aspects of tourism management in protected areas. It starts with a concise review of historical, geographic and cultural contexts in which tourism interact with protected areas (Chapter 2). A discussion of governance and policy issues is provided in Chapter 3. Positive and negative impacts are highlighted in Chapters 4 and 5, providing a balanced understanding of the potential benefits and costs of tourism. Guiding principles of sustainable tourism management are summarised in Chapter 6. In Chapter 7, strategies for managing and monitoring visitor use and impacts are presented, followed by a

detailed summary of common tools for visitor management (Chapter 8). Chapters 9 and 10 focus on tools for building capacity and sustainable finances to support protected areas. The book concludes with Chapter 11 that examines some major emerging trends that will influence the planning and management of visitor use in protected areas.

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2. Historical, Cultural and Geographical Context

2.1 Introduction

The recognition of needs for managing tourism and visitor use is by no means unique to protected areas; effective management of visitors, resources and communities to produce sustained outputs such as diverse recreation opportunities, high-quality experiences and socio-economic benefits is a desirable goal for most tourism or visitor destinations. However, protected areas possess a unique set of historical, cultural and geographical contexts that must be understood by managers as they strive to integrate tourism with other protected areas goals, justify management intervention, and adopt management strategies and tools. This context has also shaped tourism-related policies in protected areas with different types of governance structure (next chapter). This chapter provides an overview of the historical, cultural and geographical context and highlights trends in protected areas and visitation that may affect tourism pressure and associated management needs.

2.2 The Historical and Cultural Context

2.2.1 *Early Developments*

Parks and protected areas are one of societies' most valued cultural creations. Jones and Wills (2005) trace the idea of a park-like landscape back to the Sumerian tale, around 2000 BC, described in the Epic of Gilgamesh, where two people looking for the secret of immortal life enter into a sacred cedar forest, through a gate way and past a border marked by a fence of wooden stakes. However, these people start to cut down the giant trees, creating conflict with the ogre who guards the forest. The ogre is killed, and the visitors start to build a city. So 4000 years ago we have the basic elements of park and park use; a special natural environment, bounded and set apart, used to provide visitors with valued personal benefits. The morality tale describing the conflict between conservation and development is also introduced, and which continues today. This entire book of guidelines is designed to light the way towards sensitive human usage without undue damage and despoliation, as occurred once long ago in Gilgamesh.

Those in power in many societies set aside parks for their own personal benefits, typically hunting and recreation. From 1250 BC onward the Assyrian kings set up enclosed areas for the propagation, conservation and hunting of animals. These hunting reserves were only for the politically powerful leaders, and remained so for millennia. Eagles and McCool (2002) document the process in England of allowing the royal hunting reserves to be used for recreation by commoners during the reign of King Charles I (1625-1649). In some cultures, such as those in Asia, cultural and religious beliefs were instrumental in keeping sacred natural sites and spiritual landscapes from being converted into agricultural fields or built areas, effectively protecting the biodiversity and ecosystem services for the benefits of surrounding villages and communities (Hamzah et al., 2013).

It was the industrial age, spurred by the need to provide places for urban populations to rest from work and re-create themselves that accentuated the use of parks and protected areas for leisure activities for the common people (Sheail, 2012). As a result, public parks had generally been located within or near large urban populations until the mid-19th century, particularly in Western Europe and North America. The recognition that land should be set aside and protected from development, such as mining and agriculture, originated in the mid 19th century, partly in reaction to the accelerating spread of development, partly in response to poorly designed facilities around outstanding scenic wonders such as Niagara Falls, and partly as destinations for tourism. Yellowstone National Park, gazetted in 1872, for example, was established as a “pleasuring ground”, and the legislation through the American Congress was shepherded by National P. Langford, who worked for the Northern Pacific Railroad and saw the potential of tourism to the region as a good business decision (Duncan, 2009).

Similar rationales were often cited for other areas, such as Royal National Park in New South Wales (now Australia) or Banff National Park in the Northwest Territories (now Canada), established in the latter part of the 19th century. In early parks, legislation often cited protection of scenic landscapes so they could be enjoyed as a reason for creation. And given, at least in North America, such places were generally distant from population centres, since there were few alternative economic competitors; designation often went uncontested by other economic interests.

Slowly visitors started to come to these parks distant from urban centres. Enticed by dramatic artistic representations of equally vivid mountainous landscapes, visitors endured many hardships to see these wonders of the world. Over time, a visit to a national park became embedded into the culture. For example, in the USA, a visit to Yellowstone to see its astonishing geothermal features and wildlife became an equivalent of a pilgrimage to a religious site (Duncan, 2009).

Even for parks and other protected areas that were established for some other purpose, such as Kruger National Park in South Africa, originally gazetted in 1898 to protect the remaining species of wild game, tourism quickly became an important component of the park, a source of revenue for management, and the basis for employment of many people. Hundreds, if not thousands of times over, similar stories can be told about the growing significance of visits to parks and protected areas, whether in the wild landscapes of western China, the remote villages of the Himalayas, the isolated communities of the upper Amazon River basin, the indigenous communities of the Arctic, or the outback of the Australian continent. Tourism, variously seen as a human benefit for the visitor and as an employment generator for local people, became firmly embedded in culture.

This growth in interest in travel to parks and protected areas remained at a relatively low level, in comparison to what is experienced today, until after World War II. Then, vast increases in auto ownership, advances in aircraft technology, building of transcontinental roads, and general increases in convenience made visits to far-flung destinations viable. Such trends of growing park visitation were experienced by many countries in various forms of nature tourism, including ecotourism and more recently geotourism. Recognising the social and economic benefits park visitation would bring, many countries including Australia and China have been active in pursuing nominations of their outstanding protected areas to UNESCO World Heritage and Global Geopark

Network programmes (Box 2.1). While these global programmes are intended for natural and cultural heritage protection, they are also actively promoted as tourism brands.

Box 2.1. A recent trend in protected area tourism: Geoparks (Hong Kong and Brazil cases)

The Concept of Geoparks

Geopark is one of current protected area development trends at the global level, drawing attention explicitly to geological heritage and its conservation. Geoparks are territories that contain internationally significant geoheritage (e.g., representative geology, rarity and aesthetic values) in which sustainable development, education, and tourism are promoted as part of the overall geopark developmental strategy (McKeever, 2010). Geoparks are nationally protected areas with their origins in France in the 1990's, an idea and movement, that subsequently developed into the European Geoparks Network (EGN) formed in 2000 (Frey et al., 2006; Komoo & Patzak, 2008; Newsome *et al.* 2013). Over the last decade UNESCO has promoted the concept at the global level and there are now 111 global geoparks in 32 countries (GGN, 2014). The Global Geopark Network (GGN) was formerly established in 2004 for the operation and management of the global geopark concept and developing network. Under provisions of the GGN, there are three major goals: (1) conserving important landscapes; (2) educating visitors about the environment and especially via the promotion of geological knowledge and awareness; and (3) to provide sustainable tourism opportunities for visitors and local communities (Mazumdar, 2007, McKeever, 2010).

To become officially recognised as a geopark under the GGN, 6 criteria need to be satisfied: (1) geopark must have well defined boundaries, (2) the geopark must contain internationally significant geosites, (3) there needs to be a geopark management strategy and plan with local involvement, (4) the geopark must be large enough to foster economic development primarily through tourism (5) an educational strategy needs to be in place concerned with appreciation of geology, environmental awareness, protection and conservation and (6) there must be a commitment to and a recognised contribution to the GGN (GGN, 2014; McKeever et al. 2010).

The conservation and economic benefits of tourism are recognised in the geopark model and have been successfully implemented in diverse regions, although visitor management challenges also emerge from some of the popular sites (Newsome et al., 2012). The Hong Kong Geopark and Araripe Geopark in Brazil illustrate how geoparks can contribute to economic development and tourism in both urban and rural environments.

Hong Kong Geopark

China currently has 29 national geoparks with global geopark status, the largest number of global geoparks in any country in the world (GGN, 2014). Most of these geoparks are used to promote tourism development in the rural and poorer areas with the ultimate objective of improving the livelihood of local residents (Ng, 2011). In some contrast with the geoparks in Europe, most of the Chinese geoparks focus more on tourism development than on education and conservation, with the exception of the Hong Kong Geopark. The Hong Kong Geopark became a national geopark in 2009 and gained global geopark status in 2011. In line with the European geopark concept the Hong Kong geopark was established to conserve significant geological heritage, promote geological interests through education and interpretation and foster sustainable tourism development (AFCD, 2014).



Devil's Fist – the oldest rock of Hong Kong (Left). Non-basaltic gigantic hexagonal columns (Right). ©David Newsome

The early concerns of local academic and green groups in Hong Kong were that the geopark initiative could bring potential damage to valuable geological sites and to the natural environment by increased visitation have been proven invalid. Geographically, Hong Kong Geopark falls within the boundaries of established country, marine parks and some protected areas. It is well managed by the Country and Marine Parks Authority and protected under the Country and Marine Parks Ordinances. Activities causing disturbance and damage to the biological, geological and cultural environments are strictly prohibited.

Hong Kong is a densely populated city with a total of 7.2 million people living in a relatively small area of 1,100 km². Competition for land for housing and infrastructure is intense. Protecting and preserving over 40% of this total land in such a strong urban setting is extremely difficult. The government previously established country parks some thirty years ago in order to protect forests. Policy and strategy have been subsequently revised to further protect wildlife and the natural environment. The geopark concept comes at a time when the government's New Nature Conservation Policy of 2004 fails to encompass proper protection and sustainable use of valuable geological heritage and a rich geodiversity for education and tourism (EPD, 2004). The geopark initiative has been welcomed by sectors of the government and the public as a means to enrich the natural heritage values of existing country and marine parks. Hong Kong Geopark has brought about an annual increase of 5% of visitors to the country parks whose visitation stands at around a million. Local shops, restaurants, taxi services associated with towns such as Sai Kung and Tai Po have directly benefited by the increase in tourism related business. Such business operators have become strong supporters of protection of the geological heritage of Hong Kong.

Araripe Geopark, Brazil

Araripe Geopark was the first geopark in the Southern Hemisphere that was part of the GGN and the only geopark in Brazil acknowledged by UNESCO. Established in 2006, Araripe Geopark is located in the north-eastern state of Ceará. The region's basic infrastructure to support tourism includes a regional airport, easy accessibility by federal and state highways, lodging facilities, a good supply and distribution system for electrical energy and water, although still lacking in relation to sewage services and solid waste disposal. There are popular culture and arts, expressed through handicraft, folklore, literature, music, together with the religious devotion to Padre Cícero, with pilgrimages bringing in over 2.5 million visitors annually to Juazeiro do Norte during four main pilgrimages every year (Araripe Geopark, 2005). There are several tourist activities practiced in Araripe Geopark, including tree climbing, biking, and rappelling. Hiking is very common because most of the geosites have trails, and tourists can observe the flora and fauna present.



Missao Velha waterfall, with approximately 12m of height, formed by Salgado River (Left); Geopproducts that have the Geopark label, like the handmade leather sandals (Right). © Jasmine C. Moreira

The geopark contains over 59 geosites known for their scientific, educational, and tourism values. Nova Olinda is one of the municipalities with geosites that are considered tourism destinations in Brazil, there, local stakeholders are encouraged to manage tourism (Moreira, 2011). The city is home to the Casa Grande Foundation, an NGO whose mission is the educational development of children and youth in local cultural management. The tourism programme arose from the need to systematise actions to leverage the increasing flow of tourists that each year will visit Casa Grande Foundation. In 2006, the NGO headquarters received 28,000 visitors, nine times the population of the town of Nova Olinda.

Araripe Geopark has an active role in economic development of its territory, which is recognised on the basis of its natural resources, enabling the social and environmental development, as a local economic strategy, in an area with 3441 km². According to Cabral and Mota (2010), the Geopark represents an important instrument for achieving sustainable development in the southern portion of the state of Ceará, incorporating current assumptions of ecological prudence, by internalising the environmental variables in procedures and decision making, economic viability by enabling the increase of welfare of local communities directly affected, particularly with the appreciation of local products (geopproducts), and social justice, to allow equitable participation of all social actors involved in the process.

The acceptance of Geopark Araripe as an effective member of UNESCO Global Geoparks Network, has gained notoriety in Brazil and raised the interest about this new kind of protection of natural and cultural heritage under UNESCO auspices, mainly dedicated to geological heritage conservation, Earth Sciences education, and local sustainable development). In 2007, the Ministry of Culture honoured the set of activities of Geopark Araripe with the Brazilian most prestigious cultural prize, the Rodrigo Mello Franco de Andrade Prize, in the natural and archaeological heritage preservation category.

2.2.2 Modern-day Challenges

As visitation levels increased, sometimes rather dramatically, needs for infrastructure rose accordingly, at least in parks remote from urban areas. Visitors needed lodging, roads, airports, visitor centres, and information. Rising visitation also required attention to bathrooms, trails,

parking lots, sewage treatment, solid waste management, campgrounds, picnic areas, signs, employee housing and maintenance facilities. With the increases in urbanisation, many people did not have any direct experience with natural environments and wild animals, leading to needs for education and measures to ensure safety (Trzyna, 2014).

Early visitor management policies created long term problems. For example, in Canada and the USA feeding of bears in the 1930s was undertaken as a spectator sport, sometimes on the stages of outdoor amphitheatres! This created a population of wild animals trained to approach people for food, creating major human and bear conflicts that have threatened the safety of both parties.

As infrastructure in parks grew in response to visitation, concerns about the impact of visitors and the needed infrastructure were increasingly expressed. For example, in Yellowstone, at the popular Fishing Bridge area, it was recognised that much of the infrastructure was located in important grizzly bear habitat and that infrastructure, because it attracted visitors, contributed to a growing number of human conflicts with bears. These anxieties are frequently expressed today, as countries grapple with difficult questions of attempting to integrate the need to protect the natural heritage located within protected areas with the demand society has for visiting, seeing, and appreciating them with the opportunity they present to generate foreign exchange.

There are suggestions of a societal push back against increasing amounts of protected area. Recently in Australia, proposals from hunters have led some state governments to propose introducing feral animal hunting in national parks, while graziers are demanding grazing rights for domestic farm animals in national parks in both Queensland and Victoria. These use conflicts highlight the fact that there are major resource uses competing for public lands, other than the uses of biodiversity conservation and nature-based tourism, the major uses of most protected areas now. Politically, decision makers must balance all these demands, and those with more political power will be the ones to more likely be given credence.

However, national park use is declining in several countries, most specifically in Canada, the USA, and Japan. In Canada there has been a 28.7% decrease in visitation to national parks and national historic parks from 1994 to 2012 (Canadian Index of Wellbeing, 2012), creating serious public policy issues. This may be one reason that the Government of Canada undertook major budget and staffing cuts to national parks in 2012. With declining use, governments will see less need to provide finance, and other competing interests, such as mining, dam building and farming, will stake their claims to use protected areas.

Therefore while protected areas have become important components of many cultures, so too have the difficult questions that come with their designation, for designation itself is not enough to protect the values contained within them. Designation means that at some point in the future, visitors could arrive, and those visitors will eventually expect to see what is in the protected area, will need at least some infrastructure to assist their visit, and should be willing to pay someone to facilitate their visit through guiding or interpretive services. A wide array of questions will thus confront the institution charged with stewardship of these special places:

- What kind and scale of infrastructure is appropriate and where should it be located? (e.g. lodging)
- What visitor market segment should be secured through promotional campaigns?

- To what extent are the trade-offs between visitor experience opportunities and biophysical impacts resulting from visitation acceptable? What are the limits of visitors?
- What visitor experience opportunities do management seek to facilitate?
- What level of biophysical and experiential impacts is acceptable given the mission and objectives of the protected area?
- How tourist attractions within neighbouring communities can be integrated into PA tourism development to shock-absorb tourism pressure on fragile PA ecosystems?
- What kinds of services and engagement should be secured from surrounding local communities?
- How can we influence policy within planning and tourism sectors to address these issues?
- How can communities within and adjacent to protected areas actively participate in PA tourism development?
- How do we go about producing management plans determining the location, type, acceptable impacts and kind of experience opportunities afford for the tourism activity within and around the PA?
- How do managers collaborate with communities to reduce impacts on protected areas?
- How should management actions and their outcomes be monitored?
- What policies for managing visitors to protect natural heritage and provide opportunities for high quality experiences are needed?
- What kind of decision-making process should be used to ensure transparent, responsible and accountable tourism?
- Who provides the tourism services? Profit making companies? Non-profit organisations? Protected area staff?
- How tourism/visitors generated funds will be secured for management? For conservation?
- How much money is needed for management? Versus management without visitors?
- How can new, immigrant populations are incorporated into using protected areas as part of their culture?
- How can protected areas adapt to dropping use levels?
- What mechanisms must be put in place if number of visitors goes beyond accepted levels?

These questions themselves raise more fundamental challenges about the sustainability of protected area visitation, in terms of both biodiversity and visitor experiences. Biodiversity, and other natural heritage values, such as geology, minerals, water, need to be protected in order to provide similar or more expansive opportunities for future generations than for the current generation, as implied by the Brundtland Commission's report (Brundtland, 1987).

Intergenerational equity is the fundamental goal of sustainability, and protected areas play a critical role in achieving this. In addition, natural capital is at the basis of visitor experiences such as viewing wildlife, learning about nature, appreciating ecological processes, and understanding natural environments. Other types of natural heritage, such as rivers and mountains, provide the needed attributes for several activities, including rafting, fishing, canoeing, climbing, hiking, and photography. Thus maintenance of natural heritage is an important social, economic and cultural goal, if only for the role it plays in visitor experiences. At the same time, visitors impact natural heritage, potentially reducing its capability to sustain quality recreational opportunities as well as its capacity to meet the very functions for which an area has been gazetted. The natural heritage impacts the visitors, changing the views and attitudes. The question of sustainability therefore is

not so much about prevention of degradation from visitors and infrastructure to service them, but rather one of making trade-offs between goals that are both competing and shared.

How the trade-offs that must be made to meet the various goals of protected area are treated is a function of various social and cultural norms, from the importance of natural heritage to the value placed on employment opportunity to traditions of decision-making.

In summary, then, the question of sustainability encompasses complex relationships that not only deal with the appropriateness and acceptability of visitor and tourism induced impacts to natural heritage but also how the society treats important questions of natural capital and intragenerational equity. This question crosses social-organisational, temporal and spatial scales, involves diverse constituencies (each with values that are shared with others, and some that are not shared), and involves deep introspection to determine what is to be sustained, why and how.

Addressing these questions involves joint exploration of values, preferences and acceptability by the constituencies impacted by decisions and management facilitated by the managing agency. This process could be lengthy, requiring patience, tolerance, sensitivity to the rights groups may hold in the area, how the benefits and costs of gazetting and managing are distributed, and limitations on access that may be required to protect natural heritage and visitor experiences. It also requires, in some instances, best judgment and a precautionary approach in the absence of optimal data, information and feedback for decision-making.

To a large degree, trade-offs are made within a context of social and cultural values about the acceptability of impacts. This means we need to understand how a society or culture, including various constituencies assess the different values of a protected area or protected area.

What role(s) tourism and visitation play in a protected area planning and management, cooperation with local communities and within a context of national authority expectations about employment and foreign exchange is often poorly understood. Statements about the potential of tourism to create jobs, provide employment, generate revenue for management and funds for local governance are frequently bantered about during the gazetting phase as part of the general social discourse in civil society. However, tourism also brings potential negative impacts to the local area, such as rising housing and food costs, increased congestion, overuse/overexploitation of resources and competition for valuable recreation opportunities (see Chapter 5). Informed decision making requires full disclosure of impacts, and therefore there needs to be significant public debate and discussion.

Some of these impacts include homogenization of cultures, objectifying spiritual and cultural rituals and events, crime, adoption of visitor customs, dress, and language. The perniciousness of such consequences is context specific and each culture needs to make the decision for itself if such potential impacts are acceptable given the benefits of tourism to the community and the protected area and then identify and implement actions and policy to mitigate negative impacts.

2.2.3 Values of Protected Areas

Eagles and McCool (2002) posit that each protected area is created by society for a specified purpose. These have varied of time and space. Over time, the values assigned to already declared protected areas may have started to change.

Each visitor comes with certain ideas in mind, certain benefits they wish to achieve. These goals are personal, but may be shared with others to represent societal goals. It is very important that all planners and managers understand these layers of values. We briefly outline these 10 societal values, but direct the reader to the more complete discussion in Eagles and McCool (2002).

Wilderness

A widely used theme in countries that share the Germanic group of languages is the concept of wilderness; the use of a wild area for personal reflection and redemption. The word wilderness is derived from the ancient German phrase 'will doer ness', meaning a place of self-willed animals. Will means self-willed creatures that are not subject to the domination of people. Doer means wild animal, and has come into English as deer, one type of wild animal. Therefore, a wilderness is a place where all of nature exists of its own accord, where humans are secondary and must not impose their will. Of course, different societies interpret wilderness within their specific context and array of values. What is wilderness to Australians may be different than wilderness to Germans, and what urban dwellers feel is wilderness may differ from those living in rural areas.

Community Social Function

Protected areas are often used for community social events and functions, such as parties, athletic events, religious celebrations, political events, festivals and fairs. Roman city planning has a plaza in the centre of every city, for just these reasons. This long-standing activity remains important today and fulfils many social functions, such as courtship, family bonding, community cohesion, athletic competitions, and the meeting of new people.

Hunting Preserve

Since the Assyrian culture in ancient Mesopotamia, royal leaders have set up reserves for hunting and associated recreational activities. The protected areas called wildlife reserves or wildlife refuges continue this function.

Business and Profit

The creation of protected areas and associate tourism activity has been attractive themes for some sectors of society. When people visit an area they need facilities and services, which the private sector is very willing to provide. The support of powerful tourism related business sectors, such as railway companies, were very important in convincing governments in both the USA and Canada that the first national protected areas should be created. The same is often true for the fishing industry and marine protected areas

Physical and Emotional Health

Many visitors come to protected areas to gain some level of physical and emotional health. This was well known to early protected area advocates, but was largely forgotten for much of the 20th century. Recently, this value has been reinvigorated as protected area advocates and health advocates work together to lobby for protected area creation and use.

Ecological Preservation

The concept of ecology, a systems approach to understand natural phenomena, emerged in the middle decades in the 20th century. It relatively quickly moved forward to become the dominant value in the creation of many, if not most, national protected areas. Unfortunately, the power of this value often overwhelms or ignores the other values inherent in many protected areas.

Recreation

The use of lands for healthful activities leads to the value of recreation. This has many faces, such as outdoor recreation, adventure pursuits, physical challenge and personal reflection. This is a fundamental value for most visitors. A major part of protected area management is to decide which recreation activities are encouraged, allowed, where and when.

Meaning of Life

Nature is often used to reveal the meaning of life. Activities and ideas underlying the concept of nature can be used to guide the life an individual person, a community and a larger society. Concepts emerging include: continuity, stability, substance, adaptation, sustainable design, diversity, and evolutionary change. Each of these concepts has important implications for people and their lives.

Protecting Native People and Their Lands

The early creation of national parks and protected areas typically removed the existing inhabitants, so as to recreate an ecological condition without the negative impacts of human residents. In the last 50 years a new form of protected area in which native or aboriginal people play a much larger role has often been used. These people and their lives can play many roles, such as stewards of the lands, educators of the visitors on traditional ways, extractors of resources, protected area managers, and tourism providers.

Historic and Cultural Preservation

Many countries use the protected area motive and management structure for the designation and management of significant cultural and historic resources. For example, in both the USA and Canada the federal protected area agencies manage both historic sites and national protected areas. In many locales these sites designated primarily for historic values, also retain or gain over time significant ecological values. World Heritage designation has been granted to 29 properties that have both cultural and natural values (UNESCO, 2014).

Summary of the Values

Protected areas represent a rich and complicated suite of values. Planners and managers must be aware of the history of the values contained in any one site, as well as their changes in emphasis over time. The oldest protected areas have experienced changing concepts and as a result contain a complex assemblage of landscapes, artefacts, structures and landforms. A walk through an older protected area will reveal the many societal ideas that have flowed into this protected area over many years.

It is rare to have a protected area that represents only one of these values. Many protected areas contain several of the values outlined here.

It is critically important that all those involved in protected areas, the decision makers and planners, managers, the visitors, the lobbyists, recognise and respect the range of values and ideas involved. Conflict, which is typically caused by goal interference, stems from different ideas of what is desirable and acceptable in protected areas. Since many societal values occur in protected areas, it is important to understand the processes used to assign and utilise these values. The processes used to represent these values are key to protected areas' societal relevance.

2.3 The Context of Protected Areas and Their Management

It is clear that protected areas and their uses are deeply embedded in many cultures. And just as boundaries between a protected area and its surrounding context are often blurred, it is nearly impossible to separate a protected area from its embedded social and cultural context. To do so raises questions about the appropriateness of a protected area as a mainstream conservation component. Societies and culture consider conservation because without a conservation component the very factors that allow a group to continue to sustain their livelihood are irreversibly degraded. In this sense then, understanding values leading a society to conserve are not only an appropriate dimension of management, it is essential to the viability, saliency and effectiveness of various conservation strategies.

Protected areas can thus be described as one component of a complex social-ecological system that serves to sustain a society and provide resilience to it in terms of ecological catastrophes that mar human development. In this system, which is succinctly represented in Figure 2.1, there are four major components:

- Resources
- Resource users
- Infrastructure
- Infrastructure providers

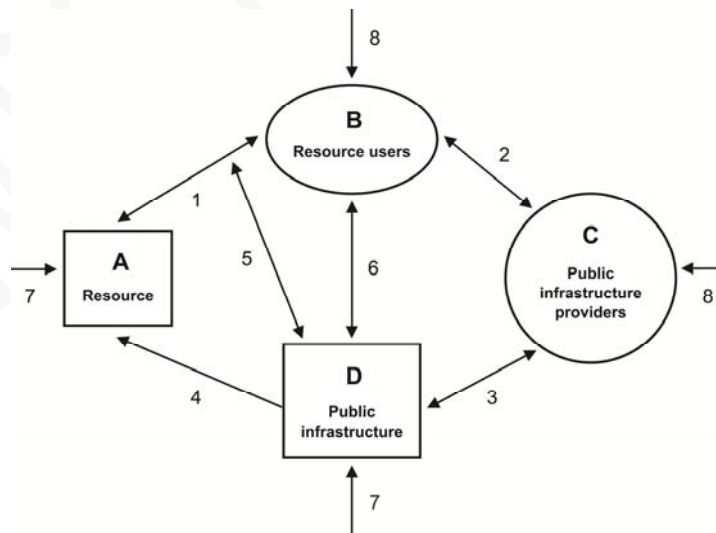


Figure 2.1. A protected area can be conceived of as a complex social-ecological system. (Anderies et al., 2004)

2.3.1 *The Resource*

At the heart of the notion of resource are the biophysical attributes, which characterise and depict the area. This includes its geographic location, biodiversity and its status, physical features and attributes, human occupation and use and threats to the values underlying the gazetting process. Most significantly, how the resource is depicted or described is a function of the meanings assigned to it by the various cultures that interact with the resource. Thus, a protected area's biodiversity may be defined as a source of ecosystem goods, materials and ecological for local residents, as a place that harbours rare plants, a location with important spiritual value and even a place for recreation. The resource then is not just the attributes, but also the values attached to it by resource users.

Many protected areas have strong cultural and historic values as well. A classic example is Tikal National Park in Guatemala, which has unique cultural and historic resources as well as world-class ecological values. In this context, managers rely heavily on visitor fees and charges to pay for management, within the context of sustainable use with very significant cultural and ecological resources.

As protected natural areas age, they may gain more historical value. Some older protected areas have large amounts of infrastructure and locales designated as historic properties, adding an important layer of complexity to management. For example, consider the issues involved in visitor use of a historic structure that was once designed for tourism but is now rare, does not conform to full modern building codes, and is expensive to maintain.

2.3.2 *Resource Users*

Protected area-based tourism has many stakeholders. Each group has its own particular values and objectives – its own “culture” indeed. This complex mosaic of stakeholder interests makes constant demands upon protected area management. It possesses great challenges but potentially also many opportunities for enhanced management. The groups who have a direct interest in, and are affected in different ways by, protected area and tourism management policies, include among others, or are not limited to:

- Protected area planners and managers
- Protected area volunteers
- Protected area visitors
- Protected area employees
- Local community
- Native or indigenous community – same as residents?
- Landowners (in and around the area)
- Residents (in and around the area)
- Resource extraction interests
- Government ministries
- Allied and sometimes competing government agencies
- Private sector (sometimes they make a loss ;-)
- Non-governmental organisations

- Environmental groups
- Economic development organisations – are these donors?
- Concessionaires, licensees and permit holders
- Hospitality industry
- Tour operators
- Destination marketing/management organisations
- Educational institutions
- Research bodies
- Media

Among all these interests, four groups are particularly important in the management of tourism in protected areas: (1) society in general, including local communities, (2) protected area managers, (3) tourism operators and developers, and (4) visitors and users. Each group views park tourism from its own unique perspective (Eagles et al., 2002)

However, the term stakeholder is not correct for all groups. Some people have legal rights to access a protected area and even harvest the goods and materials located within it. These people are rights holders. Other people have a direct interest in the area and its management such as a community living downstream that depends on a particular regimen of water flowing out of it. Also others may live at a distance from the protected area, but feel they are impacted by decisions made about it. A more inclusive term would be constituencies or actors.

Constituencies may include residents as noted above, school children, visitors, those who may extract or desire to extract natural resources from the area, and private firms and businesses who wish to provide visitor opportunities. It is important to remember that these constituencies are quite heterogeneous in character: communities, for example, are composed of a variety of interests, the visitor population is comprised of a series of groups seeking somewhat different experiences, and businesses in market economies are competing with each other--e.g. supplies of goods and services – note that some of the provision is indirect, not direct tourism activities.

Constituencies or resource users are composed of a diversity of people whose meanings or values partly overlap and are partly competing. One constituency's meaning (see Section 2.2.3) may or may not overlap another's. Each constituency may view its interests as a priority—most likely valid in the case of rights holders—meaning. There may or may not be understanding of meanings and values held by other constituencies. Thus, resource users often compete politically for access and use of the goods, materials and processes provided by the natural heritage located within a protected area.

Entrepreneurs are a particular class of constituencies that see opportunity in transforming ecological goods, materials and processes into benefits that others may wish to purchase. Thus, one particularly significant class of resource users within the context of these guidelines are operators who sell opportunities to view, appreciate and learn about natural heritage, to harvest certain materials, such as fish and game, and to engage the resource in often challenging activities such as river rafting, mountain climbing, backpacking and so on.

Such entrepreneurs—including tour operators and guides —help protected area agencies facilitate engagement in the area by visitors by providing offers that the agency itself has little capability to

deliver. Tour operators function under legally specified contracts and agreements describing the scope and content of their business (see chapter on Concessions Management). Their principal role is to provide services that visitors cannot provide themselves and to assist the agency in meeting its conservation mission. Guides maybe part of the local community, who also have vested interests in the ecological goods and who may still have regulated access to use/exploitation of natural resources (e.g. fishers who serve as guides in a marine protected area).

2.3.3 Infrastructure

Infrastructure includes all the things and policies that facilitate access to and protection of natural heritage values. It frequently involves transportation, including roads, trails, bridges, airports and ports. It also includes lodging, restaurants, visitor centres, viewpoints and attractions, shops and similar facilities specifically directed toward tourism use of the protected area. Infrastructure also includes policy and management rules, guidelines and actions. These include policies that lay out the conditions for tourism and visitation in a protected area, guidelines for determining which entrepreneurs have access for what purpose and under what conditions, limits on visitor use and behaviour, vision statements and management goals.

2.3.4 Infrastructure Providers

Infrastructure does not just happen; it results from interests, expectations and demands from various segments of society. In protected areas, infrastructure is most frequently provided by public agencies and NGOs and/or donors of various types (e.g. international development agencies, banks/financial institutions, private companies), the former through public and generally tax revenues and the latter as donations to the public agency. For example, in Yellowstone National Park, hundreds of people, foundations and corporations donated funds through the Yellowstone Park Foundation to provide \$15 million of the total \$27 million needed to construct the new visitor centre at Old Faithful. Providers often have their own agendas about what infrastructure needs development, maintenance and repair or replacement. However, these agendas themselves are often influenced by civil society, such as when a road becomes impassable, or facilities are viewed as dilapidated and the public itself calls for repair or replacement. These agendas are also influenced by economic motives (e.g. potential for revenue, generation of employment).

Infrastructure providers also have not only formal rules and regulations regarding decisions on infrastructure development, but they generally have developed a particular agency culture consisting not only of symbols and icons, but also deeply held values and norms for employee behaviour. Pressures from outside the agency for infrastructure are often filtered through this culture, and in some cases, form the basis for a dialogue with civil society over the appropriateness and acceptability of proposed infrastructure. For example, maintenance of trails located within Congressionally designated Wilderness in the U.S. often proceeds differently in National Park Service administered Wilderness (e.g., use of gasoline powered chain saws) and in Forest Service administered Wilderness (hand tools only), even though Wilderness is one idea to civil society. Some constituencies become confused when one agency implements infrastructure maintenance differently from another agency.

2.3.5 *The protected area social-ecological system as a whole*

These four components provide the basis for conceiving of a protected area as a social-ecological system embedded in a larger social ecological system (Andereis et al., 2004). Each system is subject to influences occurring at the larger scale and influences systems at smaller scales. For example, the funds infrastructure providers have available are influenced by larger scale economic processes which in turn influence revenues from taxes and donors. Such systems also contain feedback loops characterised by varying delays between an action and a response. A bridge over a river in a protected area may be built only to be destroyed by a flood decades later.

Conceiving of protected areas at one scale helps managers understand what factors influence it and the role they play. For tourism, understanding that the economy has a large influence on not only the number of visitors to a remotely located protected area, but also the willingness to pay for transportation, lodging, food and guides, for example, can help managers make sense out of processes that seem at first chaotic and random. Or, understanding that the resource is not just a set of attributes located and displayed with geographic information systems but also often have cultural and symbolic meanings attached to them may help managers understand that some seemingly unattractive places may be very popular, or that certain constituencies may resist attempts to construct new infrastructure or implement new policy regarding use.

2.4 **Types of Relationships between Resources and Resource Users**

Given this social ecological system, the relationship between resources and resource users consists of five fundamental domains.

1. **Utilitarian** -- users extract materials from protected areas or make use of ecological processes. In many areas now designated as protected, utilitarian uses often dominated as traditional forms of land use. Thus, communities may have historically depended on an area for thatching grass, fish, timber, medicinal plants, various foods and other materials that once harvested were transformed into useful benefits. Many societies evolved with this utilitarian perspective yet also developed a set of practices that discouraged unsustainable use. In some cases, as colonialism spread, these practices were not recognised as legitimate by the dominant political power and formalised rules regulating harvest were implemented, often without the consent of those impacted.
2. **Spiritual/cultural** -- Many societies believed that spirits or deities lived in or were represented by physiographic features, such as mountain peaks, waterfalls and cascades, and canyons or felt that some groves of trees and animals were particularly sacred. The five sacred mountains of China, harbouring spiritual significance for Taoism (and to a more limited extent Buddhism) are examples. These mountains are now designated the equivalent of national parks. This relationship cannot be predicted or modelled using such contemporary tools as GIS, yet may be important determinants of how users assign meanings to a resource and behave accordingly. Because they cannot be easily quantified, they are often marginalised during formalised, expert driven planning processes. This suggests that prior to tourism infrastructure development or promotional campaigns occur, peoples need to be engaged and queried about their spiritual meanings of resources.

In addition to the potential sacred meanings, many societies have set aside special places that commemorate people and events important to those societies. These places may protect battlefields, memorials to leaders, homesteads, and other places. For example, in Iceland, Þingvellir National Park (gazetted in 1928) protects the initial location and rural landscape of the world's longest running parliament, which began in 930 and ran until 1798. This area also includes rivers, bogs and also cracks and faults associated with tectonic movement between the North American and Eurasian plates.

3. Economic -- local societies benefit financially from a resource from its use as a tourism destination. Many agencies promote gazetting and management of an area because they believe tourists will come, spend money and as a result the protected area becomes an engine of economic development for local and regional economies. This expectation looms large in places with low incomes and high levels of poverty. The jobs that potentially arrive when tourists do are attractive to people with little alternative source of income; they may represent an alternative livelihood for people who lost their access to resources within the protected area when it was gazetted; and they are frequently viewed as a source of tax revenue to support government and management of the protected area.

Tourism based economies tend to be vibrant ones, with a diverse set of firms, occupations, and services available. Entrepreneurial individuals can often find market niches to develop and then become profitable businesses. The income flows into businesses and the region may be considerable such as in the Jiuzhaigou Valley and Scenic Historic Interest Area (a World Heritage Site) in Sichuan Province of China, which went from 200,000 visits in 1997 to 3,000,000 over a span of just a few years.

4. Recreational and/or aesthetic -- Tourists often engage in activities beyond viewing, interacting, appreciating or learning about the natural heritage contained within a protected area. Such activities as photography, camping, hiking, river floating, picnicking, hunting, fishing, diving/snorkeling, and even sports are popular things to do in many protected areas. Likewise, local people may seek similar or different recreation activities and these patterns may be significantly different from what tourists seek. Conflicts between these resource users (or constituencies) may arise when both engage in different activities at the same time and place.

Protected areas that contain high physiographic relief and diversity often contain culturally significant scenic value, such as Banff National Park in Canada. In a similar way, marine protected areas containing diverse coral systems are found to be highly attractive. And yet, other areas, such as the Badwater dry lake in Death Valley National Park of the U.S. or the Sand Sea World Heritage Site along the Atlantic Coast of Namibia, contain relatively little biodiversity may also find themselves increasing attractive to tourism. Such protected areas then preserve values, which serve as a backdrop to local communities, enhancing the quality of life for residents. And, scenic value frequently serves as an attribute that attracts firms whose employee base prefers such locations. In a sense then, scenery alone may become the engine of economic development.

5. Political -- Gazetting of protected areas will mean that some resource uses will no longer be permitted, reducing access to local residents. Some residents may then view the

protected area, other resource users, and the infrastructure providers, as antagonists in a long run battle over rights and stakes in the area. Such conflicts become politicised when residents bring their concerns to local parliamentarians, officials, ministers and other representatives at different scales of governance.

2.5 Managing Visitation in a Complex Dynamic and Evolving System

The multiplicity of agencies, NGOs, constituencies, and rights holders involved with, affecting and impacted by tourism management decisions in parks represents a cauldron of complexity, change and contentiousness. Each of these actors holds preferences and notions of acceptability concerning decision processes, outcomes and priorities that may or may not be shared by other actors. For example, local entrepreneurs may see a protected area as a source of opportunity for developing guiding and interpretive businesses, while some in the environmental community may regard such activity as a threat to the natural heritage they may have fought to preserve. Some actors desire transparency and accountability in decision processes while others see calls for greater public engagement in decisions, such as in co-management, as a redistribution of power going against their former exclusive access to process. Indeed, protected area agencies in some countries negotiate contractual and concession agreements to specifically engage local people in co-managing tourism ventures in protected areas. Chapters 3, 8 and 9 provide further discussion on different governance and public-private partnership models.

The design of governance processes in such situations can be particularly challenging, as not everyone desires openness, adaptability, or accountability. Actors may have different senses of what is “fair”, in terms of process or outcome. These cases are often termed “messy situations” because of the lack of social agreement on goals, scientific uncertainty about relationships between causes and effects, and the interconnectedness of various seemingly independent problems. The design of a way forward in such apparent disarray itself can develop into a contentious and divisive process. Managers will need to construct a sense of shared values and purpose before striving to build the consensus needed for implementation.

Given the diversity of potential actors that exist in any given situation, managers must be particularly sensitive to the equity consequences. Some decisions may favour some groups and marginalise others. Some decisions may lead to an actor benefiting financially at the expense of another. Some processes may be more inclusive of various actors in seeking input than others. Simple things, like the location, day of week or time of day, for a planning meeting or public engagement session, will impact actors and constituencies differently.

Originally, many protected areas were gazetted principally to preserve landscapes for scenic purposes with access for the public guaranteed to protect habitat to recover threatened populations of game species, such as the Sabi Game Reserve in South Africa which became the central area of what we now know as the Kruger National Park. For many decades these were the principal purposes of park designation and management. During the late 1980s and 1990s as more people (e.g., minorities and women, impoverished peoples) gained voice in development projects and decisions, the expectations of society for what a protected area should do greatly diversified (Borrini-Feyerabend et al., 2013). Implementation of the Convention on Biological Diversity also stimulated increased debate on functions of public designation of protected areas (CBD, 2004a,

2013 and 2014). Functions grew from scenery protection and game recovery to preserving areas as wilderness (e.g., virtually no development) to protected areas serving as cauldrons of evolution, becoming models of democratic governance, acting as tools for poverty alleviation and community development, becoming engines for local and regional economy, protecting places of high biological or geological diversity, serving as a source of ecosystem materials, and connecting urban populations to nature with health and other beneficial outcomes. Concepts of preserving the cultural manifestations of history events and structures are often important values, but these may be contested when different cultures see different values.

This growing diversity of expectations reflects the excitement of protected areas held by civil society and its expectations as cornerstones for ensuring human survival in a world of accelerating human population growth. At the same time, multiple expectations of what a protected area can do raise the complexity of decisions and contentiousness around resolving these competing demands. For example, to achieve goals of conservation in some locales, sizable numbers of local peoples were displaced out of areas gazetted as parks and protected areas leading not only to greater conflict, but in many cases impoverishment of the people themselves. At other times, local residents may not have lived in the gazetted area but may have traditionally accessed the resources within it and following gazettement, their access is restricted in some way. In many cases, such displaced local peoples have faced difficulties in adapting to new environments and unfamiliar ecosystems, in gaining access to skills required for these new places, and in receiving compensation for their losses.

In some locales different cultural groups contest each other's historic claims to a park landscape. These values are often carried in oral history and determined by past conflicts, which influence the views.

Integrating needs of local peoples who are directly dependent on natural resources with biodiversity conservation represents a complex set of trade-offs made under conditions of scientific uncertainty and potential social disagreement over goals. One small group of people may pay significant costs so that a larger group may reap the benefits from protection of natural heritage.

The increases in coverage of protected areas envisioned by Aichi Target 11 (17% of the terrestrial surface and 10% of coastal and marine areas) will inevitably lead to additional conflict between biodiversity protection and access to resources needed for shelter and sustenance. Potential strategies to resolve this conflict include developing alternative livelihoods for people displaced. We expect that tourism will be offered as one way to gain income needed to replace subsistence agriculture with a market economy. Tourism will be advocated as a more biodiversity-benign use of a protected area, one which will not only raise local per capita money income, but also generate revenues needed for stewardship of the protected area.

Cultures vary in their acceptability of tourism as an income generator, with some fearing the social impact of iPod carrying, Hard Rock Café t-shirt bearing foreigners in their midst with little concern for local customs and norms. And, governments often overstate the jobs created from tourism in an effort to grow the political support of local residents. It would seem useful then to carefully consider both the positive and negative effects of gazettement an area as well as what kind of tourism

and associated development would be most appropriate for the local population prior to the gazetting process.

2.6. Conclusions and Guidelines

A set of guidelines are distilled from the above discussion.

- A starting point for management of tourism and visitation is to identify what values are at stake and what it is that should be sustained by tourism and visitation.
- Focusing on understanding trade-offs will help managers and their constituencies better understand the potential benefits and costs of tourism and visitation in protected areas.
- The role of tourism and visitation in a protected area is explicitly discussed and presented in management plans. In particular, managers work with local people to create understanding of how tourism and visitation might affect their culture.
- The role of tourism and visitation in a protected area is explicitly discussed and presented in management planning process. In particular, managers work with local people to create understanding of how tourism and visitation might affect their culture and livelihoods and explore ways in which negative impacts may be mitigated.
- Conceiving a protected area as a system involving four distinct components, their relationships and delays between causes and effects can help managers develop the new insights needed for more effective management.
- Engaging constituencies and holders of various rights in resources in the protected area will help identify the cultural and socio-economic values important in the area and how it is managed.
- Engaging constituencies and holders of various rights in resources in the protected area will help identify the cultural and socio-economic values important in the area and how it is managed.
- Best practices must meet several tests to lead to effective management: They must be (1) technically effective; (2) consequences to equity known, with sustainable livelihoods imbedded; and (3) culturally appropriate.
- The goals of protected area management can be achieved in many different ways. Thinking creatively about local society and culture may be helpful in developing innovative strategies for stewardship.
- Conservation activists and managers must be careful about building expectations of jobs and income resulting from tourism to the protected areas.

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3. Governance, Legislation and Policy Issues

3.1 Introduction

This chapter considers governance, legislation and policy issues related to sustainable tourism in protected areas. IUCN has produced a number of publications on governance, legislation and policy issues for protected areas in general. UNEP, UNESCO and UNWTO have also produced publications on sustainable tourism in particular. This chapter will briefly summarise the main issues, and will indicate how sustainable tourism can be integrated into the framework of governance, legislation and policy issues set out in IUCN's Best Practice Guideline No. 20 "Governance of Protected Areas: From understanding to action" (Borrini-Feyerabend et al., 2013), that applies to protected areas, their conservation and activities and developments that may take place within them.

3.1.1 Governance

Governance describes who makes decisions and how they are made (Borrini-Feyerabend, 2008). It applies to decision-making about day-to-day management, as well as to decisions about policies, laws and their implementation. Key issues for governance include ensuring participation of all stakeholders in decisions that affect them, openness about decision-making processes and their timetabling, informed consent including provision of information about proposed changes and developments along with supporting information for decision-making, and accountability of the decision-makers in organisations for their decisions and actions in implementation of those decisions, including implementation of policies and law enforcement. Governance also addresses human rights issues, equity, and application of the precautionary principle in decision-making.

3.1.2 Legislation

Laws and legal agreements provide sets of legally enforceable rules and responsibilities that define what may or may not be permitted in particular circumstances and locations. These can cover both specific actions and activities, and processes by which organisations operate or decisions are made. In the case of tourism, relevant laws may include those on establishment of tourism businesses, land ownership and planning which apply where tourism developments are proposed and constructed, and on public bodies with responsibilities for various aspects of tourism administration, promotion or development. Legally binding contracts, such as leases or concession agreements, may also be established between protected areas and tourism businesses. Protected areas are also covered by laws that govern how they are set up and managed.

Some sites are designated, at the request of the relevant governments, as World Heritage Sites, Biosphere Reserves and Ramsar Sites, under international treaties and agreements. To retain their designation, such sites must meet the standards and requirements set out in the relevant international treaties and agreements, as well as complying with applicable laws and regulations in force at national level (Table 3.1).

These international treaties and agreements establish criteria for designation of sites; mechanisms for the proposal and designation of new sites; for monitoring designated sites for effective protection and for compliance with their obligations under the relevant treaty or agreement; and mechanisms for corrective action where monitoring indicates problems at any site. There are also mechanisms to provide support, particularly through training, capacity building activities, and exchange of experience and expertise, for effective management and long-term conservation of sites that have been designated. Beyond specific sites, these agreements and treaties require Governments to commit to protection of their countries' natural and cultural heritage.

Countries may also adopt various other designations for protected areas of various types, including geoparks, for example, that are established nationally and are part of an international network, but not covered by any international treaties. IUCN, in coordination with BirdLife International, Plantlife International, Conservation International, Critical Ecosystem Partnership Fund, and over 100 national/regional civil society and governmental conservation agencies, has also established a programme to designate Key Biodiversity Areas, including Important Bird Areas. Over 20,000 Key Biodiversity Areas have now been identified globally in over 200 countries.

In addition, at the regional and subregional levels, guidelines and initiatives relevant to sustainable tourism have been developed by groups of countries, for example, for Antarctica under the Antarctic Treaty, and for various regions under the UNEP Regional Seas Conventions. These include Protocols concerning Specially Protected Areas and Biological Diversity in the Mediterranean (1995), for the Conservation and Management of Protected Marine and Coastal Areas of the South-East Pacific (1989), and concerning Specially Protected Areas and Wildlife to the Convention for the Protection and Development of The Marine Environment of the Wider Caribbean Region (1990).

Table 3.1. Major international treaties, agreements, and protected area programmes relevant to tourism

Treaties, Conventions or Programmes	Year	Purpose	Parties (as of Aug. 2014)
International Treaties and Conventions			
<i>United Nations Educational, Scientific and Cultural Organisation (UNESCO)</i> World Heritage Convention	1972	Established the World Heritage Program to preserve cultural properties and promote nature conservation of internationally significant sites.	<ul style="list-style-type: none"> 190 parties ratified 1007 sites in 161 countries (779 cultural sites, 197 natural sites, 31 mixed sites)
Ramsar Convention on Wetlands of International Importance	1975	Conserve the wise use of all wetlands through local, regional, and national actions and international contribution towards achieving sustainable development throughout the world.	<ul style="list-style-type: none"> 168 parties 2186 wetlands
<i>International Union for the Conservation of Nature (IUCN)</i> Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)	1975	Regulate trade of wild animals through voluntary international agreement. Protected areas party to the agreement must take CITES into account in management plans.	<ul style="list-style-type: none"> 179 parties
<i>United Nations Environment Programme (UNEP)</i>	1992	Global commitment to the conservation of biological diversity, sustainable use	<ul style="list-style-type: none"> 193 parties

Convention on Biological Diversity (CBD) Guidelines on Tourism and Biological Diversity adopted by the CBD Parties	2004	and development, and sharing of benefits resulting from the use of resources. Tool for practical implementation of parties' commitments under the CBD to significantly reduce biodiversity loss, and to implement the Convention's strategic plan.	
UNEP Convention on Migratory Species of Wild Animals (also known as CMS or Bonn Convention) and the collection of Agreements and Memoranda of Understanding that have been concluded under the CMS	1979	Global platform for the conservation and sustainable use of migratory species, their habitats and migration routes, providing the foundation for internationally coordinated conservation measures throughout migratory ranges. Specific agreements and other instruments have been established under the CMS on species that include: <ul style="list-style-type: none"> • Cetaceans • Gorillas • Marine Turtles • Dugongs • Manatees • various bird species 	<ul style="list-style-type: none"> • 120 parties • 569 species listed in Appendices 1 or 2 of the CMS • 60 action plans covering CMS species
Antarctic Treaty System	1961	Designed to regulate international use of Antarctica (treaty first signed in 1959) and subsequent meetings address tourism to the continent.	<ul style="list-style-type: none"> • 50 parties (12 original signatories)
International Programmes relevant for Tourism and Protected Areas			
UNESCO Man and Biosphere Reserve Programme	1970	Establish biosphere reserves equally concerned with conservation, research and monitoring, and sustainable development.	<ul style="list-style-type: none"> • 631 biosphere reserves in 119 countries
UN World Heritage Programme	1972	Establish the World Heritage Programme based on the World Heritage Convention to protect natural and cultural heritage of outstanding universal value to humanity.	<ul style="list-style-type: none"> • 1007 sites in 161 states parties
UNESCO Global Network of National Geoparks	1998	Global network designed to assist in the development of geoparks and conservation of geologic heritage through the encouragement of sustainable tourism and adherence to network guidelines.	<ul style="list-style-type: none"> • 96 members in 26 countries
UN Global Sustainable Tourism Council	2010	International organisation designed to increase knowledge of sustainable tourism practices, encourage the adoption of universal tourism principles, and generate demand for sustainable tourism.	<ul style="list-style-type: none"> • 122 organisational members, 8 individual members

These international treaties and agreements focus on conservation and sustainable use. While most do not include specific requirements or provisions on tourism, the overall requirement for

conservation and sustainable use, and for elaboration and implementation of site management plans, applies to all activities - including tourism - that take place within, or which may impact upon, the designated sites. It is recognised that many of the designated sites have significant levels of tourism and that other sites have potential for tourism. To address this, the UNESCO World Heritage Centre has established a tourism programme, and the Convention on Migratory Species and the Ramsar Convention, have both produced guidance and adopted policies on tourism (UNEP & CMS, 2006; Ramsar Convention & UNWTO, 2012). In addition, the Convention on Biological Diversity has adopted *Guidelines on Biodiversity and Tourism Development* (CBD, 2004b), and has also published *User's Guide* to support implementation of these guidelines (CBD, 2007).

3.1.3 Policies

Policies describe courses or principles of action adopted or proposed by organisations, including all tiers of government, businesses, nongovernmental organisations, civil society organisations or individuals. National and local governments generally have policies on tourism that focus on how to promote tourism and increase its economic benefits, and on the types of tourism that they wish to encourage (which may include tourism in protected areas). There may also be policies for ensuring that local communities, and not just the national economy, benefit from tourism, and for measures to improve the sustainability of tourism developments and activities. Effective, well-implemented policies on these aspects are an essential component for sustainable tourism.

The content of policies, for example, on planning, management, monitoring, capacity building and financing for sustainable tourism in protected areas, is dealt with in the subsequent chapters of this publication.

The three areas of governance, legislation, and policy are closely linked along with the institutions that apply them (Figure 3.1). Essentially, governance describes the way in which institutions operate, and legislation and policy are developed and implemented. Legislation provides laws and regulations including those through which institutions are established with responsibility for implementation of legislation and/or for development of policy. Legislation also mandates some aspects of policy and governance. In many cases, the legislation, institutions and policies for tourism and for protected areas will be separate from each other. The challenge for tourism in protected areas is to find ways for these two sets of legislation, institutions and policies to work together to deliver conservation goals (Figure 3.1).

Policies and governance must be consistent with laws and legal agreements, but provided they are, can be adapted flexibly to meet the needs of particular locations or changing circumstances. For example, tourism is a highly dynamic and changing sector that can be subject to rapid changes in market demand; policies for tourism promotion need to be able to adapt to these changes. Equally, protected areas need to be able to adapt to environmental changes and external pressures from local populations or the commercial sector. Best practices for combining tourism with protected areas should ensure that tourism does not undermine conservation objectives, and where possible, helps to strengthen them.

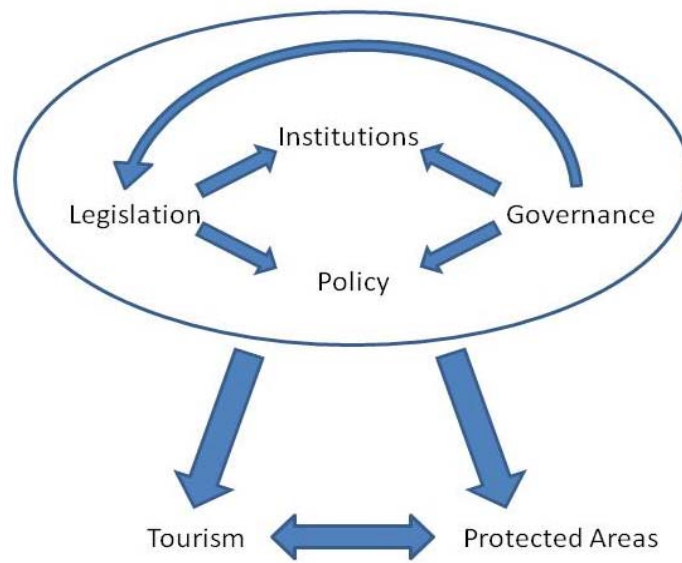


Figure 3.1. **Relationships between legislation, policy, governance and institutions.**
 © Richard Tapper, Environmental Business and Development Group

3.2 Governance and Sustainable Tourism

IUCN has undertaken work on governance of protected areas, and the WCPA has published a publication on “Governance of Protected Areas: From Understanding to Action”, as part of the series of Best Practice Protected Area Guidelines (Borrini-Feyerabend et al., 2013). Table 3.2 lists governance principles for protected areas that have been developed by IUCN in support of the Convention on Biological Diversity's Programme of Work (Target 4.1, 2014) that calls for Parties to develop and adopt standards, criteria, and best practices for management and governance of national and regional systems of protected areas (Borrini-Feyerabend, 2008). These principles apply equally to tourism in protected areas; the challenge is to ensure that tourism activities and developments comply with these governance principles in practice. Graham et al. (2003) also published an important policy brief outlining the principles of good governance based on their earlier paper presented at the 2003 IUCN World Parks Congress.

It is useful to consider how the concept of sustainable tourism fits within the framework of the governance principles for protected areas. UNWTO and UNEP (2005) define sustainable tourism as tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities. This definition and sustainable tourism development guidelines and management practices are applicable to all forms of tourism in all types of destinations, including mass tourism and the various niche tourism subsectors, including ecotourism.

Similarly, for the UNWTO and UNEP (2005), sustainability principles “refer to the environmental, economic and sociocultural aspects of tourism development; a suitable balance must be established between these three dimensions to guarantee its long-term sustainability. Thus, sustainable tourism should:

- (a) Make optimal use of environmental resources that constitute a key element in tourism development, maintaining essential ecological processes and helping to conserve natural heritage and biodiversity;
- (b) Respect the sociocultural authenticity of host communities, conserve their built and living cultural heritage and traditional values, and contribute to intercultural understanding and tolerance;
- (c) Ensure viable, long-term economic operations, providing socioeconomic benefits to all stakeholders that are fairly distributed, including stable employment and income-earning opportunities and social services to host communities, and contributing to poverty alleviation.”

The development of sustainable tourism requires the informed participation of all relevant stakeholders and strong political leadership in order to ensure wide participation and consensus building. Achieving sustainable tourism is a continuous effort that requires constant monitoring of impacts and the taking of preventive and/or corrective measures whenever necessary. Sustainable tourism should also maintain a high level of tourist satisfaction and ensure that tourists have a meaningful experience, raising their awareness of sustainability issues and sustainable tourism practices. This definition of sustainable tourism touches on all aspects of the governance principles for protected areas (Table 3.2).

All elements of sustainable tourism are compatible with the governance principles for protected areas. Tourism itself represents just one element of protected area management and decision-making, and should not be seen or managed in isolation. The governance principles for protected areas specifically include a requirement for “Providing clear policy directions for the main issues of concern for the protected area and, in particular, for contentious issues (e.g., conservation priorities, relationships with commercial interests and extractive industries) and ensuring that those are consistent with both budgetary allocations and management practice.” (Borrini-Feyerabend et al., 2013, p. 59). Relationships with commercial interests include the tourism sector, and the requirement recognises that such relationships may be contentious. It is also important to note the requirement for ensuring that such relationships are consistent with both budgetary allocations and management practice in each protected area. This is essential if such relationships are to be kept within the capacity of protected areas to manage them effectively.

Table 3.2. IUCN good governance principles for protected areas

PA governance principles	Summary of selected considerations related to the principles
<i>Legitimacy and voice</i>	<ul style="list-style-type: none"> • Establish, maintain, and respect governance institutions and rules • Ensure stakeholders receive information, can be represented, and can have a say in decision-making • Ensure no discrimination related to gender, ethnicity, and social class

	<ul style="list-style-type: none"> • Promote dialogue and mutual respect; seek consensus • Attribute management authority and responsibility to the capable institutions closest to natural resources (subsidiarity)
<i>Direction</i>	<ul style="list-style-type: none"> • Develop an inspiring and consistent strategic vision, based on agreed values and complexities • Ensure governance and management practice are consistent with values and integrated with other sectors and obligations • Evaluate and guide progress on the basis of regular monitoring • Provide clear policy directions, employ adaptive management • Provide clear policy directions for contentious issues (e.g., conservation priorities, relationships with commercial interests and extractive industries) and ensure that those are consistent with both budgetary allocations and management practice
<i>Performance</i>	<ul style="list-style-type: none"> • Monitor achievement of conservation and other objectives • Continuously evaluate management effectiveness • Respond to needs of stakeholders • Ensure capacity to carry out roles and assume responsibilities • Promote financial sustainability • Promote social sustainability and resilience • Engage in advocacy and outreach
<i>Accountability</i>	<ul style="list-style-type: none"> • Uphold integrity and commitment of responsibilities • Ensure transparency of information and decision-making • Clarify roles, responsibilities and reporting • Ensure financial and human resources are properly targeted • Evaluate, reward, and communicate performance • Encourage feedback with civil society and the media • Encourage independent oversight and questioning of operations
<i>Fairness and Rights</i>	<ul style="list-style-type: none"> • Strive for equitable sharing of costs and benefits • Ensure livelihoods of vulnerable people are not adversely affected • Deal fairly with staff, local residents, visitors, and other stakeholders • Uphold the substantive and procedural rights of stakeholders • Ensure participatory mechanisms for decision-making • Promote fair avenues for conflict management • Respect human rights, gender equity and the rights of indigenous peoples

Source: Borrini-Feyerabend et al., 2013 (Table 8, pp.59-60).

It is important to note that the principles of governance for protected areas, and the concept of sustainable tourism apply to all organisations of whatever type or origin; the same aims for sustainable tourism apply to all types of tourism, and this is made clear in the definition which refers "... to all forms of tourism in all types of destinations...". The same governance principles for protected areas apply whether a protected area is managed by government, private or community organisations, and to protected areas of any IUCN category (Table 1.1). Not all essential elements of governance of protected areas are covered by Table 3.2, however. Examples of other crucial governance elements for tourism and visitor management include the rule of law, management efficiency, and financial efficiency (Eagles et al., 2013).

3.2.1 Human rights and tourism in protected areas

IUCN has endorsed the important role of protected areas legislation in supporting implementation of the Universal Declaration of Human Rights and the UN Declaration of the Rights of Indigenous Peoples, as well as the Millennium Development Goals, and in particular, for giving respecting human rights and customary rights, and providing legal recognition and protecting tenure of the lands, territories and resources of indigenous peoples and local communities. Furthermore, Resolution 4.052 seeks to develop a “mechanism to address and redress the effects of historic and current injustices against indigenous peoples in the name of conservation of nature and natural resources”.

It is important that tourism activities both within and outside of protected areas should respect the rights of local people, communities and indigenous groups, including their rights to land and resources on which their livelihoods depend, or which have cultural significance for them. This includes ensuring that they are not displaced from or dispossessed of land and resources, that their participation in decision-making processes is facilitated, and that where it is agreed that tourism activities and protected areas are established, local people, communities and indigenous groups should gain benefits and livelihood improvements from this.

Protected area administrations and managers need to establish strategies to ensure that conservation activities, and any development of tourism within protected areas, are planned, introduced and managed in ways that support the rights set out in the Universal Declaration of Human Rights, the UN Declaration of the Rights of Indigenous Peoples, and other relevant agreements (IUCN-WCC, 2009). As part of this, social and human rights impact assessments should be carried out for tourism strategies, and for individual developments in protected areas, alongside environmental impact assessments. Tourism developments that would put people's rights or natural resources at risk should not be supported (UNWTO, 2010; Whakatane Mechanisms, 2012).

IUCN has already begun to implement a human rights based approach through development of the Whakatane Mechanism (2012), named after Whakatane, New Zealand, where the mechanism was agreed in 2011. This mechanism includes Whakatane Assessments of protected areas at the local level, in partnership with indigenous peoples' organisations (IPOs), IUCN national and international offices, government officials and other relevant actors. These assessments are required by IUCN as it seeks to develop a “mechanism to address and redress the effects of historic and current injustices against indigenous peoples in the name of conservation of nature and natural resources”, which is in line with the mainstreaming of United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) in the IUCN.

The *CBD Akwé: Kon Voluntary Guidelines* provides systematic guidance for development-related assessments that may affect Indigenous and Local Communities (CBD, 2004a) and the *CBD Guidelines on Biodiversity and Tourism Development* (CBD, 2004b) and associated *User Manual* (CBD, 2007), also provide guidance that can be applied to proposed tourism developments in protected areas.

Table 3.3 outlines steps that protected area administrations and managers can take as part of ensuring the participation of indigenous and local communities in consultations concerning tourism developments and activities.

Table 3.3. Actions to ensure the participation of indigenous and local communities in consultations concerning tourism development

- Establish a formal process, including local and open consultations, to identify indigenous and local community members, experts and organisations, and relevant stakeholders to establish adequate representation of indigenous and local communities.
- Provide adequate funding and technical support to facilitate the effective and representative participation by indigenous and local communities.
- Organise a process to properly record community views and concerns (e.g. such as written statements, video or audio tapes, or any other appropriate means, subject to the consent of communities).
- Ensure information is made available in forms accessible and comprehensible to the indigenous and local communities concerned.
- Make the development proposal and impact assessment available for public scrutiny and consultation.
- Allow sufficient time for public consultation on the proposed development, accounting for the amount of time needed by all indigenous and local communities to prepare their responses, and subsequently, provide these groups with an opportunity to present their responses for full and fair consideration by the proponent.
- Ensure that regular feedback is provided to the affected communities throughout all the stages of the impact assessment and development processes.
- Implement specific protocols to facilitate the proper conduct of the development, along with the behaviour of the personnel associated with it, when on sacred sites, lands and waters traditionally occupied or used by indigenous and local communities. Protocols should respect regulations already existing under relevant national, sub national or community self-government legislation.
- Follow protocols for the disclosure and use of traditional knowledge, innovations and practices of indigenous and local communities, including agreements to obtain the prior informed consent of owners for the use of their traditional knowledge. Draft and sign legally binding clauses on non-disclosure of information related to traditional knowledge, innovations and practices gathered through the impact assessment process.
- Consider negotiating an agreement between the community and the proponent of the development, in order to protect the interests of affected indigenous and local communities. The agreement would be subject to national legislation and regulations. Such an agreement could:
 - Cover the procedural aspects of impact assessments, including the option of a no-action alternative.
 - Define the rights and responsibilities of all parties.
 - Address measures to prevent or mitigate any negative impacts of the proposed development.

3.2.2 Types of Protected Area Governance

IUCN has identified four main types of protected areas according to how they are established and run (Table 3.4; Borrini-Feyerabend et al., 2013). In each type, the responsibilities for implementation of the governance principles for protected areas may be allocated slightly differently, although the principles themselves are unchanged. A further consideration that applies to all areas is to ensure that those involved in governance, management and day-to-day operations have the necessary skills and capacity to carry out these tasks effectively. This includes ensuring that staff and those involved in governance have sufficient training and resources to fulfil their roles and responsibilities, to manage budgets properly, and to work with other partners. In relation to sustainable tourism, it is important to also ensure that the boards and managers of protected areas are able to build effective partnerships with the tourism sector, as well as other relevant sectors where necessary (e.g. fisheries and tourism often go hand in hand in the case of MPAs), bearing in mind that even though conservation may be important to both, the training and backgrounds of those involved in conservation can be very different from those involved in tourism. The ability for protected areas and the tourism sector to build bridges between each other is crucial for integration of conservation and tourism. Box 3.1 provides further description of private protected areas as they are increasingly recognised for their complementary role in regional and global conservation with other types of protected areas listed in Table 3.4 (Stolton et al., 2014).

Table 3.4. Governance types for protected areas and the relevance to tourism

Type	Who is in Charge?	Main Governance Issues	Relevance to Tourism
<i>Government Managed Protected Areas (Governance by government)</i>	<ul style="list-style-type: none"> • Federal or national ministry or agency in charge • Local / municipal ministry or agency in charge • Government-delegated management (e.g. to an NGO) 	<ul style="list-style-type: none"> • Generally on public lands/areas and managed through institutions and bodies that have some form of public accountability • In some areas land ownership may be unclear with competing claims of land rights (e.g. beaches). • Of particular concern to indigenous, traditional or local communities which have used land/marine areas for their livelihoods that has been designated as a protected area, but 	<ul style="list-style-type: none"> • In the worst cases, indigenous and local communities are evicted, displaced or relocated, whether by force or otherwise, from their homes and land to make way for protected areas and tourism of various types. • Undermine the possibility of development of sustainable tourism, which includes respect for indigenous and local communities, and ensuring that they have an equitable share of the benefits and opportunities that tourism provides.

		who have not formally received land title recognising their rights and/or ownership.	
<i>Co-managed Protected Areas (Shared governance)</i>	<ul style="list-style-type: none"> • Transboundary conservation (involving state agencies & others) • Collaborative management (various forms of pluralist influence) • Joint management (pluralist management board) 	<ul style="list-style-type: none"> • May combine public lands with private, indigenous and community lands and open access areas (e.g. beaches and marine areas) • Typically requires the agreement of all the parties involved and include a representative governance body • The governance body decides on overall policy and management issues and to which those responsible for day-to-day management of conservation and tourism are accountable 	<ul style="list-style-type: none"> • Establishment of such areas requires considerable commitment from all parties, and particularly for private landowners and indigenous and community landowners • There need to be incentives for them to participate. Opportunities for development and enhancement of sustainable tourism can provide an important incentive for their participation.
<i>Private Protected Areas (Governance by private actors)</i>	<ul style="list-style-type: none"> • Declared and run by individual landowner • Declared and run by non-profit organisations (e.g. NGOs, universities, etc.) • Declared and run by for profit organisations (e.g. individual or corporate land-owners) 	<ul style="list-style-type: none"> • Established on private lands by private landowners who may be either individuals or organisations, usually with some legal restrictions concerning land use • The motivation for establishing such areas may be conservation, assisting local development, and/or to provide assets around which economically valuable activities can be developed, including tourism. • Some mechanisms of communication and consultation with surrounding land owners and communities is needed as management decisions on such areas may impact on surrounding zones 	<ul style="list-style-type: none"> • This has been an important driver for establishment of Private Protected Areas in some regions, for example in southern Africa, where game ranching and private conservancies linked to tourism have been found to be economically-efficient as well as ecologically desirable land uses compared to other possible alternatives. • Local support for conservation and for tourism activities can contribute to their long-term success, and local communities can contribute to, and benefit from, tourism in Private Protected Areas, by providing staff, goods and services. In turn, this helps make tourism more sustainable
<i>Indigenous and</i>	<ul style="list-style-type: none"> • Declared and run by indigenous 	<ul style="list-style-type: none"> • Established on lands owned by community or 	<ul style="list-style-type: none"> • Obtaining economic benefits and development through

<i>Community Conserved Areas (Governance by indigenous peoples and local communities)</i>	peoples <ul style="list-style-type: none"> • Declared and run by local communities 	indigenous groups, with some legal restrictions concerning land use <ul style="list-style-type: none"> • Community or indigenous groups have a great deal of freedom in the way they decide to establish such areas • Establishment of such areas requires agreement to be reached with the indigenous or community groups concerned, typically including how income, employment, and other potential benefits should be distributed equitably amongst the group and its individual members. 	conservation and related activities, including tourism, is a key motivation for establishment of Community Conserved Areas. <ul style="list-style-type: none"> • Such areas can enable continuation of traditional land uses of cultural and spiritual significance for indigenous and community groups, alongside opportunities for economic development (e.g., tourism) and generation of benefits for the groups involved.
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Box 3.1. Private protected areas: Partners in conservation

The protected areas movement has greatly evolved over time, and private reserves have always been part of this evolution. Many private reserves predate public protected area systems (Sheail, 2010), as described in Chapter 2. Examples range from a German botanist acquiring land in Mexico and creating a private tropical forest reserve in 1824 to a US bank buying forest in Chile and entrusting it to the Wildlife Conservation Society for conservation in 2002. Non-governmental organisations, such as Conservation International and The Nature Conservancy also acquire vast areas of land for protection and pioneer research on, and guidance for, private and non-governmental marine protected areas worldwide, the so-called Marine Conservation Agreements (TNC, 2013). The Leadership for Conservation in Africa network links business to conservation and has conserved 1.3 million ha of Congolese forest through a Public-Private Partnership, while in many parts of Africa and Latin America, traditional ranches are converted to game reserves and conservancies that offer sanctuary to highly endangered and much poached wildlife.

There are now many models for private enterprises, landholders, trusts and foundations, NGOs, and communal organisations to own or manage land wholly or partly for conservation, either solely or in various partnerships (Buckley, 2010a; Spenceley, 2008). These models differ greatly across countries due to factors such as land use history, land tenure systems and culture. Despite the long history, the global protected area community has not paid a great deal of attention to this form of protected areas (Borrini-Feyerabend et al., 2013; Stolton et al., 2014). It is increasingly recognised that the diversity of protected areas in a landscape, public and private (including community) increases conservation results (Leménager et al., 2014). Conservation can benefit from harnessing the entrepreneurial spirit, skills, management effectiveness, efficiency, innovation, and risk taking as well as passion, dedication and commitment of the private conservation movement, such as the Kenyan and Tanzanian examples illustrated by Leménager et al. (2014). Private reserves also play a complementary role in protecting some threatened species, such as black and white rhinoceros, African wild dogs, cheetah and Seychelles whiteeye with tourism-generated funding (Buckley, 2010b, 2012 and 2014).

Private landholdings or tourism leases, however, may or may not make net contributions to conservation,

and various ecotourism certification programmes have been established in an attempt to differentiate these (Rainforest Alliance, 2012). Examples include the Botswana Ecotourism Certification programme (TIES, 2013) and private trust initiatives such as The Long Run Initiative (LRI, 2014) of the Zeitz Foundation that recently developed guidance for sustainable management of tourism within private reserves through their Global Ecosphere Retreats® Standard– GER (LRI, 2014) which involves five assessment categories and a series of criteria for each category focused on the 4Cs of Conservation, Community, Culture and Commerce.

In sum, the private sector can be a strong partner in conservation to complement, but not substitute, public protected areas. Common to these efforts is making the economic benefits of conservation more tangible and explicit, and thus giving protected areas the value they deserve. The recent IUCN publication 'The Futures of Privately Protected Areas' (Stolton et al., 2014) has begun to develop a framework that needs to be built on by way of developing good practice guidance for private reserves.

3.2.3 Developing and Operating Tourism in Protected Areas

When it comes to developing and operating tourism, government-managed protected areas can either do this themselves, hand this task over to tourism specialists in the private or public sectors, or do some tasks themselves while handing over other tasks.

There are advantages and disadvantages with these options. First of all, while government-managed protected areas are able to operate and develop tourism when levels are low, tourism is not their main expertise or the focus of most protected area administrations and managers. In order to handle greater levels of tourism themselves, protected areas need to invest in the necessary expertise to be able to manage tourism effectively and sustainably. Some protected area administrations, such as those in South Africa and Kenya, have been very successful in incorporating tourism expertise into their management, and this has the advantage that protected areas are fully in control of tourism and its financial benefits. The risk is that if protected areas do not make a sufficient investment in the necessary expertise, they will not be as effective as they could be in managing tourism, and that benefits obtained through tourism to support conservation may be lower than otherwise.

A further consideration is that if protected areas operate tourism themselves, this may distract from, or in some cases even conflict with, their primary objective of nature conservation. In some countries, such as the United States, national protected area networks are not permitted to operate or market tourism themselves, although they are allowed to establish facilities for tourism that can then be run by the private sector. Other public bodies however, such as local municipalities or destination management organisations, may decide to coordinate with protected areas and to take on marketing of tourism to protected areas.

An alternative is for protected areas to establish some form of arrangement with tourism businesses for management of tourism at specific sites. This has the advantage of ensuring that tourism is operated and developed by tourism specialists, who have the necessary skills, expertise and networks to run tourism successfully, and who are well placed to respond to market demand. It also provides a way for businesses to benefit from the presence of a protected area. However, protected area administrations and managers will need to have access to some expertise in tourism in order to be able to assess whether or not potential partners in the tourism sector are

suitably qualified and have realistic business plans, in order to decide with which tourism businesses to work.

There are complex issues around establishment of suitable contractual arrangements - generally in the form of concessions or lease agreements, or licensing - between protected areas and tourism businesses. Such arrangements need to:

- Ensure that the tourism businesses involved will operate in ways that comply with the protected area's regulations and management objectives, including any access and use fees that may be chargeable to visitors;
- Set out clearly what forms of tourism may take place, in what locations and at what times;
- Define the levels of tourism that are permitted and planned;
- Define the financial commitments that the business will make in terms of investment, as well as payments to the protected area, which will generally include a basic annual fee for the concession or lease, plus additional payments dependent on annual receipts or turnover generated by the business through the concession or lease;
- The duration of the agreement - short durations may limit willingness of businesses to invest, while excessively long durations may make it difficult for protected areas to make adjustments in response to changing economic or environmental conditions, or changing patterns of tourism;
- Set out the mechanisms and conditions for early termination of the agreement, for example, if the tourism business does not comply with relevant regulations, is poorly managed, or performs poorly;
- Address the role of indigenous and local communities in and around protected areas, and the ways in which they may participate in and benefit from tourism operated and developed under the agreement, including through training and employment opportunities;
- Where possible, enhance the protected area's management, and achievement of conservation objectives; and
- Define how the tourism activities under the agreement will be monitored, and establish mechanisms for changing those tourism activities.

The disadvantages are that the protected area does not have direct control over tourism, and that if a tourism business is not successful, or does not comply with the terms of the agreement, this can be difficult to manage, in particular if clear mandates, policies and regulations are not established from the outset. However, tourism businesses operate successfully in many protected areas, and provided agreements are properly framed, any problems that do arise can be dealt with effectively.

There are also issues about how to determine the financial basis for agreements with tourism businesses. For relatively low levels of tourism and agreements, such as annual licences, it may be sufficient for protected areas to set a fee based on an assessment of the value of tourism taking place and of what local tourism businesses are likely to be able to afford. For high value tourism and agreements of significant duration, pricing is more complicated. It is important that protected areas should charge a realistic market rate, as setting charges below this would under-price the value of the protected area for tourism and result in a lower than reasonable income from the agreement - in effect, providing a subsidy to a business for operating in a protected area as opposed to elsewhere. It is important that protected areas obtain advice from specialists in

establishment and pricing of tourism concessions and leases, and to use some form of competitive tendering or auction when establishing such agreements.

A combination of these two main approaches to the operation and development of tourism in protected areas is also possible, for example with a protected area dealing with some of the more basic tasks, while establishing agreements with tourism businesses for more specialist tasks. The same considerations apply as are outlined above.

For many private protected areas, the individuals or organisations who have established them have the tourism expertise needed to directly manage tourism themselves, or if not, are able to obtain access to the necessary expertise. Co-managed protected areas may or may not include private individuals or organisations with the necessary expertise in the tourism sector. If they do not, the same considerations apply to them as to government-managed protected areas.

The situation with community conserved areas is rather different since the community and indigenous groups involved are unlikely to have the experience and networks that are essential for effective management of tourism, and probably also do not have more than basic skills in establishing and operating businesses.

Various structural barriers may limit the ability of poor people and communities to benefit from tourism. These barriers can include (UNWTO, 2010):

- Lack of sufficient skills or education to be successfully employed in tourism
- Lack of links with intermediaries in the tourism value chain (limiting the ability to successfully market goods and services in the tourism sector)
- Lack of sufficient assets to be able to take advantage of potential opportunities from development of tourism
- Lack of secure property rights or land title to those areas providing ecosystem services and natural resources on which their livelihoods depend
- National policies which often unintentionally disadvantage poor people and communities by failing to protect their rights and livelihood assets

These barriers also limit the ability of poor people and communities to develop economic activities based around tourism.

Local communities and indigenous groups therefore will generally need support and capacity building including training, to be able to develop tourism and work with the private sector. Often the most sensible course of action for developing and operating tourism in community-conserved areas will be through concession or lease agreements with private sector tourism operators. As well as addressing the issues that have already been outlined for contracts between government-managed protected areas and tourism businesses, such agreements in community conserved areas need to specify a range of benefits for the communities and groups that are agreeing to tourism development and operations on lands in community conserved areas, that as well as concession or leases fees, include commitments by the operator to train and employ people, from the communities or groups involved, and to respect customary rights and traditions. Agreements with private tourism operators can be a way in which communities and indigenous groups can build up investment in tourism facilities on their land, as well as gain the experience and networks that will enable them to manage tourism directly, if they so wish (e.g. at the end of the agreement

period). Tourism-related capacity building for community conserved areas can also be achieved through partnership with NGOs. Box 3.2 illustrates a notable example from India. More discussion and best practice examples on this topic are provided in Chapter 8.

Box 3.2. Community-based tourism and conservation in Thembang Bapu Community Conserved Area, India



Training programme for community members (Left). Villagers from Thembang with WWF team members (Right). © WWF India

Several hundred thousand Indigenous Peoples' and Community Conserved Territories and Areas (ICCAs) exist across the world, many of them the world's oldest conservation sites, some much newer; together these may cover as much or more of the world's surface (~14%) than that covered by formal protected areas (Kothari et al., 2012). ICCAs have been found to have generated substantial economic livelihoods and benefits for local people while maintaining conservation status (Kothari, 2008), though these benefits are yet to be systematically documented.

Several Community Conserved Areas (CCAs) have been set up in the state of Arunachal Pradesh situated in Eastern Himalaya, one of the global biodiversity hotspots endowed with diverse landforms, ethnic groups and resources. These CCAs are situated in Unclassed State Forest (USF) that cover around two-thirds of the state, and have been traditionally under the control of local communities and governed by their customary laws.

WWF-India engaged with local 'Monpa' community in the western part of Arunachal Pradesh to (1) secure the forests under community jurisdiction and (2) explore and implement appropriate livelihood activities to boost community efforts in conservation. Assessments revealed that community-based tourism (CBT) was a promising livelihood option that would encourage conservation actions. Thus efforts were made to develop a CBT plan and train the community to run the CBT programme well. The 'Monpa' is one of the primitive tribes of Tawang and West Kameng districts in Arunachal Pradesh with a population of 50,000. In 2005 the *Monpas* of Thembang village, West Kameng district began by setting up a Thembang Bapu Community Conserved Area (TBCCA) on 18 sq. km. from forests under their control. The TBCCA has now expanded to cover a massive 635 sq. km. area encompassing dense forests, snow-capped mountains and high altitude lakes that provide a secure habitat for several rare species of flora and endangered mammals including Red Panda (*Ailurus fulgens*), Snow Leopard (*Uncia uncia*), Marbled Cat (*Pardofelis marmorata*), Himalayan-Black bear (*Ursus thibetanus*), Serow (*Capricornis*), Takin (*Budorcas taxicolor*) and Red Goral (*Naemorhedus baileyi*). (Mishra et al. 2006)

The Thembang CBT programme comprises four home-stay units(10 tourists maximum), home restaurants, a cultural troupe to showcase *Monpa* art and culture, organised treks through the CCA, and provision of trained service providers (guides, cooks, porters, etc.). The community has sought to include as many families as possible so as to ensure spread of benefits from the programme. The Thembang CBT programme is now in its seventh year with a turnover increasing four-fold from the time of inception, to US\$ 15000 in 2013.

The local community has initiated a process to notify one third of TBCCA as Community Reserve (CR) under the provision of the Amended Wildlife (Protection) Act, 1972. The CR notification will further augment the protection mechanism of community forests. The Arunachal Pradesh government has solicited support from WWF-India for the development of home-stay guidelines.

3.2.4 *The Role of Government Institutions*

Although tourism is primarily an activity carried out by private sector enterprises, Governments have a crucial role to play in the development and management of tourism and in making it more sustainable (UNWTO & UNEP, 2005). A primary function of government - at national and local levels - in fostering more sustainable tourism is to create conditions that enable or influence the private sector to operate more sustainably, and influence patterns of visitor flows and behaviour so as to maximise the benefits and minimise the negative impacts of tourism.

At the government level, a wide range of institutions may be involved in both tourism issues and conservation. Relevant Ministries include those dealing with planning and land use, economic development, environment, rural development, and management of natural resources (e.g. forests, marine resources, water), as well as those responsible for protected areas and for tourism. In some countries, some of these areas - such as Environment and Tourism - may be combined within a single Ministry. Other tiers of government, especially at State, Provincial, and local levels will also be involved in dealing with at least some aspect of these issues.

Many governments are also actively engaged in supporting tourism through marketing, information services, and education, often through joint public-private frameworks. These functions need to continue and to be more closely aligned with sustainability objectives (UNWTO & UNEP, 2005).

It is important to ensure that there is a coherent approach to policy development and implementation, and to decision-making at all levels of government in relation to tourism and biodiversity generally, as well as to tourism in protected areas. In order to provide a coherent approach to policy, planning and decision-making on tourism in or around protected areas, these and other relevant institutions need to ensure that they coordinate with each other. Importantly, national biodiversity strategies and action plans should include consideration of tourism issues, and tourism plans should likewise include full consideration of biodiversity issues (CBD, 2004b). Existing documents, strategies, plans and policies should be revised and amended to that effect as applicable.

At the same time, Government institutions also need to be able to involve and coordinate with those people and groups that are or may be affected by tourism, protected areas and nature

conservation, and particularly indigenous and local communities, minorities and disadvantaged groups; there can be conflicts between the interests of these groups, tourism development and protected areas. Such conflicts are likely where the rights of indigenous and local communities, minorities and disadvantaged groups to land and resources that they rely on for their livelihoods are threatened or ignored by tourism and/or conservation activities (UNWTO, 2010).

Governments can support indigenous and local communities, minorities and disadvantaged groups in relation to tourism, protected areas and conservation, by giving legal recognition to the rights of these individuals and groups, and by enabling communities to decide how they want to use the land that they own, so that they can balance land used for traditional activities with other uses such as tourism linked to conservation. With support from Government institutions and other organisations, these communities can establish leasehold and concession agreements with tourism operators. Such agreements need to ensure that the communities get a fair share of the economic benefits from tourism through lease and concession fees, opportunities for employment and training, and profit sharing. These agreements also need to set out the type and scale of tourism that is permitted by the communities concerned. This approach has been shown to be successful in bringing together communities, conservation and tourism in a mutually supportive and beneficial framework (see Chapter 4). The lessons from this approach are widely applicable, provided Governments put in place the necessary policies and legislation, and provide training and support to enable the approach to be implemented effectively.

3.2.5 Applying the Precautionary Principle

Demand for tourism at any site can fluctuate significantly depending on factors that influence a tourist's choices of place to visit, and affected by the complexity of the tourism sector. Because tourism can cause harm to protected areas (see Chapter 4) and may conflict with conservation objectives, particularly where tourism exceeds levels that can be accommodated and managed sustainably, it is important to apply the precautionary principle. This principle, which is incorporated in the Convention on Biological Diversity and other international agreements of importance for conservation and protected areas, states that where knowledge is limited and there is lack of certainty regarding the threat of a serious environmental harm, this uncertainty should not be used as an excuse for not taking action to avert that harm. Applying this principle is fundamental for anticipation, avoidance and mitigation of threats to the natural environment in both policy and decision-making, including for governance of tourism in protected areas. The precautionary principle and its application are considered in more detail in Chapter 6.

3.3 Legislation

Tourism in protected areas is generally subject to a wide range of legislation and regulations related to land-use planning, coastal zone and marine areas management, protected area designation and management, environmental assessment, business establishment and licensing, building regulations and standards for tourism.

Key legal components for sustainable tourism in protected areas include (UNWTO & UNEP, 2005):

- Legislation that enables and supports the sustainability of tourism and gives authority to act.

- Clear and enforceable regulations, supported by licensing as appropriate, where this is necessary to ensure important minimum standards.
- Measures, such as incentives and voluntary schemes backed by legislation, to raise sustainability performance above the level of minimum standards.

In particular, it is important that legislation should provide protected area administrations and managers with clear authority to control, plan, manage and monitor tourism, and to take enforcement action where necessary. This should include authority to limit the scale, type and timing of tourism, or to totally exclude tourism, as part of management of protected areas to ensure their conservation and sustainable use.

There are a number of aspects of the development, operation and management of tourism that should be controlled through legislation and regulations in order to protect the environment, communities, visitors and the functioning of business (UNWTO & UNEP, 2005). These include:

- The location and nature of development, covered under planning and development regulations.
- Rights and conditions for employees.
- Visitor health and safety, such as food hygiene and risk from fire and accident.
- Trading practices and ability to trade.
- Serious environmental damage (e.g. caused by discharges to air and water).
- Fundamental nuisance to local communities, such as excessive noise.
- Use of water and other scarce resources.
- Serious misconduct and exploitation by visitors of local people and vice versa (e.g. child prostitution).
- Right of access to services and land.

These aspects are of universal concern and should therefore be covered by a basic legal framework in each country applicable to all types of tourism in all locations. There may also be situations where further specific regulations are needed, relating to particular activities or locations, including protected areas where appropriate.

It is important to understand how the existing legislation applies to tourism in protected areas, and whether it enables tourism to be managed, controlled and developed effectively within protected areas. As a starting point, protected area administrations can benefit from preparing a review of all legislation that may apply to tourism in protected areas, its effectiveness and enforcement. This can then be used to identify gaps that may need to be addressed for example, by revision of - or the development of additional - legislation, by improving enforcement, or by provision of additional capacity through resources and staff training.

In particular, it is important for reviews of legislation to consider the rights of indigenous and local communities as well as resource management issues, including assessment of the effectiveness of any provisions for resource management, access, and/or ownership by communities, especially indigenous and local communities in relation to tourism development or operations on lands and waters traditionally occupied or used by them. It is also important to address legally established rights of indigenous and local communities and to enable these groups to make decisions about tourism development and activities, amongst other forms of development and activities, in these areas (CBD, 2004b).

Table 3.5 lists areas where legislation may apply or be relevant to tourism in protected areas. These include legislation on land use planning, environmental regulations including those for environmental impact assessment, and the provision of infrastructure and environmental services (UNWTO & UNEP, 2005). In addition, tourism activities also need to comply with relevant employment and social legislation, as well as with legislation concerning the rights of indigenous and local communities.

Because of the wide range of legislation that may apply to tourism in protected areas in any country, there can be some uncertainty as to how to meet legal requirements, especially if different pieces of legislation appear to be incompatible when applied to tourism in protected areas. While it has previously been noted that policies and governance must be consistent with laws and legal agreements, in some cases it may prove necessary to harmonise or update existing legislation, or to enact new legislation, in order to provide a clear legal framework for sustainable tourism, including development of tourism, in protected areas. Furthermore, to ensure that the rights of indigenous and local communities are respected in practice, legislative action may often be required to allocate land titles to these groups for the land that they traditionally occupy and/or on which their livelihoods are based, and to recognise traditional and customary rights.

Table 3.5. Examples of areas where legislation may apply or be relevant to tourism in protected areas.

- Effective enforcement of existing laws, including the participation of all stakeholders;
- Approval and licensing processes for tourism development and activities;
- Controlling the planning, siting, design and construction of tourism facilities and infrastructures;
- Land rights of indigenous and local communities;
- Management of tourism in relation to biodiversity and ecosystems, including vulnerable areas;
- Application of environmental assessment, including assessment of cumulative impacts and effects on biodiversity, to all proposed tourism developments, and as a tool to develop policies and measure their impacts;
- Setting national standards and/or criteria for tourism that are consistent with overall national or regional plans for sustainable development and national biodiversity strategies and action plans;
- Environmental quality and land-use criteria in and around tourism sites;
- Development of a decision-making process with environmental and cultural sustainability guidelines for new and existing tourism development within the designated goals and objectives of the site's different zones and within the limits of acceptable change;
- Integrated land-use management;
- Ensuring inter-linkages between tourism and cross-cutting issues, including agricultural development, coastal zone management, water resources, etc.;
- Mechanisms to resolve any inconsistencies between policy objectives and/or legislation in a manner that takes into account the interests of all stakeholders;
- Application of economic instruments, including tiered user fees, bonds, taxes or levies, for the management of tourism and biodiversity;
- Creating incentives for sustainable tourism development through economic mechanisms;
- Supporting private sector voluntary initiatives, such as certification schemes and providing opportunities for the private tourism sector to contribute to management initiatives through direct donations, in-kind services, and other voluntary initiatives;
- Avoiding tourism development or activities outside those areas set out in the objectives;
- Monitoring, control of and provision of information on activities related to collection and trade of

biological and related cultural resources within tourism sites.

Sources: CBD, 2004b and UNWTO & UNEP, 2005.

3.4 Policies

Policies set out aims, plans and modes of action for an organisation. For protected areas, policies will be set in legislation that covers, for example, national objectives and plans for conservation, and the constitutional and administrative arrangements for protected areas established and managed by public authorities. Policies for tourism in protected areas, whether in the public or private sectors, also need to comply with the full range of legislation in force in the country where they are located, including obligations in international agreements to which a country may be party, such as human rights agreements, the World Heritage Convention or the Ramsar Convention. In this respect, the role of protected areas is to implement policies that are defined in national legislation and relevant international agreements.

Protected area administrations in any country play an important role in the national policy-making process. In particular, protected area administrations have experience gained from day-to-day management of protected areas, as well as knowledge of effective practices for protected area management both nationally and internationally. Using this experience, protected area administrations are able to advise governments on the implementation of existing legislation on protected areas, and to promote changes in national policy and legislation that would help to improve the overall management of protected areas, including issues related to tourism in protected areas.

Similar considerations apply to tourism. Most countries have some legislation on tourism, along with national strategies and policies for tourism, and have allocated responsibilities for tourism to specific ministries and departments. Most countries also have a National Tourism Organisation that operates semi-autonomously from government and which has responsibilities that include tourism marketing and branding, development and implementation of policies to spread tourism in different national regions, and strengthening skills and expertise within the tourism sector. Policy choices are often made in consideration of the seasonality and sensitivity of domestic and international tourism markets. The mandates of these organisations may or may not promote protection of the natural environment. Global tourism-related initiatives, such as the establishment of the Global Sustainable Tourism Council (GSTC), can motivate nations or protected area agencies to voluntarily formulate and implement policies that help them meet the evaluative criteria and therefore maintain their market recognition of sustainable tourism operations (Box 3.3).

Box 3.3. Global Sustainable Tourism Council: Common Criteria for Conservation and Poverty Alleviation



The Global Sustainable Tourism Council logo. © GSTC

The Global Sustainable Tourism Council (GSTC) was established with the full support of UNWTO, the United Nations Environment Programme (UNEP), and the United Nations Foundation in order to harmonise the more than 130 sustainable tourism standards and guidelines from around the world in a form that recognises their individuality, but ensures that the minimum requirements for the sustainability of tourism are met in all countries (GSTC, 2014; UN Foundation, 2014). UNWTO and UNEP are permanent members of the board of directors, which includes representation from every continent, private sector, and relevant NGOs. The GSTC is an international non-governmental organisation, with its main office based at the UNWTO headquarters in Madrid. The GSTC is a membership based and funded organisation. Its membership base is composed of over 200 members representing all stakeholders of the Travel and Tourism sector from all continents (Harms, 2013).

In collaboration with representatives of the tourism industry and sustainability experts, the GSTC reviewed over 60 existing certification and voluntary criteria implemented throughout the world, including the United Nations World Tourism Organisation's Indicators of Sustainable Development, and gathered feedback from over 2,000 stakeholders. Through this process, the GSTC developed two sets of voluntary standards: the Global Sustainable Tourism Criteria for Hotels and Tour Operators and the Global Sustainable Tourism Criteria for Destinations. Adaptable to local conditions, the criteria promote minimum requirements businesses and destinations should strive for to foster conservation and poverty alleviation. Organised into four areas, the GSTC Criteria include standards for sustainable planning and management, and maximizing benefits and minimizing negative impacts socioeconomically, culturally, and environmentally.

The GSTC Criteria aim to achieve global consensus through utilizing the Criteria as a best practice baseline. The GSTC Process was developed for sustainable tourism standards and certification programmes and incorporates two stages: GSTC-Recognition and Accreditation. Recognition involves a sustainable tourism standard that meets the minimums outlined in the GSTC Criteria (e.g., Green Globe). GSTC-Accredited is the most comprehensive step available to certification programmes. Once the certification programmes receive GSTC-Accredited status they may begin certifying businesses. GSTC-Accredited status is the most comprehensive and rigorous of the three stages.

In 2014, the GSTC launched its Destination Partner Programme in order to help destinations benefit from these guidelines. The programme consists of a menu of options for destinations to use to improve their business practices. These options are offered in collaboration with *Sustainable Travel International*, an NGO with expertise in the design and implementation of sustainable tourism solutions for destinations, through a non-exclusive partnership.

Destination Partner Programme options include training, assessment, and networking:

- **Training**—Destinations learn how to implement the GSTC-Criteria and Indicators. Curriculum includes hands-on learning and group-discussion, and provides participants with access to

the GSTC- Destination Matrix for self-assessment purposes. Outcomes of the training include improved destination planning and management strategies, preparation for a GSTC-Evaluation.

- **Assessment**—Destinations which are already implementing sustainability practices will be interested in a destination assessment, which provides them with a trained destination specialist and an analysis of their readiness and performance on the GSTC Criteria and Indicators. The assessment outlines good practice, areas for improvement, and recommendations to consider implementing. Fourteen destinations worldwide have participated in this programme, and many of them have gone on to implement new sustainability priorities and plans as a result.
- **Global Networking**—GSTC and Sustainable Travel International both offer networking opportunities for destinations. Now in collaboration, GSTC's Destination Membership and Sustainable Travel International's Sustainable Destination Leadership Network (SDLN) are being offered to destinations with one package price, providing destinations with unparalleled opportunities for global networking and collaboration.

The GSTC Criteria have been recognised by UN organisations such as the United Nations Environmental Programme, and the United Nations World Tourism Organisation, and has been adopted by several destinations, accommodations, and tour operations through certification programmes and the Early Adopter and Destination Partnership programmes. Within the first four years of operation, the GSTC has grown to 122 diverse member organisations and as of March 2014, has formally recognised 19 sustainable tourism standards (GSTC, 2013). Some government agencies, like the Costa Rica Tourism Board and the Malta Tourism Authority, have achieved GSTC-Recognised status for their certification programmes, indicating the potential influence of the GSTC Criteria on tourism policy. For example, in 2010, over 120 Mayors in cities across the United States signed an MOU to utilise the GSTC Criteria as guidance for tourism development in their cities.

Policies for tourism are a significant factor that affects tourism to protected areas. These policies include marketing and branding, as well as management of the tourism sector and support for tourism businesses. For some countries, conservation and protected areas are important in national marketing and branding. Because of the influence that tourism policies have on tourism in protected areas, coordination between policies for tourism in protected areas and national tourism policies is highly desirable.

Taking policy goals for protected areas and for tourism together, the main areas of policy for tourism in protected areas generally include the following:

- Assist poverty alleviation and attainment of MDGs
- Improve livelihoods
- Contribute to local development
- Generate jobs
- Generate revenues to help support conservation
- Increase foreign exchange earnings and GDP
- Provide recreation and visitation for domestic tourists
- Raise awareness about value of conservation
- Create value from sustainable use of natural resources
- Raise the profile of the country internationally

Box 3.4 provides an example in Botswana where multiple policies were implemented in support of wildlife-based sustainable tourism, including benefit sharing, wildlife protection and concession bidding requirements.

Box 3.4. Supporting sustainable tourism in protected areas with policy: A case study of Botswana



African buffaloes (*Syncerus caffer*) in a Botswanan protected area. © Ralf Buckley

Tourism in Botswana has experienced rapid growth since the country's independence from Great Britain in 1966, growing from nearly non-existent to comprising the second largest economic sector (Mbaiwa, 2005). Located in southern Africa, Botswana is home to parts of the Kalahari Desert, grasslands, savannas and the largest inland delta, the Okavango Delta. The Okavango Delta is also the largest RAMSAR site at 6.8 million hectares. Tourism in Botswana is predominately nature-based, with tourists attracted by diverse wildlife and scenic landscapes.

Botswana has developed and enacted several policies and programmes striving for sustainable tourism best practices, including benefits to local communities and the protection of natural resources. The Tourism Policy of 1990 strives to connect local communities with the benefits derived from wildlife-based tourism, including rural employment opportunities and acquisition of tourism concessions. Concerns regarding tourist impact on natural resources, especially wildlife, prompted the formation of the Tourism Act of 1992 and the Tourism Regulations of 1996. Both promote low volume, high value tourism enterprises, which encourage lower levels of visitation capable of generating high revenues. These policies are particularly influential for photographic tourism, which is associated with larger tourist groups and increased levels of infrastructure (Hachileka, 2003). Under the policies, tourism enterprises are categorised, licensed and graded based on quality standards. Categorization also depends on protocols outlined in the Wildlife Conservation and National Park Act (WCNPA) of 1992 that not only established national parks, game reserves, controlled hunting areas (CHA) and wildlife management areas (WMA), but also outlines guidelines for the licensing of professional guides and hunters. While the low volume, high cost policy has created concerns regarding the growth of foreign-owned enclave tourism, the policy has encouraged the conservation of biological diversity (Magole & Magole, 2011).

Concession contracts, awarded for an average 15-years duration, require addressing environmental (e.g., infrastructure development, monitoring plans, risk analysis, waste management) and social

(e.g., capacity building, community assessment, local employment, community revenue share) impacts. The bidding process for third-party operation and management of public campgrounds in some national parks and game reserves also requires an Environmental Impact Assessment by the bidder during development and operational phases as well as monetary performance guarantees at the signing of the agreement (Wyman et al., 2011).

As a key tenant of sustainable tourism, community participation and protecting the interests of local communities is further supported through the National Ecotourism Strategy (NES) of 2002 and Community Based Natural Resource Management (CBNRM) Policy of 2005 (Thakadu, 2005). The NES emphasises ecological and economic sustainability and proposes awards for tourism businesses making substantial contributions to conservation (IUCN, 2002). As implemented with respect to the nature-based tourism, CBNRM promotes that people living within or near protected areas can work to conserve and use them while still deriving benefits. Following similar implementations of CBNRM in neighbouring Zimbabwe (e.g., CAMPFIRE) and Mozambique, CBNRM in Botswana has merged the goals of conservation and rural development. Devolution of management authority is a key underpinning to CBNRM in Botswana and has resulted in the formation of several community trusts recognised as legal entities. For communities living in CHA or WMA, trusts could lease the area (until 2014), enter legal contracts with the private sector, and receive grants (Hachileka, 2003). For example, the Chobe Enclave Conservation Trust (CECT), a collaboration between five villages near Chobe National Park and Chobe Forest Reserve, is the oldest trust in Botswana. Formed in 1993, the CECT has increased total annual revenues generated from joint venture contracts by 4,000% between 1993 and 2000 (Jones, 2002). In an effort to protect wildlife populations, the government instituted a ban on commercial hunting in 2014, with designated hunting zones converting to photographic areas. Community concessions within the Okavango Delta have transitioned to photographic tourism and increased lease fees to compensate for the loss of hunting revenue. For communities with lower game numbers where photographic tourism alone may be less economically viable, the government is looking to other types of tourism to diversify the tourism markets (C. Brooks, personal communication). Ecotourism, for example, is being promoted with the development of the Botswana Ecotourism Certification System run by Botswana Tourism (TIES, 2013).

The existence of sustainable, nature-based tourism policies has not always translated to enforcement of best practices in reality. The implementation of CBNRM is not without challenges and concerns have been raised with respect to the levels of success achieved. Challenges include the ability of grassroots conservation-based organisations to compete with private, and often foreign-owned, commercial enterprises, marginalisation of certain groups and the amount of revenue generated for the community (Blaikie, 2006). The ban on commercial hunting may also lead to new conservation challenges as concessions adapt to diversified tourism activities. Botswana has, however, taken steps towards recognizing the importance of impacts associated with protected area tourism. Studies have found CBNRM to contribute income to support community initiatives, enhance social capital, and successfully co-management of protected areas (Mbaiwa & Stronza, 2011). Additionally, since the 1970s, new policies have led to large areas of land being placed in conservation status to safeguard seasonal wildlife migration, protecting both ecological resilience and markets for sustainable and community-driven tourism enterprises in years to come.

3.4.1 Key Policy Issues for Sustainable Tourism in Protected Areas

While the IUCN categories (Table 1.1) are based upon the primary objective of management for a site, most sites are divided into various zones, which can include core zones which are the focus for primary conservation objectives and management, and buffer zones which are designed to provide an interface between a core zone and prevailing land uses outside of the surrounding buffer zone. The conservation objectives and associated management requirements are generally different for different zones within a protected area. Furthermore, the zones within any protected area, and their associated potential for tourism activities, may cover several types of management. For example, a category I protected area that is managed mainly for science or wilderness protection in its core zone, may be surrounded by a buffer zone where some tourism is possible and even desirable as a sustainable use of natural ecosystems in the buffer zone.

The same questions in relation to tourism arise for all categories of protected areas:

- How much tourism can take place within and/or around the protected area?
- Where can tourism take place within and/or around the protected area?
- When can tourism take place within the protected area?
- What types of tourism can take place within the protected area?
- How will local and indigenous communities, as well as other stakeholders, be affected by tourism within and/or around the protected area?

In developing policies to answer these questions, protected area managers for any protected area category will need to consider:

- Conservation objectives and plans for each site,
- Any existing tourism and its positive and negative effects on each site;
- Visitor management measures that could be implemented to reduce or avoid any adverse impacts from tourism on each site;
- Resource requirements necessary to be able to manage tourism on each site effectively;
- Demand (actual and potential) for tourism and whether it is likely to increase, decrease or remain the same at each site;
- Views of local and indigenous communities, and other stakeholders.
- Acceptable siting, construction practices and infrastructure

Table 3.6 shows examples of specific policy goals for protected areas in relation to tourism. It is also of particular importance to consider the way in which any adverse impacts from tourism could be reduced through appropriate management measures at a site (Chapter 7-8), and the resources that would be necessary to implement these, as well as the overall costs and benefits of tourism at a site. This should include indirect as well as direct costs and benefits. It is equally important to understand how tourism may change at a site in future; if demand is falling, then investment in developing tourism activities or facilities may not be appropriate, but if demand is rising, this may be essential.

Table 3.6. Examples of policy goals for protected areas in relation to tourism

- | |
|--|
| <ul style="list-style-type: none">• Maintenance of the structure and functioning of ecosystems;• Sustainable tourism compatible with biodiversity conservation and sustainable use;• Fair and equitable sharing of benefits of tourism activities, with emphasis on the specific needs |
|--|

of the indigenous and local communities concerned;

- Integration and interrelation with other plans, developments or activities in the same area;
- Information and capacity-building;
- Poverty reduction, through the generation of sufficient revenues and employment to effectively reduce threats to biodiversity in indigenous and local communities;
- Protection of indigenous livelihoods, resources and of access to those resources;
- Diversification of economic activities beyond tourism to reduce dependency on tourism;
- Prevention of any lasting damage to biological diversity, ecosystems, and natural resources, and of social and cultural damage, and restoration of past damage where appropriate;
- Supporting the effective participation and involvement of representatives of indigenous and local communities in the development, operation and monitoring of tourism activities on lands and waters traditionally occupied by them
- Zoning and control of tourism developments and activities, including licensing and overall targets for and limits to the scale and type of tourism, to provide a range of activities for user groups that meet overall visions and goals;
- Empowerment through participation in decision-making;
- Access by indigenous and local communities to infrastructure, transport, communications and healthcare provisions laid on for tourists;
- Increased safety for indigenous and local communities;
- Increased social pride and sense of ownership;
- Control of tourism development and activities including licensing and clear indication on the limits to the scale and type of tourism development.

Overall protected areas need to find a balance between tourism development, conservation of biodiversity and ecosystem protection, and economic and social development, while minimizing negative social and environmental impacts from tourism. Specific policy goals should contribute to achievement of these overall goals.

Sources: CBD, 2004b; UN General Assembly, 2012; and UNWTO & UNEP, 2005.

The same questions and considerations apply for groups and networks of protected areas, and for national decision-making on tourism in and around protected areas, as for individual sites. Conservation objectives and plans, negative impacts of tourism, and resources requirements for effective tourism management may all put clear limits on the scale, type, location and timing of tourism within or around any protected area; but beyond the limits imposed by these factors, the practice of good governance includes ensuring that decision making includes the participation of all stakeholders in decisions that affect them.

3.5 Conclusions and Guidelines

The following are general guidelines related to governance, legislative and policy issues for sustainable tourism in protected areas.

- Implementation of governance, legislation and policy should recognise the large variations that there can be in tourism levels and types between protected areas. They need to be sufficiently flexible so that their implementation can be tailored to the circumstances of each site.

- Governance for sustainable tourism in and around protected areas should respect, and be consistent with, other local to international legislation, policies, and agreements.
- Governance, legislation, and policies should be internally consistent.
- Governance for sustainable tourism should follow internationally respected principles of legitimacy and voice, direction, performance, accountability, and fairness and rights.
- Governance should respect the rights of indigenous peoples and local communities.
- Governance for sustainable tourism should be adapted to, and supportive of a particular type of, or zone within, any protected area and its conservation objectives.
- Decisions about options for developing and operating sustainable tourism within protected areas should consider the advantages and disadvantages of all possible arrangements.
- Stakeholders should recognise that governments have a crucial role to play in the development and management of sustainable tourism in protected areas (and vice-versa).
- Legislation should be created to establish clarity about the control, planning, management, and monitoring of sustainable tourism in protected areas.

Chapter 3: coordinator: Richard Tapper. Section contributors: 3.1-3.5 (Richard Tapper). Case box contributors: B3.1 (Mohammad Rafiq, Sibylle Riedmiller and Delphine M. King), B3.2 (Kamal Medhi and Rajiv Bhartari), B3.3 (Kelly Bricker and Chelsey Walden-Schreiner), B3.4 (Chelsey Walden-Schreiner).

4. Positive Impacts of Protected Area Tourism

4.1 Introduction

Tourism in protected areas can have a variety of positive impacts, on the protected areas themselves, for the people, communities and economies that surround them, and also for the tourists that visit them. The types of positive impacts are very broad in their range, and include environmental, economic, and social/community benefits. Table 4.1 provides a summary of these major benefit categories. This chapter outlines these benefits and illustrates with international examples. Negative impacts of tourism in protected areas are also recognised and discussed in next chapter. It is important to note that the word 'impacts' is a neutral term by definition, as impacts perceived as positive by one stakeholder group can be seen as negative by another group. In the discussion in Chapters 4 and 5, and indeed throughout the book, it is crucial to bear in mind the question of who decides what impact is positive or negative.

Table 4.1. A summary of potential benefits of tourism in protected areas

Type of Benefits	Examples
<i>Economic</i>	<ul style="list-style-type: none">• Increases jobs for local residents• Increases income: for the protected area, for businesses, and for local people• Stimulates new tourism enterprises, and stimulates and diversifies the local economy• Encourages the local manufacture of goods and services• Obtains new markets and foreign exchange• Generates local tax revenues• Enables employees to learn new skills
<i>Social/Community</i>	<ul style="list-style-type: none">• Improves living standards for local people• Encourages local people to value their local culture and environments• Supports environmental education for visitors and local people• Establishes attractive environments for destinations, for residents as much as visitors, which may support other compatible new activities (e.g. hunting, service or product-based industries)• Improves intercultural understanding• Encourages the development and conservation of culture, crafts and the arts• Encourages people to learn the languages and cultures of foreign tourists• Promotes aesthetic, spiritual, health, and other values related to well-being• Physical health improvements through recreational exercise (e.g. walking, climbing, cycling)• Contributes to reducing mental stress and fatigue• Provides opportunity for social contact• Spiritual health improvements, by providing opportunity for contemplation and reflection• Contributes to social pride
<i>Environmental</i>	<ul style="list-style-type: none">• Educates the general public about the need to protect ecological processes, soils and watersheds

	<ul style="list-style-type: none"> • Educates the general public about biodiversity conservation (including genes, species and ecosystems) • Transmits understanding about cultural and built heritage values and resources • Creates economic value for natural resources and protects resources which otherwise have no perceived value to residents, or represent a cost rather than a benefit • Transmits conservation values, through education and interpretation • Helps to communicate and interpret the values of natural and built heritage and of cultural inheritance to visitors and residents of visited areas fostering attachment to and greater appreciation of protected areas and conservation in general • Supports research and development of good environmental practices and management systems to influence the operation of travel and tourism businesses, as well as visitor behaviour at destinations • Improves local facilities, transportation and communications • Helps develop self-financing mechanisms for protected area operations and management
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Source: Adapted from Eagles et al., 2002; Maller et al., 2009

Multiple forms of benefit can take place in one tourism destination. Box 4.1 below illustrates one example from the Volcanoes National Park in Rwanda.

Box 4.1. Benefits from mountain gorilla tourism in the Volcanoes National Park, Rwanda



A guided mountain gorilla tour in Volcanoes National Park (Left). © Anna Spenceley. One of the mountain gorilla social groups observed by tourists (Right). © Mei-Yee Yan

In the 160 km² Volcanoes National Park of Rwanda, the endangered Mountain Gorilla is the main tourist attraction. Around 20,000 gorilla viewing permits are sold each year, mainly to international tourists. In Rwanda, nature-based tourism has been enthusiastically supported by government and conservationists, and is acknowledged to have a crucial role in the success of mountain gorilla conservation.

However, Rwanda has some of the highest densities of people in Africa, with 820 people per km² in some areas, and people living around the VNP are extremely poor farmers. As a consequence, mountain gorillas are severely threatened by agricultural conversion and illegal resource use (e.g. snares).

Some of the benefits from mountain gorilla tourism include:

- *Economic:* Employment opportunities are offered to local people as guides, trackers and anti-poaching guards (including for ex-poachers).
- *Social:* Between 2005 and 2009 social development projects around the park included development of 10 schools with 56 classrooms, to provide 32 water tanks to local people, environmental protection projects, (e.g. tree planting, soil erosion control), and food security initiatives. This was financed through a revenue sharing scheme whereby 5% of tourism revenues from the park fees are used in community projects around the protected area.
- *Environmental:* Mountain gorilla population growth of 1.1% in areas frequented by tourists, compared with lower growth rates in the Democratic Republic of Congo, which has lower numbers of tourists, patrols and researchers.

Sources: Bush et al., 2008; Fawcett, 2009; Nielsen & Spenceley, 2011; Plumptre et al. 2004; Uwingeli, 2009

4.2 Economic Benefits

This section of the chapter on economic benefits of tourism in protected areas addresses the following themes:

- How tourism generates economic benefits;
- Use of tourism revenues by protected area authorities;
- Influence of the private sector; and
- Local benefits and attitudes to protected areas:

4.2.1 How tourism generates economic benefits

Tourism also generates economic benefits including through income, employment, encouraging entrepreneurial activities, contributing to foreign exchange earnings and the balance of payments (Mathieson & Wall, 1982). Tourists spend considerable money in protected areas or in activities associated with them through entrance fees, accommodation, activities (e.g. guided drives and walks), and when they buy food, drink and crafts. This money can be accrued by different actors, including governments, protected area agencies, travel agents, tour operators, accommodation providers, retailers, service providers, and members of local communities. In the case of partnerships, two or more of these actors may benefit (e.g. as in the case of accommodation joint-venture partnerships between the private sector and a host community entity).

Intermediaries can also benefit financially from these products and services, including: (1) tour operators, who are paid for putting a package of accommodation, travel, and activities together; (2) travel agents or e-booking sites, who charge for transacting between the tourist and the service or product provider; (3) providers of products and services to tourism enterprises, tourists and retailers; (4) retailers, who sell craft, or food that is produced by others. Examples of the range of sources income from tourism in protected areas are summarised in Table 4.2.

A positive feedback loop, or a Virtuous cycle, needs to be encouraged (see Figure 4.1). Tourism revenues can respond to demand, or limit demand (where over visitation may threaten biodiversity), and appropriate proportions of the income should be invested in the management of the destination (Drumm, 2007).

Table 4.2. Sources of income from tourism in protected areas

Direct Spending by Tourists	Indirect Spending
Booking fees	Uniform manufacture
Transport (buses, automobiles, airplanes, boats, parking)	Supplies, building materials
Park entrance fees	Furniture manufacture
Accommodation (operated by PA agency or the private sector in PAs)	Craft for décor
Guiding services and education fees	Water
Food and drink (restaurant and shops, game meat)	Electricity
Information (guide books, films, books, videos)	Waste disposal
Recreation service fees, special events and special services	Concession fees, paid by the private sectors to provide services to visitors.
Equipment rental	Royalties, from the sales of branded products
Merchandise (equipment, clothing, souvenirs, craft, community-based wildlife and cultural products)	Taxes
Fuel (wood, charcoal)	
Voluntary donations, carbon offsets	

Sources: Adapted from DFID, 1998; Drumm, 2007; van Sickle & Eagles, 1998; Eagles, 2014

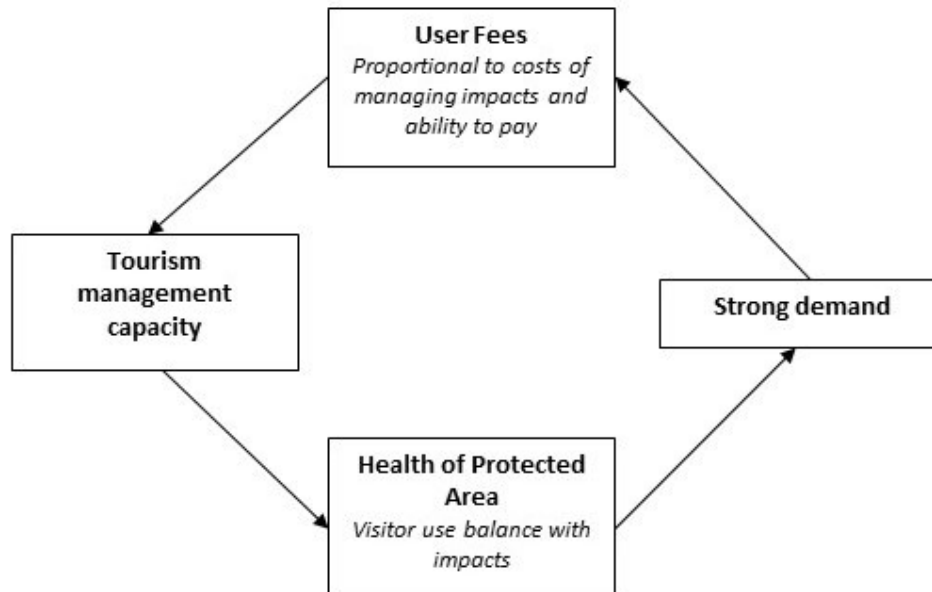


Figure 4.1. Virtuous cycle for tourism impacts and conservation finance. (Drumm, 2007)

The magnitude of economic impact of tourism is governed by a multitude of factors, which include (adapted from Matheison & Wall, 1982):

- The nature of the protected area, its facilities, accessibility, and its attractiveness to tourists,
- The volume and intensity of tourist expenditure in the destination;
- The level of economic development and size of the economic base of the protected area;
- The degree to which tourism expenditures re-circulate within the destination;

4.2.2 Use of tourism revenues by protected area authorities

Protected area agencies can use the revenues from tourist expenditure, and from private sector fees, to finance conservation management activities. For example, concessions leased to the private sector can provide the agencies with considerable income on an annual basis (see Box 4.2 below). The efficient management of these revenues is critical to the level of benefit they can have on conservation. For example, some destinations it has been found that operating profits of protected areas can be eroded by the costs of running large centrally managed protected area headquarters (Aylward, 2004). In response to a drop in government grants in Canada, Ontario Parks increased its tourism income from C\$18.1 m to C\$64.9 m (257%) over a 15 year period, by increasing fee levels in general, establishing price tiers for different qualities of products, and by generating income from additional tourism products and services (Eagles, 2014).

Box 4.2. Revenues accrued by protected area agencies from concession areas in Africa

- US\$58 million from accommodation, canoe trail and houseboat concessions, combined with rentals of shops and restaurants in South African National Parks (2002-12) (SANParks, 2012)
- US\$65,000 annual revenue to the Niassa Reserve management in Mozambique, from 12 concession sites in Niassa Reserve (Rodrigues, 2012).
- US\$30,000 for the state from Etendeka concession, Palmwag Conservancy in Namibia (Thompson, 2008)

4.2.3 Influence of the private sector

The private sector has substantial influence over the extent of economic benefits, through the way in which they decide to develop and operate their business. For example, they can facilitate capital investment in tourism plant, by obtaining financial assistance to develop infrastructure and new enterprises. Local ownership and investment can have higher economic benefits in destinations than where companies are foreign owned, and profits are repatriated (adapted from Mathieson and Wall, 1982). If protected area authorities permit commercialisation, the private sector can develop concessions within protected areas and provide tourists with accommodation, restaurants, tours and opportunities for shopping. So the private sector can increase the range of opportunities for tourists to spend money in a destination, and thereby to improve the economic benefits. Tourism business can also be major local employers (i.e. of managers, chefs, housekeeping staff, guides), purchasers of local services (e.g. maintenance, construction, laundry, transport, security, waste disposal) and local products (e.g. food and drink, craft, furnishings). The private sector can also enter into joint-venture partnerships with local people, to develop and

operate tourism businesses. In these instances, local people may obtain the financial investment for their shareholding from a donor agency, or their equity may relate to land that they have tenure over (e.g. in a community conservation area).

Historically foreign ownership of tourism businesses, expatriate labour, and repatriation of profits has led to leakages, and has eroded the potential for local economic benefits from tourism. However, given appropriate guidance, and operational frameworks, the private sector can have considerable economic benefits for local people (see Box 4.3 and 4.4 below).

Box 4.3. Economic benefits from Wilderness Safaris operations to local people (March 2010-February 2011)

- Employees who are citizens of the country of operation including Botswana, Namibia, South Africa, Zambia, Zimbabwe and Seychelles: 2302 (92% of staff)
- Philanthropic donations to communities from guest donations, Wilderness Trust or Children in the Wilderness: BWP2.25 million (approx. US\$260,000) directly impacting over 6000 people.
- Joint venture payments to community partners, in Namibia, South Africa and Botswana: BWP12.7 million (approx. US\$1.5 m)

Source: Wilderness Holdings, 2013

Box 4.4. Finances of protected area tourism in KwaZulu Natal, South Africa

Key findings of a World Bank study on protected areas in the province of KwaZulu Natal in South Africa included:

- The private game reserve business is difficult, and many operations struggle to turn a profit. Occupancies are extremely variable between companies, and profitable reserves tend to be larger.
- Property owners are not exclusively focused on the bottom line.
 - Of 23 private game reserve owners, 48% said that running a game reserve was “equally a way of life and a business”, while 40% said that it was “more a business than a way of life.”
 - The majority gave among their reasons for going into the nature-tourism businesses, their personal interest or love for wildlife.

Sources: Aylward, 2004; James & Goodman, 2001

4.2.4 Local benefits and attitudes to protected areas

Local communities can obtain direct economic benefits from tourism in protected areas through employment, owning and operating business that supply the tourists or tourism businesses, and from revenue sharing systems. Tourism can be one of the few opportunities for local people to benefit from a protected area, particularly if natural resource harvesting is not permitted. There is a range of ways in which local people can and should benefit from tourism, which have implications for the level of capacity, the risk, the investment and the returns (see figure below).

In the realm of economic incentives, conservation stakeholders can increase support from local people by documenting the local economic benefits of tourism in ways that are convincing to decision makers. The implementation of revenue generation devices can increase support for protected area management and tourism stakeholders can promote more local economic impact. Many protected area systems use multi-tiered entrance fee structures in which foreign tourists pay substantially more than residents.

In order to enhance the potential for improving positive local attitudes, managers and tourism operators should promote revenue sharing from protected area tourism with local communities in ways that are appropriate to the local situation (Archabald & Naughton-Treves, 2001). Any potential economic mechanisms require long-term institutional support, transparency, and accountability, and should include community development projects, equitable accommodation sourcing, and distribution of entrance fee revenues. Any revenues generated from park tourism that impact on local communities should also fund or stimulate local conservation projects, community development, and sustainable economic activity in these largely rural areas. Local tourism service providers should be made aware of the existing and potential benefits that tourism can provide, as well as of the natural capital of the protected area (e.g. ecosystem services) so that market incentives to promote conservation can be enhanced. Tourism stakeholders can also develop economic incentives to maintain and increase use by tourists (e.g., loyalty benefits, place attachment). Efforts to increase local spending by tourists include increasing visitation rates or raising the limits on incoming tourists (if carrying capacities allow), promoting longer stays, encouraging return visits, and supporting local purchases.

4.3 Social and Cultural Benefits

This section on social and cultural benefits addresses two main themes: benefits to local communities, and specific health benefits. Please note that the term 'community' can be defined in many ways. In the discussion below we are referring to *local communities* that are situated within, adjacent to or nearby a protected area where tourism has a direct impact to most community residents, either positively or negatively.

4.3.1 Benefits to local communities

Tourism to protected areas can be a key driver for local community development (Eagles et al., 2002; Mitchell & Ashley, 2010; Snyman, 2013; Telfer & Sharpley, 2008). When proper planning and design of a tourism operation are in place, the positive economic returns can be substantial and have numerous socio-economic benefits. These include, but are not limited to:

- Maintaining and improving the host communities' standard of living and quality of life. This can be achieved through a number of initiatives, including improvements to infrastructure and telecommunications, education, training, and healthcare.
- Tourism to protected areas can also ensure sustainable growth in the host community by emphasising the value of local arts and culture as well as the importance of local environmental sites and wildlife, all of which contribute to the initial motivators that generate tourism to the area in the first place.

- Ecotourism aims to support and strengthen the local community, through skills development and improved governance.
- Ecotourism facilities promote local hiring in order to increase local income and employment.
- Tourism can be the vehicle used to bring basic healthcare, social infrastructure and other local developments to remote protected areas.

Each of the above benefits is elaborated on below and summarised in Table 4.3.

Table 4.3. Tangible and intangible community development

Tangible community development	Intangible community development
Infrastructure – roads, communications, schools, libraries, clinics	Capacity building for institutions and individuals
Introduction and/or support of local governance and support institutions	Skills development and training
Benefit sharing schemes, e.g. joint ventures, community lease fees	Education and scholarships
Direct employment benefits, through wages and salaries	Community empowerment through partnerships
Indirect employment benefits through suppliers of goods and services	Introduction and development of partnerships, e.g. joint ventures, which build capacity and result in skills training and development, e.g. finance, marketing, etc.
Overall, enhancing livelihood security through providing alternative livelihoods	Promoting community cohesiveness, and structure and stewardship
	Promotion of culture and cultural activities
	Acting as a catalyst for the collective action of resource management
	Lessen the out-migration of youth to urban areas, and thereby assist in keeping rural families together
	Reduced community incentive to engage in ecologically problematic land and marine uses, e.g. mining and intensive agriculture, can promote conservation of natural resources for future generations

In order to realise a number of socio-economic benefits to communities, there are some prerequisites for the tourism operation. Firstly, a successful tourism destination must be accessible (Spenceley, 2008). Therefore, tourism operators must invest in the infrastructure and telecommunication of the local and surrounding communities. This includes maintaining and upgrading roads, promoting sustainable means of transportation to and from the protected area, and building communications networks such as landline telephones, cellular phone towers, internet, etc. The importance lies in connecting tourists and the greater outside world to the local villages and protected area.

Additionally, ecotourism businesses often partner with existing non-profit organisations or create new organisations whose purpose is to raise funds to support local community projects. This

includes projects to increase access to clean water, improve agricultural practices, build community centres, or collect donations from tourists and the outside world to provide basic materials and supplies to local schools, children, and families in need (Wilderness Holdings, 2013). Providing these services and resources is a direct way that tourism can have a beneficial impact on community development.

Sometimes, the tourism employer provides employees with basic language, literacy and numeracy training, which increase the educational level of the local community. These are transferable skills that can then be applied in the greater community. In a similar spirit, tourism businesses can also be a place for other skills trainings such as agricultural skills, power generating technologies, food hygiene, mechanical skills, and much more. These are practical skills that can be shared and spread throughout the community. Skills training and development through tourism are also important and can be used in future employment and serve to empower tourism staff (Snyman, 2013). Snyman (2012a) found that across three southern African countries, tourism staff were supporting an average of seven people: emphasising the indirect impact of tourism employment on community development. Private sector tourism partnerships or joint ventures with local communities can provide community members with important business skills and can serve to improve governance in community structures (Snyman, 2012b). There have, however, been examples of communities receiving tourism income through various partnerships, but little community development being implemented (see Boggs (2000; 2004) and Mbaiwa (2005) in Botswana). It is important that communities see a link between benefits and conservation and that tourism benefits are seen to be received in a community.

Protected areas and communities living around them are often isolated and too often do not have sufficient medical and healthcare facilities. These basic needs often accompany the development of tourism because tourists demand a safe vacation environment. Therefore, tourism can be the vehicle used to bring basic healthcare to remote protected areas. In other cases a particular tourism activity can also bring healthcare facilities not readily available in other parts of the location or country (e.g. hyperbaric chambers at important diving destinations).

A potential threat that the introduction of tourism poses is the dilution of local values and cultures when introduced to foreign cultures. Encouraging the development of local culture, crafts and the arts, can mitigate this threat. This can be achieved by ensuring the continued availability of supplies used in local arts and crafts, memorializing and documenting cultural traditions, and facilitating cultural education. When an ecotourism facility properly educates and informs its visitors about local values and culture and provides appropriate and non-invasive ways for visitors to interact with local inhabitants, this improves intercultural understanding and helps ensure that the local cultural identity remains intact for generations to come.

Sustainable tourism can generate cultural values and also reinforce local identity in relation to the management and conservation of cultural landscapes. This includes maintaining traditional construction techniques, design of the ancestral trails, community land-use and bio-agriculture among others (Pers. Com. D. Sberna, 2014).

Ecotourism also has the capability to educate the public (both visitors and locals) about local environmental sites and wildlife. Education about the value of the local habitat is the first step in encouraging and supporting local conservation efforts and raising funds to protect sites of

significance. This may lead to the discovery of new ways to utilise a native resource to create sustainable products, such as artistic products made of local materials, sustainable fishing, or supporting a service-based industry.

There are a number of ways to measure the positive impacts of tourism on community development. The infrastructure and telecommunications impacts can be measured in increased access to recreation sites, protected areas or subsistence resources, while the impacts of education and training can be measured in increased school graduation rates and a decrease in unemployment. Health and medical developments lead to reduced infant mortality and an increase in the availability of basic healthcare to treat both minor and major health problems. Environmental education can lead to improved water and air quality, increase in local wildlife, and decrease in harmful or unsustainable living practices (such as overfishing, overhunting, over farming, etc.).

By maximizing the amount of money that remains in the local community through the use of locally owned accommodations, employment of local people and support of local services, ecotourism can fund local community projects and initiatives that support community development (Mitchell & Ashley, 2010; Spenceley, 2008). Ecotourism can help conserve and raise awareness of protected areas, promote the development of cultural pride and confidence in the local community, invest in sustainable developments in construction projects and education, and contribute a net positive effect on their surroundings (Snyman, 2013).

4.3.2 Health Benefits

The value of protected areas as a fundamental health resource has been increasingly recognised (Healthy People Healthy Parks [HPHP], 2013). Human health is dependent on nature for the many environmental services (such as carbon sequestering, the provision of clean air and water, healthy ecosystems and biodiversity which sustain life on earth), providing agricultural and aquaculture resources, and material needs for clothing and shelter. Equally important to our health, nature nourishes and nurtures our psychological, emotional and spiritual needs. All are essential as precursors to our wellbeing (SHSD, 2008).

Substantial evidence from fields as diverse as ecology, biology, environmental psychology, landscape design, psychiatry and medicine point to many health benefits of nature. Research shows that being in nature and access to nature plays a vital role in our wellbeing and development (Maller et al, 2009). The health benefits relate to a range of lifestyle-related problems. These include obesity, cardiovascular and pulmonary disease, diabetes, stroke, cancers, musculo-skeletal disease, depression, osteoporosis, anxiety, sleep problems, behavioural conditions and degenerative conditions (Sparkes & Woods, 2009). So-called 'green exercise' - exercising in the presence of nature or nature based recreation, either active or simple enjoyment, relaxation, walking, just being in nature, affords stress relief, enhances recovery from pre-existing conditions and provides an 'immunising' effect (Pretty et al., 2005).

While the extent of this interdependence of human health on nature and the full range of benefits derived from interacting with nature have only begun to be properly investigated, it is now well established that protected areas play a vital role in environmental and human health (Maller et al., 2009) (see Table 4.1). The relationship needs to be better understood, acknowledged and

promoted (USNPS, 2013a). Green space should be acknowledged as a fundamental health resource. Green exercise has important public health consequences, with physical activity a co-determinant of health. It is estimated that in the UK a 10% increase in adult physical activity would reduce national health costs by some £500 million per year and affect around 6000 lives (Pretty, 2004). Undertaking that physical activity in nature adds many further benefits.

There is growing popularity for alternative medicines as people look to more natural approaches to health promotion as well as the treatment of illness (Clark, 2000). Non-communicable diseases or so-called lifestyle illnesses, including stress and mental ill-health are becoming more common and the associated costs are very high. The World Health Organisation predicts that by 2020 depression related illness will be the most prominent source of ill-health (WHO, 2001). A British study found that people living in areas with green space undertook three times more physical activity and had a 50 percent less chance of being obese. In turn obesity is linked to many life-threatening illnesses (Pretty, 2004). The psychological value of green space has an enduring association with longevity and decreased risk of mental illness according to studies in Japan, Scandinavia and the Netherlands. Enjoying time in nature tends to reduce stress, mental fatigue and improve mood (de Vries et al., 2003). The most positive underlying health 'value' is derived from healthy natural environments and has the most beneficial impact when set within urban environments (Natural England, 2012; Trzyna, 2014).

These health benefits have important implications for conservation, environmental and public health as well as for tourism planning, development and operations. Policies and partnerships that link all together are also important. The UK Countryside Agency (now Natural England) has long had an interest in the health benefits of green exercise. In 2000 the Australian park agency Parks Victoria, created the *Healthy Parks Healthy People* (HPHP) brand commissioning a literature review of all existing published work, and in 2010 ran the inaugural international HPHP Congress, attracting over 1200 delegates from 37 countries. HPHP seeks to reinforce and encourage the connections between a healthy environment and a healthy society (HPHP, 2013). The US National Park Service adopted the HPHP approach in 2012. Since then numerous other park agencies worldwide have developed similar programmes. HPHP has been adopted as an IUCN initiative to encourage divergent sectors to come together to build healthier communities.

As a result of the compelling evidence regarding the health benefits that protected areas can deliver, many projects are now underway worldwide (HPHP, 2013; Pretty 2004). For example, Parks Victoria have actively pursued partnerships with research bodies, the department of health and other health related organisations, tourism and leisure bodies, businesses and local government, in order to foster a better understanding of the many dimensions of health-nature benefits. Over time this will provide strong evidence of the benefits and encourage greater community participation in nature-based leisure. One such partnership (see Box 4.5) is with Australia's Medibank Community Fund and the National Heart Foundation.

Box 4.5. Parks Victoria Healthy Parks Healthy People project with Medibank Australia (a national health insurer) and the Australian National Heart Foundation

Physical inactivity is a major health problem in Australia, with more than half of the adult population not sufficiently physically active to gain health benefits. The direct and indirect costs of obesity and obesity-

related illnesses in 2008/09 were estimated to be \$AUD37.7 billion and it is estimated that 7,200 Australians die each year due to obesity and obesity-related illness. In announcing the programme, Managing Director, George Savvides said Medibank's key objective is raising the physical activity levels of Australians. "We are partnering with these two great organisations to help achieve this goal, and we will be promoting the programmes through our Australia-wide network of 4,000 employees, 158 retail outlets, 66 health clinics and 3.7 million customers."

Parks are an important part of improving and maintaining health, both for individuals and the community. They provide a place to exercise and so can improve our physical and mental health. Green space also has a proven benefit on wellbeing, with nature being a buffer to stress and the development of mental illness. Dr. Rob Grenfell of the Healthy Parks Healthy People Programme notes that with Medibank's support Parks Victoria can encourage more people to get outside and exercise in Australia's great parks and open spaces. Dr. Lyn Roberts, CEO of the National Heart Foundation confirms that walking for 30 minutes a day or more can reduce the risk of heart disease and stroke by as much as half.

As part of the partnership, the Medibank Community Fund are piloting another programme with Healthy Parks Healthy People to provide health care professionals with resources and support to prescribe physical activity in parks as a means of pro-active health prevention.

Source: HPHP Central, 2013

Visiting a park regularly is seen as the best medicine. Parks and trails encourage active and healthy lifestyles. The benefits of increasing regular exercise in nature includes improvements in energy levels, mood and sleep patterns, is calming on the mind and the nerves therefore helping to reduce stress and mental fatigue (de Vries et al., 2003). A UK study concluded that green exercise generates mental health benefits regardless of the level of intensity, type or duration (Pretty et al, 2007).

Like all exercise, nature-based recreation helps weight control and helps develop strong bones with good density, providing both immediate and future health benefits. Obesity and related conditions now cost more in public health terms than smoking (Lang & Heasman, 2004). Childhood obesity is linked to serious health issues in later years including cardiovascular and coronary heart diseases. In a Canadian study, Potwarka et al (2008) found that children with a park playground within 1 km of home were almost five times more likely to have healthy weight than further away or nearer parks without suitable playground equipment. Local green space is also important for children in relation to social development, concentration and motor skills (Taylor et al., 2001). Most visitor survey respondents report their motivation and experience as including senses of wellbeing relaxation, enjoyment etc. (evidencing the research on the health and well-being benefits from contact with nature) (Pers. Com. J. Senior, 2014).

The benefits are not confined to younger people; age is no barrier with older people more likely to stay active in parks than going to a gym. Regular outdoor activities such as walking and hiking, bike riding, healthy picnicking, undertaking ranger-led tours, yoga and exercise classes in parks; sporting games, fishing, birdwatching, painting, writing, camping, canoeing and so on, provide affordable healthy lifestyle choices for all ages. They also bring people together to share enjoyable experiences, thereby improving social and personal relationships as well as the individuals' health.

Healthy Tourism is another commitment to responsible tourism planning, development and operations initiated by the UN World Health Organisation that has as its vision the protection and promotion of good health (Bushell & Powis, 2009). The elements that serve as the foundation of the concept involve working in ways that embrace open communication, effective collaboration and engagement between all stakeholders.

Commitment such as a Healthy Tourism approach and those embodied in HPHP are essential to establish a health ethic within the goals and objectives of tourism planning and operation. This includes the development a range of communicative strategies to promote the health and wellbeing of visitors and community, together with capacity building for park staff. Co-operation through a partnerships approach, such as that described in Box 4.5 are encouraged between government departments, park management agencies, health service providers and professionals, public and private tourism bodies and researchers to successfully integrate parks and nature into public health (SHSD, 2008).

4.4 Environmental Benefits

Tourism in protected areas can generate important net positive impacts related to conservation (Buckley, 2010a). Depending on the circumstances, tourism in protected areas may be only a small (Pegas & Stronza, 2008) or a large component of conservation efforts (Steven et al., 2013). The potential for new tourism facilities and activities (e.g., the perception of benefits associated with proposed operations or developments) and the operation of existing tourism (e.g., traditional forms of park recreation) can assist conservation. Conservation benefits can be related to water, air, habitat, wildlife, and other natural and cultural resources in protected areas.

A few examples demonstrate the possibilities of using tourism in protected areas to directly promote conservation. For water, members of the International Ecotourism Society (2013) are promoting enhanced water conservation and water management through policies focused on efficiency, reduced chemical treatment, and collaborative management. While air resources are severely impacted by most travel associated with tourism (Gössling, 2010), many agencies are striving to reduce carbon emissions through education, policy, and research (Hong & Mingchong, 2013).

In some cases, tourism enterprises directly support the protection or rehabilitation of habitat for target species (e.g., Little Penguins; Harris, 2002). In other cases, the tourism activities (or revenue from them) can help reduce poaching of rare species or promote the gathering of scientific data for wildlife monitoring. For example, many ecotourists participate in 'voluntourism' programmes in and near protected areas to gather data for scientists and to support park conservation projects. Some programmes result in direct financial contributions to the conservation project or park. Participants in these programmes increase their conservation awareness and interest in future conservation efforts (Rattan et al. 2012). In addition, the mere presence of tourists in a protected area can reduce destructive and illegal activities. For example, in the Dzanga-Sangha Project, Central African Republic, managers promote tourism involving gorilla viewing in order to help reduce poaching (Greer & Cipolletta, 2006). In Virunga Volcanoes, Rwanda, the densities of snares

and poachers' tracks crossing transects in gorilla tourism and research areas were 25-50% less than in areas without tourism and research (McNeilage, 1996) (Box 4.1).

If carefully planned and executed, tourism can provide authentic cultural experiences while promoting local cultural benefits, which might include community stability, economic assistance, cultural sharing, and the provision of opportunities to practice local cultural practices (Burns, 2004; Weaver, 2001). Based on past experiences, elements of success for cultural sustainability include access to capital, local control, public consultation, information sharing, and local employment opportunities (Burns, 2004).

The economic benefits from tourism can also indirectly support conservation, by providing revenue to protected area authorities for conservation, incentivising local people to conserve natural resources, and encouraging the private sector to conserve biodiversity (Buckley, 2010a; Bushell & McCool, 2007; Hvenegaard, 2011): These three elements are outlined below:

1. Revenue for protected area management: Revenue raised from tourism can support management of protected areas. Among the many mechanisms, entrance fees or user fees are most common. Such fees can also help manage visitors, provide learning opportunities, and even subsidise other units in a protected area system (Lindberg, 1998). Managers should consider the specific management objectives, types of visitors, and engagement with the tourist industry before selecting a revenue mechanism. Revenues can come from other sources, including concessions and leases, taxes, and donations from international aid or conservation agencies (Lepp, 2002), tourism operators, and visitors (e.g., Barnes & Eagles, 2004; Hvenegaard & Dearden, 1998). The previous section of this chapter, and Chapters 7 and 9 provide more coverage on economic benefits and sustainable finance tools.

2. Economic impact to nearby communities, encouraging residents to conserve wildlife: If tourism in protected areas produces benefits for nearby residents, they should become supporters of initiatives that help conserve those protected areas (Biggs et al., 2011; Pegas & Stronza, 2008). Those conservation initiatives connected to tourism might include habitat protection, respect for zoning or park boundaries, engagement in sustainable tourism, and reduced poaching. For example, after gorilla tourism increased in central African parks, attitudes among nearby residents became more favourable toward park and gorilla conservation issues (Blom, 2000; Lepp, 2002; Weber, 1987). As a result, local residents might become more involved in the tourism industry and less involved in illegal resource extraction (Stronza, 2007) (also see Box 4.1).

3. Private sector support for habitat and biodiversity conservation: Some tour operators promote conservation through direct voluntary in-kind contributions (Bottema & Bush, 2012; Buckley, 2010a) by providing, for example, direct support (e.g., financial donations, park ranger salaries, or equipment), in-kind support for non-governmental conservation groups (e.g., free tours, transportation, or accommodation), or lobbying on behalf of conservation (e.g., political activism, planning efforts). Other tour operators may promote donations by tourists to conservation causes.

The social impacts of tourism can also indirectly benefit conservation. Education about conservation issues in and near the local protected areas, directed towards visitors and local residents, may increase their support for conservation (Beaumont, 2001; Zeppel & Muloin, 2008).

For visitors and residents, involvement in tourism activities may increase awareness and concern about local threats, conservation issues, and management solutions. However, it is possible that educational efforts might reinforce, rather than increase, visitors' already favourable conservation attitudes and behaviour (Hill et al., 2010). Tourism operators and guides have a strong role to play in offering tourism experiences that build support for conservation (Curtin, 2010; Powell et al., 2009), through increased knowledge, supportive attitudes toward conservation issues, increased intentions for environmentally-friendly behaviour, and philanthropic support (Powell & Ham, 2008; Weaver, 2013).

Finally, the combination of social and economic benefits of tourism may encourage the designation, enlargement, or better management of protected areas (Dabrowski, 1994). Since many forms of tourism (e.g., wildlife tourism, ecotourism, adventure tourism) occur or could occur within protected areas (which provide a reliable supply of desirable opportunities), individuals and agencies might designate new protected areas to support this existing or new industry. In some cases, tourism has supported arguments for new or enlarged protected areas in Kenya (Sindiyo & Pertet, 1984), Canada (Sewell et al., 1989), Australia (Harris, 2002), and privately owned reserves (Moore, 1991). Tour operators can play a key role in making this case (Higginbottom et al., 2003). These arguments for protected area tourism are strengthened when the net benefits of sustainable tourism in protected areas are greater than the net benefits provided by other alternative resources uses, such as slash and burn agriculture (Gould, 1999). Examples exist for vegetation (Turpie et al., 2003), macaws (Munn, 1992), gorillas (Djoh & van der Wal, 2001; Harcourt, 1986), lions (Thresher, 1981), and elephants (Western & Henry, 1979).

In light of the potential direct and indirect conservation benefits from tourism, there are many suggestions for improvement. These can be classified into the following categories: benefits to biodiversity, legislation and policy, education, community support, and monitoring and evaluation (Bushell & McCool, 2007; Hvenegaard & Tiitmamer Kur, 2010; Sandbrook & Adams, 2012):

- Biodiversity benefits (e.g. re-introductions of species/habitat management) should be clear and directly related to tourism operations. This will help in future monitoring and evaluation and in planning similar efforts elsewhere.
- Tourism stakeholders must be proactive in addressing local legislation and policy frameworks. This will help increase support from local communities, conservation agencies, and government departments. Involving political leaders can be strategic for conservation, by way of shared decision-making, information about economic impact, and public recognition. Tourism in protected areas can provide an integrative force that brings together stakeholders concerned about a variety of local concerns, including, for example, community development, endangered species, local empowerment, and other conservation issues.
- Supporting education initiatives can enhance long-term conservation benefits. Educators should stress not only an awareness and understanding of conservation issues for tourists and local residents, but also stimulate concern and action to promote conservation. Any educational efforts should be supported with information, opportunities, networking, and rewards. Since tourists have a variety of learning styles, it is important to provide several different types of interpretive opportunities.

- Individuals and experts in the local community and conservation groups can also provide important volunteer support for a variety of topics, including tourism planning and biodiversity research.
- Monitoring and evaluation is critical for evaluating whether the biodiversity and conservation benefits are long-lasting and whether they are resulting from tourism or from other external factors.

4.5 Guidelines for Promoting Positive Impacts

The following *Guidelines* are provided for increasing the positive impacts of tourism in all kinds of protected areas regardless of the governance structure (e.g., owned or managed by public, private, voluntary or community bodies). Parts of these suggestions are adapted from Eagles et al. (2002) and Scherl and Edwards (2007):

Economic guidelines

- *View tourism as just one element of a diversified economy:* Ensure communities and protected areas have other sources of income, and understand the role of the park tourism within the broader context.
- *Increase the number of visitors:* However, increasing visitation is risky unless the financial benefits from the visitors exceed their costs. It may increase other impacts, some negatively.
- *Increase the length of stay:* Increased length of stay provides more opportunity to sell local products and services, including longer stays in accommodation, more food and drink, and extra tours.
- *Increase the value of expenditure per visitor:* By offering an appropriate diversity of products and services for sale, and by matching the quality and type of offerings to the types of visitors who come (i.e. link supply with demand).
- *Attract richer market niches:* Different marketing tactics may bring in consumers with strong abilities to spend. These may be from different originating markets, those who tend to stay longer, or who spend more per day.
- *Increase purchases per visitor:* Offering more locally made goods for sale, available directly and indirectly to the visitor, helps increase visitor expenditure and local incomes.
- *Provide lodging:* The costs of overnight accommodation are relatively large and are paid for locally. Local lodging also increases expenditures on meals, and local goods and services, and can encourage tourists to stay longer in the destination, rather than just taking a day-trip.
- *Provide concession opportunities:* For the private sector, partnerships and community enterprises to develop and manage commercial facilities through concessions. They can provide accommodation, guided tours, events, and catering services. Encourage revenue sharing options.
- *Provide guides or other services:* Since much tourist activity in protected areas is information intensive, there are usually good opportunities for guide services.
- *Host events:* Artwork, crafts and festivals based on local culture can increase the local economic impact.

- *Minimise leakage* (i.e. retain local expenditures through maximum local self-sufficiency) by developing procurement linkages with local industries, product and service providers (e.g. food and drink) and preferentially employ local people.
- *Good management*: Ensure that tourism programmes are based upon competent financial management, well trained staff, and ensure prices are market related and cover operational costs. Earmark the income from fees appropriately. Ensure value for money and good service quality in all areas of tourist experiences.
- *Be aware of non-profit motivated investors*: Remember that not all tourism investors are interested in profit. Some private sector wants to capture a nature-based way of life, while some NGOs want to benefit conservation and the livelihoods of local people. They can be valuable allies to conservation authorities.

Social guidelines:

- *Assist in the education of local people* in the skills necessary for tourism where needed;
- *Develop a constituency of satisfied and supportive protected area visitors and neighbours*, people who will argue for park objectives in the large political debates in society;
- *Develop opportunities for park visitors to play a positive role in protected area management* (through membership in Friends Groups, by providing donations to targeted programmes, or providing personal assistance to staff; voluntary conservation programmes);
- *Ensure local participation and control* (e.g. local guide services, involvement in protected area planning);
- *Provide opportunities for local people to celebrate their cultural traditions* (e.g. sustainable use of natural resources, visiting heritage sites in protected areas).
- *Provide mechanisms to enhance facilities in local communities from tourism revenues* (particularly in developing countries), including for infrastructure, communications, education, training and healthcare. Ensure that efforts are coordinated and not overlapping where multiple organisations are involved.
- *Ensure that information and interpretation is accurate* and creates appropriate expectations. This includes for local hiring of staff and procurement of goods and services for visitors.
- *Give visitors opportunities to interact with nature*, in a way that does not jeopardies the safety or wellbeing of wildlife or tourists.
- *Foster research collaborations* with institutions studying health and social benefits from tourism in protected areas.

Environmental guidelines:

- *Raise awareness of the benefits of tourism in protected areas for their creation and continuation*. Politicians and community members alike are more likely to support conservation if they understand the tangible benefits.
- *Ensure revenue from tourism goes back into pay for conservation management, and mitigating tourism's impacts in the area where it takes place*. Often funds accrued by protected areas go to a national central pot, and then need to be clawed back. Look for innovative ways to generate and retain revenue.
- *Provide environmental education opportunities for local people and tourists*. Appropriate interpretation for tourists enhances their experience and understanding – particularly

among youth. Conservation lessons for local children and stakeholders (e.g. judges enforcing anti-poaching regulations) can provide valuable awareness raising – particularly where it involves a visit to a beautiful natural area.

- *Provide opportunities for volunteers to work on conservation activities in protected areas:* Whether it is high level volunteers with helicopters to do anti-poaching work, voluntourists paying to do research on animal behaviour, or local residents who organise litter clear ups along coastal zones – all can stimulate awareness and enhance valuation and ‘ownership’ of protected areas.
- *Encourage operators to design, develop and operate in an environmentally responsible manner:* Provide information and resources on environmental regulations and environmentally friendly design, and also links to sustainable tourism certification programmes.
- *Encourage collaboration between protected area authorities and the private sector to support habitat and biodiversity conservation:* Stimulate formal and informal partnerships with common objectives and benefits for the long-term.

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5. Negative Impacts of Protected Area Tourism

5.1 Introduction

While tourism and visitation can bring a multitude of benefits to conservation, communities and economies and human experience (see Chapter 4), tourism in protected areas can cause many negative impacts to the natural environment and local communities. These impacts can be perceived differently, and interact in many complex ways, in the short- and long-term. Protected areas have a mandate to ensure protection of the natural environment, so it is critical to understand potential negative impacts of tourism. Protected area managers should seek to identify negative impacts on the environment early in an attempt to avoid, mitigate, or minimise them. Monitoring is essential to help detect current conditions, document changes over time, and evaluate significance and success in mitigation. Strategies for monitoring and managing negative impacts of tourism are further discussed in Chapters 7 and 8.

At the same time, protected areas are mandated to provide, where appropriate, visitor experiences. These experiences and impacts also affect local communities. While not directly under the control of protected areas (unless within the boundaries), managers still have a responsibility to be good neighbours and partners with local communities in the tourism enterprise. The goal of this chapter is to outline the types of negative impacts created by tourism, examine how those impacts can be assessed, and provide recommendations to manage those impacts. We break down the negative impacts as they relate to biophysical attributes of the protected area, local communities (in which we include the visitor experience), and infrastructure.

5.2 Impacts on Biophysical Attributes

Environmental impact studies are popular among tourism researchers, and several reviews of the literature have been generated (e.g. Buckley, 2004; Knight and Gutzwiller, 1995; Mathieson and Wall, 1982; Newsome et al., 2013). Budowski (1976) considered that there were three types of relationship between conservation and nature-based tourism: conflict, coexistence and symbiosis. Conflict (or negative impacts) could be illustrated by tourism infrastructure destroying the habitat of rare species, while coexistence might be manifested through well-managed, photographic wildlife tourism in temporary tented camps (Spenceley, 2003). Symbiosis is achieved when, for example, a protected area conserves its target species and habitats for wildlife tourism, maintains a unique visitor experience, and generates significant revenue for research on, and conservation of, the species and its habitat.

5.2.1 *Types of Activities and their Negative Impacts*

Different tourism activities cause different biophysical impacts in protected areas. For example, the construction of roads, accommodation, airports, ports, hiking trails, campsites, golf courses, and swimming pools that support tourism have inevitable environmental impacts that include

mineral and energy consumption, habitat removal, water use, land-based pollution and aesthetic impacts on the landscape. The *operation* of tourism also has environmental impacts on habitats, wildlife, water, energy consumption and the air. The environmental impacts of tourism are diverse because of the varied and fragmented nature of the industry; different tourism activities and assorted environments in which it takes place; and the different environmental demands that take place during the product life-cycle (Spenceley, 2003) (see Figure 5.1).

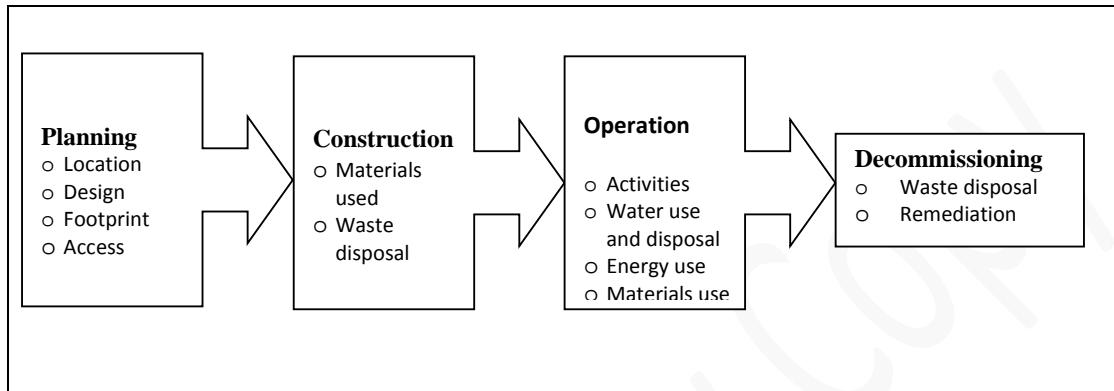


Figure 5.1. **Potential causes of environmental impacts during the life cycle of tourism operations.** (Spenceley, 2003)

Furthermore, the habitat type and its sensitivity to disturbance also have a bearing on the extent of the impact. For example, excessive trampling in rocky areas would tend to have a lower negative impact on vegetation than in a wetland area. Similarly, any impacts from tourism must be considered in light of other background conditions or changes. For example, climate change can stress ecosystems so much that tourism impacts will be exacerbated considerably. In many cases, the impacts of tourism on threatened ecosystems or endangered species are magnified when compared to impacts on less vulnerable parts of the environment.

Tourism impact studies show a broad range of effects ranging from physiological changes in charismatic wildlife, to impacts on soil biota and water quality (Buckley, 2009; Newsome et al., 2013; Spenceley, 2003). A summary of the potential environmental impacts of tourism on different environmental components is outlined in Table 5.1. Some unique issues of tourism impacts related to infrastructure are highlighted in Box 5.1. Box 5.2 illustrates a case example of a range of tourism impacts that were documented in Machu Picchu, Peru, a UNESCO World Heritage Site.

Table 5.1. **Potential negative environmental effects of tourism activities**

Area of impact	Tourism Activities	Examples of Potential Consequences
<i>Air</i>	Transport activity and facility power	<ul style="list-style-type: none"> • Air and noise pollution from vehicles. • Increased carbon dioxide (CO₂) emissions from fossil fuel combustion, which contributes to global climate change.
<i>Light</i>	Lighting in and near facilities	<ul style="list-style-type: none"> • Light pollution can distract young sea turtles from heading to sea
<i>Sound</i>	Construction or	<ul style="list-style-type: none"> • Noise pollution from vehicular traffic can affect behaviour and breeding success of nesting birds

	operation of facilities	
<i>Water</i>	Disposal of waste into water bodies	<ul style="list-style-type: none"> • Introduction of minerals, nutrients, sewage, solid waste, petrol and toxins to the environment. • Contamination reduces water quality and may lead to potential health hazards to animals • Increase water consumption
<i>Geology and Soil</i>	Collection, vandalism, erosion	<ul style="list-style-type: none"> • Removal of minerals, rocks, fossils and items of archaeological interest, and graffiti • Physical and chemical changes in soil • Erosion and soil compaction, which affects invertebrate fauna
<i>Landscape</i>	Formal and informal development	<ul style="list-style-type: none"> • Visual impact of settlements on the landscape
<i>Habitats</i>	Clearing for construction and tourism facility. Increased use of natural resources by facility. Pollution of local habitats	<ul style="list-style-type: none"> • Decrease and fragmentation of natural habitat (e.g. wetlands) (Burton, 1998). • Competition between native and invasive plant species from resort gardens. • Increased fire frequency leading to habitat change • Destruction of habitats and clearing of lands (e.g. mangroves) • Overfishing to provide seafood for visitors • Eutrophication and sedimentation • Coastal and beach erosion
	Pedestrian and vehicular traffic	<ul style="list-style-type: none"> • Changes germination, establishment, growth and reproduction, species diversity, composition, and plant morphology. • Reduced populations of fragile species and replacement by more resilient species
<i>Wildlife</i>	Hunting and fishing	<ul style="list-style-type: none"> • Changes in species composition, reproductive patterns and social behaviour; disappearance of species. • Reduction of habituated animals
	Pollution	<ul style="list-style-type: none"> • Effects on health including psychological stress, behavioural changes, reductions in productivity due to noise pollution. • Use of waste disposal areas as sources of food. • Eutrophication
	Potential wildlife harassment resulting from viewing and photography	<ul style="list-style-type: none"> • Behavioural changes: Avoidance, habituation or attraction to humans resulting from interactions. • Physiological Changes: Changes in heart rate, growth rates and abundance. • Species Changes: Changes in species composition, diversity and abundance, distribution and interspecific interactions. • Disruption of feeding: Found in a variety of wildlife species • Effect on reproductive behaviour and breeding success
	Development of highways and trails in natural areas	<ul style="list-style-type: none"> • Species-specific disturbance caused by roads, buildings and plantations • Barrier effects to carnivores, collisions, increased accessibility to wild areas by poachers • Increase in sun-loving plant species in travel corridors. • Vehicles kill and/or maim wildlife during collisions, from which scavengers profit

Sources: Spenceley, 2003, citing Anderson, 1995; Bowles, 1995; Cole & Landres, 1995; Gabrielsen & Smith, 1995; Gutzwiller, 1995; Klein et al., 1995; Knight & Cole, 1995; Salmon, 2003; Spenceley, 1997; Sun & Liddle, 1993; Sun & Walsh, 1998 - and also Buckley, 2004; Francis, et al., 2009; Lin, 2010; Wang & Miko, 1997.

Box 5.1. Impacts associated with infrastructure

In protected areas, the development of infrastructure affects, and is affected by, the types and levels of tourism. Moreover, infrastructure is directly related to many biophysical and community-related impacts. The more visitors a park receives, the more infrastructure it needs. Many protected areas are not open to visitors at all; many are wilderness areas with no infrastructure. Most, perhaps, have hiking trails and often a composting toilet, but nothing more. Some have designated campsites with or without toilets, and tracks with boardwalks, bridges and backcountry shelters.

Some parks with a long history of outdoor recreation use have historic huts and cabins. Many with high levels of modern tourist use have interpretive visitor centres. Some have engineered structures such as scenic lookouts, marine pontoons, suspension bridges, suspended treetop walks or cantilevered cliff walks. In a small number of parks, there are tourist accommodation buildings inside the park itself, usually but not always near the main entrance. In most cases such accommodation is owned by the protected area management agency. In a very small number of parks, there are privately owned facilities inside public protected areas. Almost all of these private facilities are there for historical reasons. An even smaller number of protected areas contain large-scale visitor accommodation, catering and/or activity infrastructure. Examples include ski lifts, marine mooring pontoons, and scenic transport infrastructure such as cableways and large-scale elevators.

The types of environmental impacts that these large-scale facilities produce depend on the development and ecosystem, not on land tenure directly. Information on impacts is thus based on assessments for large-scale tourist facilities across a wide range of environments and land tenure types. The different types of environmental impact produced by visitor infrastructure at various scales have been summarised by Buckley (2009, pp. 151-154). The ecological effects of physical effects such as noise and water pollution, visual and sound disturbance, and introduction of invasive species, have been reviewed by Liddle (1997) and Buckley (2004, 2009, 2011).

Large-scale visitor infrastructure creates environmental impacts through many different mechanisms, and its environmental footprint typically stretches well beyond the physical footprint of the infrastructure itself. Construction commonly involves a large temporary workforce with tight deadlines and limited concern over environmental impacts, which may be housed onsite. Impacts include lighting, construction noise, vehicle movements, earth moving operations, slopewash and turbid runoff from earthworks, water pollution, wastes, introduction of weed seeds and pathogens, and the introduction of feral animals as pets or pests. Each of these individual impacts can be reduced through a combination of technology and management, but these approaches cost time and money and are hence rarely adopted, especially when construction faces deadlines or budget constraints.

Routine operation of large-scale tourist infrastructure produces many direct impacts, typically including all those listed for the construction phase, though generally at lower intensity but for a longer duration. Construction can sometimes be timed, for example, to avoid animal migrations or breeding seasons, whereas routine operations run for a more extended season or year round. In addition, impacts from long-term routine operations are commonly cumulative.

In addition to direct local impacts from large-scale infrastructure, there are a range of off-site and indirect

impacts associated with access and changes in visitation. Large-scale visitor infrastructure operations typically require access for visitors and staff, utilities and material supplies. This involves access roads, and sometimes electricity power lines and/or gas and water pipelines. It may also include airstrips or helipads, or jetties and loading docks. All of these create impacts, including habitat fragmentation, roadkill, a broad zone of noise and light disturbance from traffic, areas of disturbed habitat amenable to invasive species, and corridors and mechanisms for introduction of pests and pathogens. There is now an extensive literature on the environmental impacts of road corridors and fragmentation.

Even though large-scale visitor infrastructure is typically built as a management response to increased visitor numbers, there is a positive feedback effect whereby new infrastructure in itself leads to further increases in visitation. Protected area agencies may well be keen to encourage visitation, but more visitors create more impacts. Large-scale infrastructure commonly acts as a hub where visitors arrive and disperse, creating a piosphere effect with increased impacts in an extended zone, and associated pressures for further site hardening. Large-scale infrastructure also needs staff, and staff need somewhere to live. This creates a further indirect impact, either through construction of a staff village or staff quarters inside the park, or through pressure on accommodation in nearby gateway towns, with staff commuting back and forth. In regions where park gateways have become upmarket amenity migrant destinations too expensive for staff, there are social impacts associated with displacement of staff into less expensive townships further away.

Technological and management approaches to reduce impacts have been reviewed by Buckley (2009, 2011, 2012b). For point source and localised impacts, best practice management approaches are generally straightforward and technical, though dependent on scale and ecosystem type. Sewage and wastewater treatment provides a good example, with options ranging from small-scale composting toilets for low visitation infrastructure in warm moist climates, to multi-stage industrial sewage treatment systems with artificial wetland finishing ponds, for infrastructure with high visitor volumes. Bacterial and nutrient pollution of freshwater streams and lakes from visitor infrastructure is an issue of major concern in many heavily visited protected areas worldwide.

Controlling diffuse impacts, in contrast, generally needs intensive management effort as well as technology. To prevent earthmoving or construction equipment from transporting fungal pathogen spores in mud requires washdown and sterilisation, to a standard rarely achieved in practice. To prevent hikers and backcountry campers from spreading infected mud needs only simple boot scrubbing, washdown and sterilisation trays; but these only work if every hiker uses them rigorously. In practice, it appears that once fungal pathogens such as *Phytophthora cinnamomi* are introduced into a park, it has not proved possible to eradicate them, nor to prevent them spreading (Buckley, 2004). Similar concerns apply for weed seeds, which are spread on vehicles and clothing. Even feral mammal species, once introduced, have proved very difficult to eradicate. There are very few known successful examples, all of them on small islands.

For heavily visited protected areas, some forms of large-scale visitor infrastructure are unavoidable, in order to provide for visitor safety, comfort and experience. Appropriately planned, such infrastructure can also reduce the environmental impacts of visitors, by concentrating them into restricted areas where they can be addressed through technological approaches. All such infrastructure has impacts of its own, however, both direct and indirect. In addition, there are many types of large-scale infrastructure, which are rarely needed or appropriate inside protected areas, but are much better located on private land in gateway zones. Overnight accommodation, catering, and transport hubs provide prime examples.

Beyond these, there are types of recreational infrastructure which create severe negative impacts for conservation and do not contribute to visitor appreciation of nature, and are entirely inappropriate within protected areas. Golf courses, residential developments and ski resorts provide examples. There are in fact cases where these are indeed located inside public protected areas, but only for historical reasons. Finally,

there are types of infrastructure completely unrelated to either conservation or recreation, which are sometimes forced upon parks agencies against their will. Examples include power lines, telecommunications towers, major arterial highways, and hydroelectric dams. Each of these has major environmental impacts with no redeeming features for conservation or recreation, but governments often insist on constructing them nonetheless.

Box 5.2. Case Study: Impacts of tourism at Machu Picchu, Peru



Visitors congregate at Machu Picchu, Peru © Florian Blumm

The natural beauty and historical significance of Machu Picchu, Peru, have earned the ancient Inca city a designation as a National Historic Sanctuary and a UNESCO World Heritage Site. Despite the benefits of a thriving tourism industry, pressure from the increasing number of tourists, and their associated developments, threatens to destroy the ecological integrity and cultural authenticity of the area. Such challenges have earned Machu Picchu a dubious distinction as one of the most rapidly deteriorating World Heritage Sites. These impacts can be grouped into three major categories:

Impacts on Biophysical Attributes

- *Impacts on biodiversity.* Designated as an IUCN managed resource protection area, the Machu Picchu ecosystem contains high species and ecosystem diversity. However, current and proposed tourism developments in the region threaten some of South America's last remaining pockets of Andean cloud forest. Increasing visitor traffic on the historic Inca Trail footpath (a key Machu Picchu access point) has also led to increased anthropogenic waste and damage to fragile, high elevation paramo grasslands. Among the many negative wildlife impacts, noise pollution has contributed to the disappearance of Andean Condors (Collyns, 2007), and tourism infrastructure jeopardises the migration corridors and montane habitats of the endangered spectacled bear (INC, 2005).
- *Impacts on topography.* Machu Picchu's unique topography and geological instability are particularly vulnerable to tourism pressure. Portions of the ancient city are already sliding downhill, and landslides along the Urubamba River Valley may be precipitated by the construction of additional visitor facilities at the summit (Sassa et al., 2005).
- *Impacts on archaeological ruins.* The city built around 1470 A.D. was never meant to withstand current levels of use. In Inca times, no more than 500 small, barefooted people occupied Machu Picchu (LaFranchi, 2001), but visitation today often exceeds 2,000 per day. Despite regulations and guide supervision, many historic structures have been chipped, broken, or damaged

Impacts on Communities

- *Impacts on gateway communities.* Capitalizing on the tourism industry, the nearby town of Aguas Calientes has grown from 400 to 4,000 residents in less than a decade. Despite potential economic opportunities, unplanned commercial growth and an overflow of transient settlers have caused a variety of unanticipated problems, including direct pumping of human waste into rivers due to inadequate water treatment facilities, social instability and unrest due to seasonal employment fluctuations related to tourism demands (McGowan, 2010), unequal distribution of tourism profits, increasingly costly services and facilities, and high economic leakage, (Mitchell & Eagles, 2001).
- *Impacts on local culture.* Tourism packages in the region are culturally-based, but the foreign demand for ethnic tourism experiences have led to the exploitation and commodification of Inca culture (e.g., staged authenticity of the Inca experience; McGrath, 2004). Despite growing resistance (e.g., *incanismo*, a Peruvian movement, extols the virtues of Inca civilization and advocates the preservation of historic treasures), tourism-mediated changes continue to permeate and transform local identities, altering many aspects of life and livelihoods for residents of the Machu Picchu area (van den Berghe & Flores Ochoa, 2000).
- *Impacts on spiritual rights.* Machu Picchu holds intangible spiritual qualities for many indigenous people. Overuse of the site by tourists and conflicts regarding access to the ruins (e.g., Amerindians who wish to visit the site are often displaced by tourism activities) are negatively impacting those spiritual values (Yachay Wasi, 2006)

Impacts on Infrastructure and Visitor Experience

- At most tourist sites, increasing tourist numbers leads to decreasing tourist satisfaction. At Machu Picchu, with its natural constraints on infrastructural development, and growing tourist numbers, crowding and congestion (both real and perceived) are major concerns. To minimise biophysical impacts and maintain visitor satisfaction, managing bodies want to establish and enforce an appropriate carrying capacity (INC, 2005). Permits and quotas are already enforced at adjoining sites such as the Inca Trail; the high demand forces many aspiring hikers to wait six months or more to gain access.

This overview of tourism impacts highlights a variety of threats to the long-term viability and resiliency of Machu Picchu. However, resource protection and tourism promotion are not necessarily mutually exclusive goals. Sustainable tourism growth that achieves the appropriate balance between preservation and development creates many potential opportunities, but that balance is often difficult to attain. This is critical for wonders that are part of both local and global heritage. Achieving a balance at Machu Picchu through an enhanced understanding of the negative impacts of tourism could be used to inform management of other vulnerable protected areas around the world.

Source: Larson & Poudyal (2012)

5.2.2 Assessing the Significance of Impacts

Several impact assessment tools can be used to establish the significance of environmental impacts in a destination and in the surrounding area (Buckley, 2009). These include Environmental Impact Assessments and Strategic Environmental Assessments. An **Environmental Impact Assessment (EIA)** of a specific tourism development proposal within or around a protected area, for example, describes the project or development, predicts key environmental impacts and their significance, facilitates public consultation and participation, suggests appropriate mitigation methods, and documents the process of decision making, monitoring, and post-project audits

(Bagri, et al., 1998). When applied effectively, EIAs are said to minimise the depletion of natural resources and social disruption (Ceballos-Lascuráin, 1996). National legislative frameworks usually include provisions for EIAs, and there are often stringent requirements in protected areas. For example, in Mozambique developments in national parks and reserves require a Category A EIA, which is the most detailed, but also is the most costly and time consuming for developers. In South Africa, the government has developed a detailed guidance series of publications to guide EIA practitioners and investors to support implementation of the National Environmental Management Act, 1988.

Management Plans for protected areas can also be used to address environmental impacts of tourism. Park management plans specify the type and degree of resource protection and management needed to assure the ecological integrity of the park and the management of its cultural resources; define the type, character and locale of visitor facilities, activities and services (Parks Canada, 2013). Management plans can provide context for tourism, including which areas of the protected area are zoned or allocated for commercial use.

On a broader scale, **Strategic Environmental Assessment (SEA)** is the formalised, systematic and comprehensive process of evaluating the environmental effects of a policy, plan or programme and its alternatives. In protected areas, SEAs can be used to assess the overall impacts of all tourism developments and activities within a protected area, and, for example, as a preparatory planning tool for tourism concessions (Therivel et al., 1992). Whereas EIAs are used to assess environmental impacts that may result from individual projects (e.g. one hotel development), policies relating to multiple projects, with cumulative, synergistic, induced, global or regional effects require the more strategic SEA approach (Therivel & Thompson, 1996). SEA therefore helps to create a development context towards sustainability, by integrating environment and sustainability issues into decision-making, so that strategic development options can be assessed and guidelines provide to support implementation (Partidário, 2012)

Other tools include:

- **Multiple Parameter Rating System:** Each parameter is assessed (e.g. vegetation loss, tree damage) and an impact index is derived by multiplying a rating determined in the field by a weight (Parsons & MacLeod, 1980).
- **Ecological Impact Assessment:** A formal process of defining, quantifying and evaluating the potential impacts of actions on ecosystems (Beanlands & Duinker, 1984; Treweek, 1995).
- **Cumulative Effects Assessment** addresses impacts that are of the same or different nature, and occur so frequently in time (or so densely in space) that they cannot be assimilated, and the effects are combined with the impacts of other activities synergistically (Beanlands & Duinker, 1984; Peterson et al., 1987).
- **Ultimate Environmental Thresholds** are specific thresholds imposed directly by natural resources (Kozlowski, 1989), indicating the limits that the natural environment can deteriorate without becoming irreversibly damaged or destroyed (Kozlowski, 1993).
- **Biodiversity Impact Assessment** incorporates biodiversity issues into impact assessment (Bagri & Vorhies, 1997).
- **Input-output management** combines *input management* (which identifies and manages anthropogenic inputs by adapting land management ecosystem management to avoid causes of degradation) and *output management* (which assesses resource condition to trigger

modified management activities when resources are degraded past a specified threshold of concern) (Montgomery, 1995).

5.2.3 Implications

The extent of environmental impacts associated with tourism in protected areas depends on how tourism facilities and activities are planned, implemented and monitored. Where there is potential for tourism to have a negative impact on the environment, then this should be avoided (e.g. by doing a different activity, or developing in a different location), or mitigated (e.g. if trees are to be removed, they should be replanted in other areas). Ecologically sensitive areas should be avoided where possible for infrastructure development, but given that protected areas are by definition usually ecologically sensitive, a pragmatic approach should be taken. This includes placing infrastructure outside protected areas where the category of protection warrants it, and opting for small footprints, rather than extensive developments. Where existing tourism plans exist, sensitive operational practices can minimise negative impacts. These relate to siting and design, water consumption, waste disposal, energy use, and interactions between tourists with fauna and flora. Specific recommendations are found at the end of this chapter.

5.3 Impacts on Communities

Research on the social and cultural impacts of tourism has focused on three main areas (Affeld, 1975; Deery et al., 2012):

- *The tourists* and their demands for tourist services, their motivations, attitudes and expectations;
- *The host community* in relation to employment, provision of services, and opportunity costs incurred by inhabitants of the destination area; and
- *Tourist-host interrelationships*, regarding the nature and consequence of contact between tourists and their hosts.

The term 'community' has many definitions, and has even been called one of the most vague and elusive concepts in social science (Barrow & Murphree, 2001). For example, communities have been characterised as groups with social interaction, intimacy, moral commitments, cohesion and continuity through time (Bernard, 1973) with direct and multi-faceted relations between individuals who practice reciprocity (Stoddard, 1993). However, this chapter adopts the definition of 'host community' as a group of people inhabiting the same locality, sometimes within the same ecosystem or habitat (Jamal & Getz, 1995; Murphy, 1985).

5.3.1 Types of Activities and Their Impacts

Table 5.2 and Box 5.1 summarise the range of potential social, cultural and economic impacts of tourism in protected areas. Determining whether impacts are negative, benign or positive depends on the temporal or spatial scales chosen. For example, the commodification of ceremonies, the homogenisation of food and drink, and the 'demonstration effect' in developing

countries tend to be regarded as ‘negative’ impacts by researchers from developed countries (e.g. Mathieson & Wall, 1982; Mintel, 2001). However, Harrison (1992) argued that it was patronising to assume that the culture of developing countries should be protected from change. Harrison (1992) maintains that economic advancement through tourism should be measured against the costs of losing some cultural heritage as the result of modernisation. Essentially, communities do not exist in a vacuum, and other influences from popular culture like television, radio, and the economic necessity of labour migration (Nettekoven, 1979) may be more disruptive to cultures than tourism. In addition, tourism may accelerate change that is already occurring, rather than being the root cause of change (de Kadt, 1979).

Table 5.2. **Potential negative impacts on communities: Social, cultural and economic**

Area of impact	Examples of Potential Consequences
Social and cultural	
<i>Traditions</i>	Commodification and demeaning of ceremonies that are re-enacted for tourists. Changes in arts, craft, dress, festivals for display to tourists, and invasion of traditional/sacred sites. Workmanship of craft may deteriorate as increased volumes are made for tourists.
<i>Psychology</i>	Demonstration effect - Local people may try to imitate tourists but become disillusioned
	Offence caused to residents when confronted by inappropriately attired tourists, and xenophobia develops
<i>Crime and Stability</i>	Destabilisation of communities leading to increased crime, prostitution, gambling, begging, alcohol and drugs
	Sexual exploitation of women and youths
	Displacement and resettlement of local communities deemed incompatible with tourism development
<i>Roles</i>	Tension and loss of self-esteem for men and older generations who are not actively involved in the tourism industry
Economic	
<i>Employment</i>	Low wages: Employment options may be menial, with low wages and low skill requirements, with little opportunity for advancement and training of local people
	Seasonal job losses: Variations in vacation times, climate, or temporal attractions may lead to job losses during the low seasons
<i>Local business development</i>	Reducing leakage: Local ownership of tourism enterprises, and opportunities for those enterprises to purchase supplies locally reduces leakage. Leakage is the effect where a portion of foreign exchange earnings generated is repatriated (e.g. through foreign owner’s profits, imports of equipment, materials, capital and consumer goods)
	Seasonal business: May cause difficulties for enterprises to sustain profits during low seasons
<i>Diversified economy</i>	Opportunity costs: Tourism may be incompatible with other revenue-generating industries such as agriculture or mining. In addition, it may not be the most appropriate tool for economic development in a particular area
	Dependency on tourism: If the local economy is not diverse, service and product providers are vulnerable, and at risk if there is a downturn in visitation
	Unequal distribution of benefits: Benefits are often accrued by a small elite group rather than the poorest people.

	Inflation: In regions where tourism is growing, destinations may become too expensive for staff.
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Sources: Spenceley, 2003, citing Ashley et al, 2000; Diaz, 2001; Koea, 1977; Krippendorff, 1987, Mathieson & Wall, 1982; Opperman & Chon, 1997; Saville, 2001; and Voss, 1984

Tourism's environmental impacts may have indirect and direct social and economic consequences in destinations. For example, raw materials (e.g. energy, food and water) may be prioritised for tourism development and the demands of tourists over the needs of local people. Such tradeoffs may lead to host communities losing access to key natural resources (Ashley & Roe, 1998; Mintel, 2001). Other complementary industries that rely on the same resources as tourism may be adversely affected if tourism impacts heavily on those resources. The multi-disciplinary impacts of tourism consequently require that this research addressed impact issues holistically (Spenceley, 2003).

In addition, tourism itself can influence visitor experiences, which will be addressed more fully in chapter 8. Visitor experiences are affected by a variety of tourism-related factors, such as motivations, expectations, visitor numbers, density, timing, activities, managerial presence, biophysical settings, and facilities (Mannell, 1999). Notably, high levels of tourism can impact visitor experiences in several ways, such as displacement of visitors with specific expectations, dissatisfaction for those visitors whose expectations have not changed, and a feeling of crowding (Needham & Rollins, 2009). However, high tourism levels can also change expectations of those visitors, affecting the nature of the current or future experience (McCool, 2006). In addition, high levels of tourism can create conflict among visitors or visitor types (Needham & Rollins, 2009).

5.3.2 *Assessing the Significance of Impacts*

Several social and cultural assessment techniques can be used to calculate the significance of impacts (Esteves et al., 2012). These include Social Impact Assessment and Tourism Impact Attitude scales. **Social Impact Assessment (SIA)** is the process of assessing or estimating the social consequences that are likely to occur as a result of a specific policy, action or development in the context of relevant legislation (Burdge & Vanclay, 1995). Implementation of SIA requires a sound understanding of the attitudes, perceptions, cohesiveness, relative vulnerability and day-to-day living regimes of those potentially affected (Armour, 1988). Techniques used in SIA include profiling, projection, assessment and evaluation (Connor, 1998; Finsterbusch, 1985). The **Tourism Impact Attitude Scale** was designed to test the effects of multiple, independent variables on the attitudes of residents towards tourism. Independent variables evaluated include length of residence, economic dependency on tourism, distance of the tourism centre from the resident's home, resident involvement in tourism decision-making, birthplace, level of knowledge, level of contact with tourists, demographic characteristics, level of tourism development, perceived impacts on local outdoor recreation opportunities and rates of community growth (Lankford & Howard, 1994). The Tourism Impact Scale was developed subsequently to address socio-cultural, economic and environmental impacts, while also incorporating crowding, congestion, taxes and community attitudes (Ap & Crompton, 1998).

Other tools include:

- **Social Cost-benefit Analysis** addresses the measurement and assessment of the social consequences of the proposed developments (Archer, 1996).
- **Panel Evaluation Method** utilises social cost-benefit analysis and the Delphi technique to define, rate, rank, and evaluate social costs and benefits (Stauth et al., 1993).
- **The Battelle Social Indicators Model** relates direct demographic, environmental and economic impacts through indirect impacts, such as community structural changes, to changes in social well-being and project alternatives (Dee et al., 1972; Olsen et al., 1981). Qualified experts rate quality of life indicators with respect to their relative importance in an iterative fashion, until consensus is achieved on standards of desired goals of the public as a whole (Sondheim, 1978).
- **Political ecology** assesses how environmental and political forces interact to affect social and environmental changes through the activities of social actors at different levels of analysis (Bryant, 1992).
- **Social and Economic Assessment Model; Community Level Impact Projection System and SIMPACT** are computerised simulation models designed to estimate socio-economic changes that accompany industrial developments (Huston & DeSouza, 1980; Monts & Bareiss, 1979; Stenehjem, 1978).

Reducing negative impacts on local people is of paramount importance if the protected areas, and the tourism that takes place within it, are to be sustained in the long term. The consequence of unhappy residents can be an unstable social environment (e.g. with crime or harassment of visitors) that tourists do not want to visit. Residents who do not perceive net positive values from protected areas (i.e. through monetary benefits, or customary use of natural and cultural resources), may be more likely to harvest resources from the protected area unsustainably or illegally (e.g. hunting wildlife).

5.3.3 Implications

The essence of reducing tourism impacts on local communities is to develop partnerships between community entities and the private sector in protected areas. Table 5.3 provides some steps that could be used to accomplish this goal. Partnerships are helpful in promoting coherent tourism plans, identifying potential impacts and encouraging long-term relationships.

Table 5.3. **Establishing sustainable partnerships: An enterprise perspective**

Step	Major Tasks
Step 1	The enterprise should define its own objectives and clarify how these objectives will be met through co-operation with others.
Step 2	The enterprise should identify prospective partners based on the objectives to be met. Partners may be drawn from the public, private and/or community sectors. Special care should be taken to ensure that disadvantaged parties have not been excluded from this process of identifying and selecting partners.
Step 3	The enterprise should identify the mandated representatives of all partners . When dealing with communities, certain issues should be taken into account.
Step 4	The enterprise should (re)define the objectives of co-operation in consultation with all partners. The partnership arrangement should benefit all the partners. This process may require the skills of a reputable independent facilitator, especially where there are language differences between the parties. Try to accommodate the language needs of all parties, especially those with the weakest capacity and to keep all partners informed.
Step 5	The parties should choose a method of co-operation . This method will derive from the objectives. In some cases an informal arrangement may be sufficient, however it may be necessary to create a formal structure with legal standing. In particular formal structures are required if funds will be distributed / managed and if the structure is to have any decision-making authority. Widely used methods of co-operation include: <ul style="list-style-type: none"> ➤ A management board (to involve partners in the management of the enterprise or activity) ➤ A trust (to manage flow of benefits to partners, in particular to the wider community) ➤ A communication forum (to tackle issues of joint concern, such as resource management, safety & security)
Step 6	The parties should implement the chosen method of co-operation . Throughout the implementation process, it is important to: <ul style="list-style-type: none"> ➤ Enable weaker / marginalised partners to participate fully and meaningfully ➤ Make it easy for all partners and representatives to attend meetings ➤ Report on the assistance provided to 'emerging' partners in terms of time, training, advice, transport and other resources
Step 7	The parties should monitor and report on the success of the co-operative structure against the objectives set by the parties.

Source: Spenceley & Casimiro, 2012

5.4 Conclusions and Guidelines

Tourism activities in protected areas can cause significant negative impacts to the natural environment and local communities. Many of these impacts are interrelated, and must be considered in the context of infrastructure, the visitor experience, economics, planning, policy and political will. In considering a tourism development or activity, protected managers and stakeholders must consider any positive impacts in light of the negative impacts. Ongoing monitoring is needed to measure change in the natural environment. To reduce negative impacts on the environment, local community, and visitors, the following *guidelines* are recommended for

protected areas, based on the draft Global Sustainable Tourism Council's (2013) Criteria for Destinations:

- **Tourism Planning and Policy**
 - **Tourism strategy:** The destination should establish and implement a multi-year tourism strategy that is publicly available, is suited to its scale, developed with public participation, and considers environmental, economic, social, cultural heritage, quality, health, and safety issues.
 - **Tourism management organisation:** The destination should have an effective organisation, department, group, or committee responsible for a coordinated approach to sustainable tourism and policies which require coordination with environmental and planning agencies as appropriate. This organisation should have defined responsibilities for the management of environmental, economic, social, cultural heritage, quality, health, and safety issues and for coordination with the relevant national environmental and planning institutions.
 - **Planning regulations:** The destination should have planning guidelines, regulations, and policies that integrate sustainable land use, design, construction, and demolition. The regulations protect natural and cultural heritage should be publicly communicated and enforced.
 - **Monitoring:** The destination should have a system to monitor, publicly report, and respond to environmental, economic, social, cultural heritage, quality, health, and safety issues.
- **Environmental Management**
 - **Climate change adaptation:** The destination should have policies to identify challenges and opportunities associated with climate change. These policies should encourage climate change adaptation strategies for development, siting, design, and management of tourism facilities. These policies should contribute to the sustainability and resilience of the destination.
 - **Protection of sensitive environments:** The destination should have policies to prevent, monitor and address the impact of tourism on sensitive environments and protect habitats and species.
 - **Wildlife protection:** The destination should have policies to ensure compliance with local, national, and international standards for the harvesting, display, sale, and capturing of wildlife (including both plants and animals), as well as for the protection of threatened or endangered species. Temporal and spatial zoning are key management strategies.
 - **Greenhouse gas emissions:** The destination should have policies to encourage tourism-related enterprises and services to measure, monitor, report, and mitigate their greenhouse gas emissions.
 - **Energy conservation:** The destination should have policies to promote energy conservation, measure energy consumption, and reduce reliance on fossil fuels. The destination should encourage tourism-related enterprises to conserve energy and use renewable energy technologies.
 - **Water management:** The destination should have policies to conserve and manage water usage. The destination should encourage tourism-related enterprises to manage and conserve water.

- Water security: The destination should have policies to monitor its water resources to ensure that use by tourism is compatible with the water requirements of the destination community.
 - Water quality: The destination should have policies to monitor drinking and recreational water quality. The monitoring results are publicly available.
 - Wastewater: The destination should have clear and enforced guidelines in place for the siting, maintenance and testing of discharge from septic tanks and wastewater treatment systems.
 - Solid waste reduction: The destination should have policies to ensure solid waste is reduced, reused, and recycled. The destination encourages tourism-related enterprises to adopt waste reduction strategies.
 - Light and noise pollution: The destination should have guidelines and regulations to minimise noise, light, and visual pollution. The destination encourages tourism-related enterprises to follow these guidelines and regulations.
 - Low impact transport: The destination should have policies to increase the use of low-impact transport, including public transport, in the destination.
 - Environmental risk: The destination should identify key environmental risks and have policies in place to address these.
- Visitation management
 - Attraction protection: The destination should have a policy and system to value and conserve key natural, historical, archaeological, religious, spiritual, and cultural sites, including scenic, cultural and wild landscapes.
 - The destination should have a visitor management system (including education) for key attraction sites that include measures to value, preserve and protect key natural and cultural assets.
 - Visitor behaviour: The destination should have publicly available guidelines for visitor behaviour that are designed to minimise adverse impacts.
- Social Health and Well-being
 - Safety and security: The destination should have policies to prevent and respond to tourism-related crime, safety, and health hazards.
 - Crisis and emergency preparedness and response: The destination should have a crisis and emergency response plan that is appropriate to the destination. Key elements should be communicated to residents, tourists, and tourism-related enterprises. The plan should establish procedures and provides resources and training.
 - Preventing exploitation: The destination should have a defined system and established practices to prevent commercial, sexual, or any other form of exploitation and harassment, particularly of children, adolescents, women, and minorities.
- Economic Vitality
 - Economic monitoring: The direct and indirect economic contribution of tourism to the destination's economy should be monitored regularly and publicly reported.
 - Local career opportunities: The destination should provide equal employment and training opportunities for local residents (open to women, youth, disabled people, minorities, and other vulnerable populations).

- Supporting local entrepreneurs and fair trade: The destination should have policies that supports local entrepreneurs and promotes fair trade principles.
- Cultural Preservation
 - Promotion: Promotion should be accurate with regard to the destination and its products, services, and sustainability claims. The promotional messages should be respectful of its cultural and natural heritage.
 - Cultural heritage protection: Historical and archaeological artefacts should not be illegally sold, traded or displayed.
 - Site interpretation: Interpretive information should be provided, in relevant languages, at key natural, historical, archaeological, religious, spiritual, and cultural sites.
- Community Engagement
 - Local community opinion: Residents' aspirations, concerns, and satisfaction with tourism should be regularly monitored, recorded and publicly reported. Key stakeholders should be included and, where needed, responsive action should be taken.
 - Local access: The destination should protect, monitor, and safeguard local resident access to natural, historical, archaeological, religious, spiritual, and cultural sites.
 - Support for community: The destination should have policies that encourage visitors to volunteer or contribute to community development, cultural heritage, and biodiversity conservation.
 - Stakeholder participation: The destination should have policies that enable stakeholders to participate in tourism-related planning and decision-making on an ongoing basis.
 - Protection of community property and rights: The destination should have policies to protect the tangible and intangible heritage and property of individuals and communities.

Chapter 5: Coordinator: Glen Hvenegaard. Section contributors: S5.1 (Glen Hvenegaard,), S5.2-S5.3 (Anna Spenceley), S5.4 (Glen Hvenegaard and Anna Spenceley). Case box contributors: B5.1 (Ralf Buckley), B5.2 (Lincoln Larson).

6. Management Principles and Processes

6.1 Introduction

Given the importance of parks and protected areas, and associated tourism and outdoor recreation, we should think carefully about how to plan and manage these places and activities. As the preceding chapters illustrate, protected areas and tourism are connected and can support each other, but too much tourism or inappropriate tourism activity can threaten the integrity of protected areas and degrade the quality of visitor experience. The key challenges are -- How can we provide for visitor use of protected areas without threatening the core values of the natural and cultural resources? And, how can we provide opportunities for recreation and tourism in protected areas that are appropriate, high quality and responsive to societal needs?

The overall premise of this document is that sustainable tourism will benefit from good management practices as demonstrated by various case studies. The focus is on the *management* of natural resources, infrastructure, operations and activities to achieve sustainability and high-quality visitor experience. Readers are advised to consult recent guidelines, such as Melenhorst et al. (2013) and GiZ (2014c), for detailed guidance and case examples on tourism development planning. This chapter outlines overarching principles of tourism and visitor management in protected areas. It connects with principles developed by other management guidelines and handbooks for specific aspects of sustainable tourism and visitor use operations. It also includes a concise overview of management frameworks that are intended to support adaptive management planning processes. The chapter ends with a set of guidelines that lead to the discussion of management and monitoring strategies as well as management tools in Chapters 7 and 8.

6.2 The Precautionary Principle

The precautionary principle provides a fundamental policy basis to anticipate, avoid and mitigate threats to the natural environment. The principle states that where knowledge is limited and there is lack of certainty regarding the threat of a serious environmental harm, this uncertainty should not be used as an excuse for not taking action to avert that harm. It is important in all aspects of environmental decision making, including decisions related to conservation, sustainable use, and protected area systems. The precautionary principle is incorporated in the Convention on Biological Diversity and other international agreements of importance for conservation and protected areas. Because of the complexity of conservation and protected area systems and sites, protected area managers and decision makers regularly have to deal with issues where there may be considerable uncertainty and complexity, at local, regional and global levels (IUCN, 2011).

This equally applies to tourism and recreation in protected areas. As populations increase the demand for tourism and recreation grows, and can place further pressure on protected areas. The tourism sector is both complex and subject to major uncertainties as market demand fluctuates depending on the preferences of tourists, economic conditions and patterns of investment in public infrastructure and by private sector tourism developers. Protected areas and sites are already an important part of tourism in many countries, and for some countries and regions, are

the main reason for tourists to visit. Quite apart from conservation considerations, it is therefore vital that protected areas should be maintained and operated so that they provide a resource for tourism, and the income and employment it can provide, both now and in the future.

IUCN's guidance for effective implementation of the precautionary principle includes the importance of ensuring (IUCN-WCPA, 2007):

- Broad participation: including all relevant stakeholders and rights holders in a transparent process of assessment, decision making and implementation as input for making the best possible judgements about overall risks, threats and required actions, particularly where there is uncertainty. The imperative of including key stakeholders should, however, be balanced against potential conservation costs of delaying a decision.
- Best available science and other information: using the best available information, including best available scientific understanding of threats, related human influences and drivers of threats, along with traditional and indigenous knowledge, to characterise the threat, assess options and measures for addressing the threat, and assign roles and responsibilities.
- Adaptive management: using an adaptive management approach, particularly important in the face of current and potential future environmental uncertainties, including from new factors such as climate change, where ongoing monitoring, regular review and flexibility are essential elements of the decision-making process, so that new knowledge and understanding can be incorporated as improved data and research findings become available

These factors are aligned with the principles of governance (broad participation) and of sustainable development, and apply equally to sustainable tourism in protected areas.

In practical terms, application of a precautionary approach to sustainable tourism in protected areas means ensuring that tourism activities are:

- Planned on a sound economic foundation (UN General Assembly, 2012) with clear evidence of market demand;
- Operated by suitably experienced and competent operators;
- Carried out within the capacity of sustainable use of natural resources that are available within and around a protected area and respect environmental limits, particularly in relation to water use and availability, disposal of sewage and liquid and solid wastes;
- Compatible with a protected area's conservation objectives and management plan;
- Acceptable to local and indigenous communities, and involve their participation if they so wish;
- Provide realistic and equitable benefits to local and indigenous communities;
- Developed cautiously, and avoid both development that is driven by demand rather than conservation priorities in protected areas, or development that exceeds market demand; and
- Monitored and controlled effectively, with action being taken to correct any adverse effects on protected area management and conservation goals.

Uncontrolled tourism can be compared to ecological population explosions which are followed by population crashes as ecological balances are destroyed. Damage to the environment is quick, but recovery slow. From a management point-of-view, taking measures and applying plans to avoid such explosions are important. This is a key reason for applying a precautionary approach to tourism in protected areas.

6.3 Management Principles

While the precautionary principle defines the overall philosophy and approach to management, a set of **ten** management principles are provided in this book to guide managers' thinking and decision making on the key issues of visitation management in protected areas toward the goal of environmental, social and economic sustainability. As pointed out in Chapter 2, management of tourism and visitors often occurs in the complex historical, cultural and social context, making the solutions of management problem unique – but some common threads exist. The last edition of Sustainable Tourism Best Practice Guidelines outlined nine general principles of visitor management (Eagles et al., 2002). These principles are largely retained for this edition, but some have been integrated with other principles established in more recent references (EUROPARC Foundation, 2012) (Table 6.1).

Table 6.1. Ten principles of tourism and visitor management

Principles	Summary
1. <i>Appropriate management depends on objectives and protected area values</i>	<ul style="list-style-type: none"> Objectives provide definitive statements of the desired outcomes of protected area management. They identify the appropriateness of management actions and indicate acceptable resource and social conditions. They allow evaluation of success of management actions. The specific objectives are likely to be more contentious than general value statements. The process of establishing objectives is essentially political; therefore, public participation is essential.
2. <i>Diversity in biophysical and social conditions is inevitable and may be desirable</i>	<ul style="list-style-type: none"> Impacts, use levels, and expectations of appropriate conditions tend to vary (e.g. impact of a campsite in the periphery vs. centre of the protected area). Environmental variables influence visitor use and level of impact (e.g. topography, vegetation, access). Managers can identify this diversity, then make decisions on its desirability, thereby separating technical decisions from judgmental ones. Using zoning explicitly to manage for diverse recreation opportunities is more likely to preserve important values.
3. <i>Impacts on resource and social conditions are inevitable consequences of human use</i>	<ul style="list-style-type: none"> Any level of recreational use leads to some impact; in most cases the initial, small levels of use generate the greatest impacts per unit use. Managers must ask: "How much impact is acceptable or desirable?"

	<ul style="list-style-type: none"> • The process to determine the acceptability of impact is central to all visitor planning and management. • Managers must utilise appropriate actions to create and manage this acceptable level of impact. • Evidence of impacts can be used for environmental education for park visitors.
<i>4. Management is directed at influencing human-induced change</i>	<ul style="list-style-type: none"> • Protected areas often protect natural processes as well as features, so management is generally oriented to managing human-induced change since it causes most disturbances. • Human-induced change may lead to conditions considered to be undesirable. • Some changes are desirable and may be the reason for the creation of the park. For example, many parks are created to provide recreation opportunities and local economic development. • Management actions determine what actions are most effective in influencing amount, type and location of changes.
<i>5. Impacts can be influenced by many factors so limiting amount of use is but one of many management options</i>	<ul style="list-style-type: none"> • Many variables other than level of use affect the use/impact relationship in protected areas (e.g. behaviour of visitors, travel method, group size, season, and biophysical conditions). • Education and information programmes, as well as regulations aimed at restricting visitor behaviour, may be necessary in addition to limits of use. Impacts from visitor use or management activities may occur out of the protected area, or not be visible until later (e.g. prohibitions of use may displace that use to other areas; or poor water treatment may result in water pollution downstream). • Planners need substantial knowledge of relationships between use and impacts to predict relationships at a variety of scales and over time.
<i>6. Proactive tourism and visitor management planning enhance effectiveness</i>	<ul style="list-style-type: none"> • Proactive management starts with the articulation of protected area values and management objectives. Management decisions that can be tied to these values have a better chance for effective implementation. • The practice of forward-thinking can lead to better awareness of emerging recreation and tourism activities.
<i>7. Monitoring is essential to professional management</i>	<ul style="list-style-type: none"> • Monitoring is a key step for all adaptive or proactive management frameworks, generating resource and social condition data that inform management decisions. • Monitoring needs not be complicated or expensive. There are often options. • Public engagement and visitor education can be enhanced by integrating monitoring data.
<i>8. The decision-making process should separate technical description from value judgments</i>	<ul style="list-style-type: none"> • Many protected area management decisions are technical (e.g. location of trail, design of visitor centre). But others reflect value judgments (e.g. decisions to limit use, and how, types of facilities, tourism opportunities provided). • Decision processes should separate questions of “existing conditions” from “preferred conditions.”
<i>9. Affected groups should be engaged since consensus and</i>	<ul style="list-style-type: none"> • All management decisions affect some individuals and groups.

<i>partnership is needed for implementation</i>	<p>These groups should be identified early in the decision-making process.</p> <ul style="list-style-type: none"> • Stakeholders of protected area should be involved in identifying values of protected areas and developing indicators • With suitable training, groups should be able to collect monitoring data
<i>10. Communication is key to increased knowledge of and support for sustainability</i>	<ul style="list-style-type: none"> • A communication strategy is needed to support a proactive or adaptive management process. • Communication of monitoring results to stakeholders and visitors support the science-based approach to management.

Sources: Adapted from Borrie et al. (1998), Eagles et al. (2002) and EUROPARC Foundation (2012)

6.4 Management Planning Frameworks

The incorporation of management principles as outlined above into specific management decision making is no small task. While the language of principles can be easily embraced in protected area governance or management documents, the bigger challenges are to ensure that they are genuinely applied to inform management strategies and actions and that the management agency is committed to such applications. To this end management frameworks or models offer a valuable mechanism through which these principles can be properly addressed and evaluated. This section begins by outlining basic concepts that help sharpen our thinking about managing tourism and visitor use in parks and protected areas. Then, a three-step, management-by-objectives framework is described that builds on these conceptual and organisational frameworks. International experience with the visitor management frameworks is also discussed. These frameworks are intended to support and defend management decisions made by protected area managers. Examples of such decisions are outlined in Box 6.1.

Box 6.1. **Decision-making on tourism in protected areas**

Decisions regarding tourism in protected areas will ultimately be the responsibility of governments in all four governance types of protected areas: Government Managed Protected Areas; the parties, including Government, who manage Co-managed Protected Areas; private landowners in Private Protected Areas; and indigenous or local communities in Community Conserved Areas (also refer to Table 3.4).

Key decision areas include those on:

- Strategies and plans for tourism and for conservation;
- Types and scale of tourism development and activities that will be permitted at particular locations in relation to conservation and other land and resource uses, as well as areas where tourism is not permitted;
- Measures to be implemented to manage impacts - both actual and anticipated - from tourism development and activities;
- Monitoring and reporting on tourism development and activities, and impacts arising from these;
- Measures to ensure compliance of all involved with agreements concerning those tourism development and activities that have been permitted;
- Benefit sharing with indigenous and local communities including sharing of tourism revenues, job creation, fostering local enterprises, participation in tourism enterprises and projects, education, direct investment opportunities, and economic linkages; and
- Benefits for conservation and protection of ecological services including channelling part of total tourism revenues towards supporting the conservation and sustainable use of biodiversity, such as conservation of protected areas, education, research programmes, or local community development.

Whoever may have the ultimate responsibility for these and other decision areas, the principles of good governance and of sustainable tourism, as well as guidelines prepared by the CBD and others, highlight that there needs to be effective consultation with and participation of the communities and groups affected, including specific input from biodiversity managers, indigenous people, local communities, and the private sector in a broad sense. This is an important foundation of the decision-making process and critical to sustainable development, and decision makers should consider using multi-stakeholder processes as a tool for the decision-making process. Furthermore, decision-making processes need be transparent, accountable, and apply the precautionary approach.

6.4.1 *Recreation Opportunity Spectrum*

The Recreation Opportunity Spectrum (ROS) is a framework to help ensure diversity in parks and outdoor recreation (Brown et al., 1978; Brown et al., 1979; Clark & Stankey, 1979; Driver & Brown, 1978; Manning 2011). ROS applies indicators and standards of quality to each of the three components of parks and outdoor recreation – resources, experiences, and management – to illustrate a broad range of recreation opportunities (Principle 2).

Figure 6.1 illustrates a simplified example of ROS. In this example, the presence of wildlife represents the resource component of outdoor recreation and can range from wild to domesticated. Similarly, solitude represents the experiential component of outdoor recreation

and this can range from high to low levels. Facility development represents the managerial component of outdoor recreation and this can range from no development to highly developed facilities. These ranges of conditions can be combined into a spectrum of park and outdoor recreation opportunities from wilderness to urban. This structured approach can be used by managers to help ensure that tourism and outdoor recreation opportunities meet the diverse demands of society.

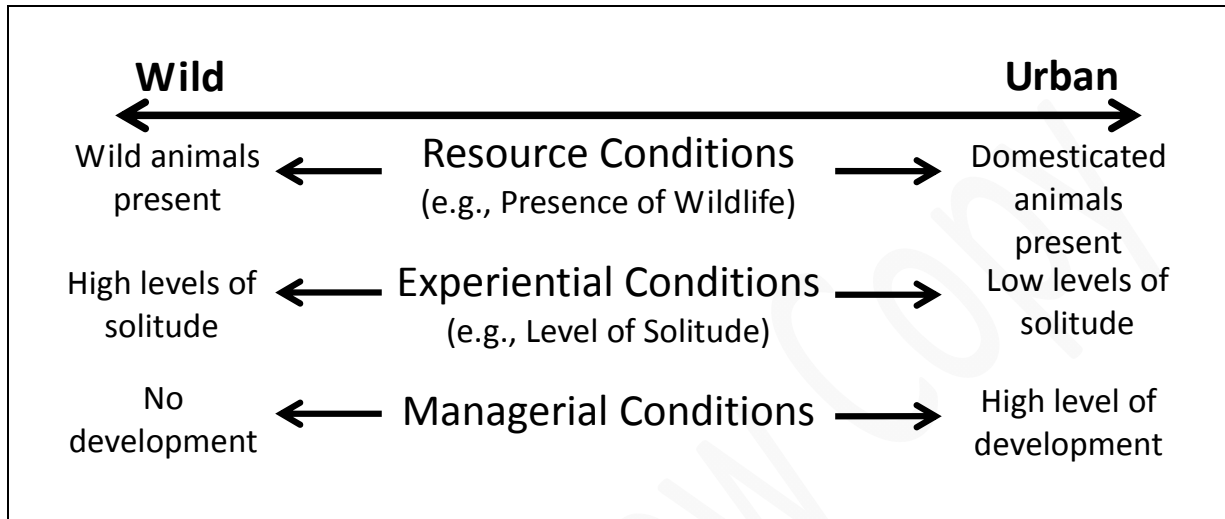


Figure 6.1. A simplified example of the Recreation Opportunity Spectrum (ROS).

6.4.2 Protected Areas: The Commons and Carrying Capacity

As protected areas increasingly serve as destinations for nature-based tourism and recreation, vital natural and cultural resources can be impacted and degraded, as can the quality of visitor experience. How can protected areas be managed for the two, sometimes competing, objectives of protection and visitor use? Indeed, protected areas can be considered as a fitting example of the commons, which were conceptualised by Hardin (1968) in his classic paper entitled 'The Tragedy of the Commons'. Hardin identified a set of environmental problems – issues of the 'commons' – that have no technical solutions but must be resolved through public policy and associated management action. Hardin's ultimate prescription for managing the commons was through 'mutual coercion, mutually agreed upon': without such collective action, environmental and related social tragedy – the ruin of protected area resources and the quality of the visitor experience – is inevitable. Management of tourism represents an example of 'mutual coercion, mutually agreed upon' that Hardin suggests is needed to protect parks and the quality of the recreation experience. While these forms of coercion – for example, restricting the amount and type of tourism – may be distasteful because they limit freedom of choice, they are ultimately needed to protect parks, tourism, and the greater welfare of society.

Much discussion of visitor management in protected areas has recognized the concept of visitor capacity (or visitor carrying capacity). Box 6.2 provides a brief history of this concept. Contemporary approaches to visitor capacity have adopted the management-by-objectives framework, and are also referred to as indicators-based or standards-based frameworks (Leung et

al., 2008; Manning & Anderson, 2012; McCool et al., 2007). The most common frameworks and latest developments are summarised in the upcoming section.

Box 6.2. A brief history of visitor carrying capacity (or visitor capacity)



Visitors on a high use trail in Zhangjiajie National Park, China. © Yu-Fai Leung

The term 'carrying capacity' has been an important part of natural resources and environmental management for decades. Its emergence can be traced back to a historic publication entitled *An Essay on the Principle of Population* (Malthus, 1798). This essay reasoned that human population tends to grow at an exponential rate, but that food production grows only arithmetically. In this way, the supply of food presents an ultimate limit to population growth, and if this limit is not respected, the carrying capacity of the earth (or selected geographic regions) will be exceeded. Malthus's ideas about carrying capacity and the limits of the earth to support human population growth have become foundational concepts of the contemporary environmental movement.

Scientific applications of carrying capacity were first developed in the fields of fisheries, wildlife, and range management (Hadwen & Palmer, 1922; Leopold, 1934; Odum, 1953). For example, how many animals can ultimately be supported by a given area of range? Carrying capacity was first applied to parks and outdoor recreation in the 1960s (Wagar, 1964; Lucas, 1964). The initial focus was on the environmental impacts of outdoor recreation: how much use can be accommodated in a park before the area's natural resources are unacceptably impaired? However, it quickly became apparent that there is also a social or experiential component to carrying capacity in the context of parks and outdoor recreation; how much use can be accommodated in a park before the quality of the visitor experience is degraded to an unacceptable degree?

Carrying capacity, or 'visitor capacity' as it is sometimes called, has remained an important but challenging issue in the field of parks, tourism, and outdoor recreation (Graefe et al., 1984; Shelby & Heberlein, 1986; Stankey & Manning, 1986; Manning, 2007; Manning, 2011; Whittaker et al., 2011). What is the ultimate capacity of parks for tourism/outdoor recreation? How can tourism/outdoor recreation be managed to ensure that it does not exceed a park's carrying capacity? These foundational questions can be addressed through application of management processes driven by protected area values, management objectives,

and their associated indicators and standards (McCool & Cole, 1997; McCool et al., 2007; Manning, 2011; Whittaker et al., 2011). These are important questions that must inform park, tourism, and outdoor recreation management.

6.4.3 Visitor Capacity and the Limits of Acceptable Change

Research related to visitor capacity has documented many impacts of tourism/recreation on park resources and the quality of the visitor experience. For example, park visitors may trample fragile soils and vegetation, and disturb wildlife. And as the number of visitors increase, parks may become crowded. With increasing use of parks comes increasing environmental and social impacts, and at some point these impacts may become unacceptable, which would suggest that the visitor capacity is being exceeded. Figure 6.2 illustrates that increasing amounts of recreation result in increasing environmental and social impact (e.g., trampling of soils and vegetation, crowding, the need for more intensive management); as the amount of recreation use increases from X_1 to X_2 , the amount of impact increases from Y_1 to Y_2 . However, the limits of acceptable change are not clear from this relationship; which of the points on the vertical axis – Y_1 or Y_2 , or some other point along this axis – represents the maximum acceptable level of impact? Determining the limits of acceptable change is central to addressing the visitor capacity of protected areas (Frissell & Stankey, 1972; Manning, 2011), and such determination can be strongly influenced by stakeholders' values, culture and other factors not directly linked to the amount of visitor use.

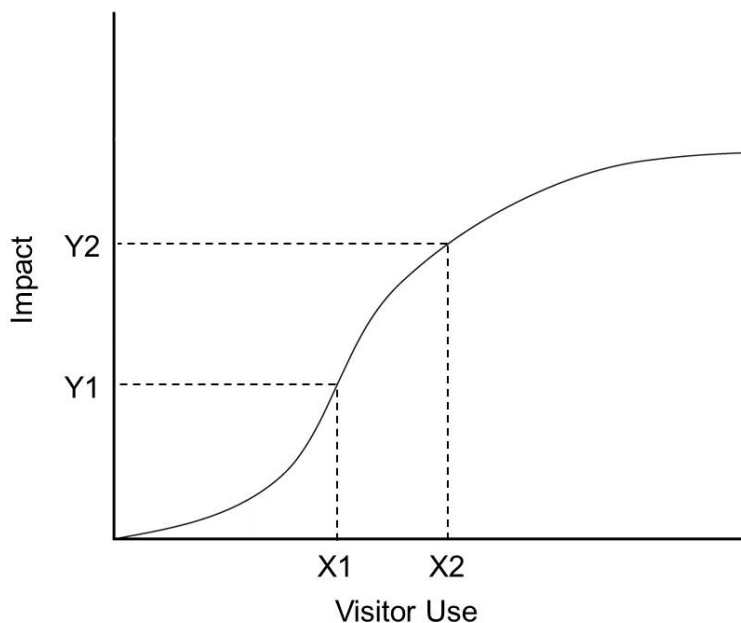


Figure 6.2. The limits of acceptable change.

To emphasise and further clarify the limits of acceptable change and their relationship to visitor capacity, some studies have suggested distinguishing between the descriptive and prescriptive

components of visitor capacity (Shelby & Heberlein, 1984, 1986; Whittaker et al., 2011). The descriptive component of visitor capacity focuses on factual, objective data such as the relationships in Figure 6.2. For example, what is the relationship between the amount of visitor use and perceived crowding? The prescriptive component of visitor capacity addresses the seemingly more subjective issue of how much impact or change is acceptable. For example, what level of perceived crowding should be allowed? Determining acceptable levels of change must form a foundation for park and outdoor recreation management (Principle 3)

6.4.4 Indicators and Standards of Quality

Determining the limits of acceptable change in parks and outdoor recreation is based largely on formulation of management objectives and associated indicators and standards of quality (Manning, 2007; Manning, 2011; Manning & Anderson, 2012). Management objectives are statements about the desired conditions of parks and outdoor recreation, including the level of protection of park resources and the type and quality of the recreation experience. Indicators of quality are more specific, measurable, and manageable variables that reflect the meaning or essence of management objectives; they are quantifiable proxies of management objectives. Standards of quality define the minimum acceptable condition of indicator variables.

An example may help to illuminate these ideas and terms. The US Wilderness Act of 1964 specifies that areas designated by Congress as part of the National Wilderness Preservation System are to be managed to provide opportunities for visitor 'solitude' (16 USC 1131-1136). Therefore, providing opportunities for solitude is an appropriate management objective for most wilderness areas. However, solitude is a somewhat abstract concept that is difficult to measure directly. Research on wilderness use suggests that the number of other visitors encountered along trails and at campsites is important to wilderness visitors in defining solitude (Manning, 2011). Thus, encounters with other groups of visitors along trails and at campsites is a potentially good indicator variable because it is measurable, manageable, and can serve as a reasonable proxy for the management objective of wilderness solitude. Research also suggests that wilderness visitors may have standards about how many trail and campsite encounters can be experienced before opportunities for solitude decline to an unacceptable degree. For example, a number of studies suggest that wilderness visitors generally find no more than five groups per day encountered along trails to be acceptable and wish to camp out of sight and sound of other groups (Manning, 2011). Therefore, a maximum of five encounters with other groups along trails and no other groups camped within sight or sound may be good standards of quality for managing at least some wilderness areas. These standards will vary across use zones, protected areas and countries as influenced by environmental settings, culture and expectations. Formulating management objectives and expressing them in the terms of quantitative indicators and standards of quality is an important part of managing parks and outdoor recreation.

6.4.5 A Threefold Park and Tourism Management Framework

Research and practice in the field of parks and outdoor recreation has evolved from an initial orientation toward resource considerations to include a more comprehensive approach that recognises a threefold framework of concerns. Protected area tourism can be best understood as including three principal components: resources (e.g., soils, vegetation, water, wildlife), experiences (e.g., crowding, conflict), and management (e.g., visitor education, rules and regulations) (Manning, 2011). Moreover, there are potentially important interactions among the components of this threefold framework. For example, impacts to park resources can degrade the aesthetic quality of the recreation experience. Informed management of parks, tourism, and outdoor recreation must take into account all components of the threefold framework and the potential interactions among them.

The organisational and conceptual frameworks outlined above have contributed to the development of a management-by-objectives framework that can be used to guide management of tourism/recreation in parks and protected areas. This approach relies on a series of three primary steps as shown in Figure 6.3:

1. Management objectives and associated indicators and standards of quality are formulated for a park or site within a park. As noted above, management objectives describe desired conditions – the level of resource protection, the type and quality of recreation experiences, and the type and intensity of management – and indicators and standards of quality define these objectives in quantitative, measurable form.
2. Indicators of quality are monitored to see if standards of quality are being maintained.
3. If standards of quality are violated, or are in danger of being violated, then management action is required to ensure that standards of quality are maintained.

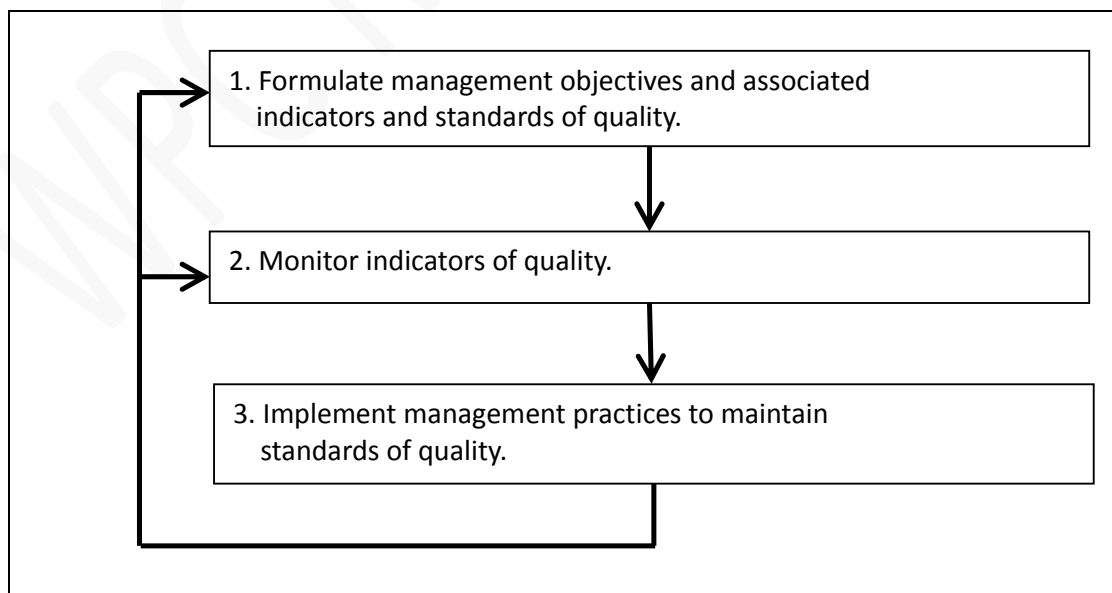


Figure 6.3. A park and tourism management framework.

This management framework takes somewhat different forms in alternative contexts. For example, the US Forest Service uses a framework called Limits of Acceptable Change (LAC) (Stankey et al., 1985), while the US National Park Service uses Visitor Experience and Resource Protection (VERP) (USNPS, 1997; Manning, 2001). Parks Canada has adopted a framework called Visitor Activity Management Process (VAMP) (Nilsen & Tayler, 1997), while a framework called Tourism Optimization Management Model (TOMM) (Manidis Roberts Consultants, 1996) has been developed and used in Australia. While there are some differences in terminology and sequencing of steps, these and related frameworks rely on the three basic steps described above (Manning, 2004). This management framework represents a long-term commitment to management that requires periodic monitoring of indicators of quality, implementation of management actions to maintain standards of quality, and adjustment of management practices based on monitoring data. When circumstances warrant, for example when a management plan has reached the end of its useful life and needs to be revised, management objectives and associated indicators and standards of quality can be reconsidered.

This management framework is built on the concepts outlined in the previous section and Chapter 2. It represents a form of 'adaptive management'; that is it is implemented based on the best information available, but new information is gathered in an ongoing programme of monitoring and research, and management practices are revised in keeping with this new information. It uses management objectives and associated indicators and standards of quality as quantitative expressions of the limits of acceptable change. These limits of acceptable change define the visitor capacity of parks and related areas, and address the inherent tension between recreational use of parks and protection of park resources and the quality of the visitor experience. The framework requires management actions – 'mutual coercion, mutually agreed upon' – as demanded in the context of common property resources. Management objectives and associated indicators and standards of quality can and should be considered for all three of the components of parks and outdoor recreation – the resource, experiential, and management environments. As suggested in ecotourism, the management component can be structured to help ensure that the costs and benefits of parks and outdoor recreation are equitably distributed (e.g., employment of local residents) and that a reasonable share of economic benefits is used for park protection (e.g., allocation of user fees). The configurations of the resource, experiential, and managerial components of parks and outdoor recreation can and probably should be varied to offer a broad range of park and outdoor recreation opportunities as suggested by ROS. This broad range of park and outdoor opportunities can be designed to appeal to an increasingly diverse society. Management objectives and associated indicators and standards of quality can and should be derived from ecological research and knowledge, along with public participation and engagement as suggested by ecosystem management.

The need for integrating different management planning frameworks to provide common guidance was recognized by six U.S. federal natural resources agencies, which have recently formed the partnership entitled the *Interagency Visitor Use Management Council* (visitorusemanagement.nps.gov) (IVUM, 2014). The goal of this partnership is to provide a consistent science-based visitor management framework that is applicable across these agencies supported by communication and training strategies (IVUM, 2014).

Visitor management frameworks have been applied primarily in North America but increasingly in other protected area systems around the world (Brown et al., 2006; McCool et al., 2007; Roman et al., 2007). Moore and Hockings (2013) reviewed over 20 applications of visitor management planning frameworks and the WCPA's Management Effectiveness model in Australia. They found that the framework methodologies helped facilitate the adaptive management of visitor use problems in protected areas, even though there are some barriers due to lack of commitment to sustained implementation. Box 6.3 illustrates another visitor management framework, the World Tourism Organisation's Sustainable Tourism Framework, which is being proposed for implementation at Machu Picchu, Peru, a UNESCO World Heritage Site (Larson & Poudyal, 2012). The process of formulating management objectives, involving stakeholders, selecting meaningful indicators, and developing monitoring strategy is discussed.

Box 6.3. Applying an adaptive tourism management framework to Machu Picchu, Peru



The main attraction point at Machu Picchu. © Rocco Lucia

Machu Picchu, Peru, is among the most famous tourism destinations in the world, but management of the protected area has proven to be challenging and controversial. Multiple regional, state, and international organisations have distinct agendas for site development and conservation, and disputes regarding public access, economic growth, and ecological and cultural preservation are rampant. Tourism at Machu Picchu has therefore evolved into a “messy situation”: a context where conflicting goals, uncertainty, and hostile stakeholder relationships lead to negative consequences (McCool & Moisey, 2008).

One promising solution to this complex problem is an adaptive resource management (ARM) strategy based on the World Tourism Organisation's (WTO) sustainable tourism framework. In an integrative ARM approach, managers synthesise disparate goals and objectives embraced by diverse stakeholders (in this case, the Peruvian government, international conservation organisations, foreign tourists, private tour operators, and indigenous communities) and use these objectives to guide management

and monitoring actions. The basic steps in the ARM process and how they might be applied at Machu Picchu are outlined below.

Defining Management Objectives & Actions

A major criticism of Machu Picchu's existing Master Plan has been the ambiguity of goals and strategies and a conspicuous absence of detail for possible actions. Like other frameworks used to guide decision-making for tourism management (e.g., LAC, TOMM), the ARM approach addresses this concern in several basic steps (Allen et al., 2011). First, managers must define the central problem and a corresponding *fundamental objective* that represents a desired outcome. At Machu Picchu, the fundamental objective might be to maintain the site's value as a unique natural, cultural and economic resource. Next, managers must identify a set of *means objectives* that support the fundamental objective. At Machu Picchu, these objectives might include simultaneously minimizing the impacts and maximizing the benefits of tourism. Other targets or *means sub-objectives* could then be constructed, creating a transparent network structure to help guide the tourism decision-making process at the site. Each means sub-objective is associated with a corresponding set of potential management actions necessary to achieve the desired outcome. The input of all stakeholder groups is critical in the objective specification process (Plummer & Fennell, 2009). Attempts at ARM in other arenas have experienced limited success because they are often generic top-down systems focused around expert opinion, not place-based, participatory planning frameworks guided by local concerns and integrated goals (Schianetz & Kavanagh, 2008).

Selecting Appropriate Indicators

Although the identification of explicit management outcomes is a critical element of ARM, objectives and actions alone are insufficient. A set of measured attributes must also be included to monitor progress and ensure that goals are being met. At Machu Picchu, a range of quantitative and qualitative sustainability indicators based on the WTO (2004) model could be used to measure and monitor progress and direct actions at multiple temporal and spatial scales. Some of these indicators include information that is already available through standard surveillance monitoring, while others would require additional research and data collection. For example, the role of tourism in community development could be tracked through quantitative evaluations of tourism integration (e.g., percent of guides that are locals or percent of hotels operated by locals) or qualitative assessments of community involvement (e.g., stakeholder ratings of perceived collaboration in the tourism planning process). Similarly, the economic benefits of tourism could be assessed by quantitative methods (e.g., daily tourism revenues) or qualitative approaches (e.g., stakeholder ratings of the distributional equity of tourism profits). The Management Committee of Machu Picchu has already identified many potential indicators in the site's comprehensive Master Plan (INC, 2005). However, the Committee has yet to devise a consistent strategy for implementing and monitoring these performance indicators. This stage of adaptive management (monitoring phase) is where many sustainable tourism projects break down.

Monitoring Progress

Indicator monitoring in ARM can help managers detect trends and determine which management practices meet specified objectives. ARM monitoring programmes are most useful when they initiate a particular management option, evaluate its impact, and learn from the results – adjusting management strategies as understanding improves. This learning can occur “actively” by using experimental approaches (e.g., different actions on multiple site units simultaneously) to reduce uncertainty associated with particular outcomes over time. Alternatively, the learning can occur “passively” by focusing on trends and changes in resource conditions with respect to desired objectives using one action at a time (Williams, 2011). The passive approach is probably more feasible in the nascent stages of ARM at Machu Picchu, where managers are under pressure to implement actions that generate an immediate response (e.g. temporary site closures, regulating visitor numbers, altered pricing schemes, archaeological restorations). As information is gathered, sustainability indices that are performing

within their desired range may require no action. On the other hand, indicators revealing unsatisfactory performance outcomes may facilitate a movement toward more promising management alternatives.

Implementing ARM at Machu Picchu

The Historic Sanctuary of Machu Picchu already has many of the essential ARM ingredients in place. The site's Master Plan provides a comprehensive assessment of resources and recommendations for management. The Machu Picchu Management Committee, composed of local to international agencies, has expressed a desire to expand and incorporate a broader range of actors in the public and private sectors. Once open lines of communication are established, Machu Picchu's managers may finally be able to resolve some of the challenges that impede the development of sustainable tourism at the site with a long-term ARM framework that is flexible, open to participatory decision-making, and sensitive to both development and conservation-oriented perspectives. If the ARM approach can be successfully applied in the complex context of Machu Picchu, it could serve as an effective model for sustainable tourism at other ecologically and culturally-rich destinations around the world.

Source: Larson & Poudyal (2012).

6.5 Tourism and Visitor Management Planning Process

As shown in the preceding sections, sustainable visitor and tourism management inevitably entails a management planning process with multiple steps before the best decisions are reached. This process is most explicit and traceable when a management framework, such as Limits of Acceptable Change, is implemented. In a broader context of tourism planning, this section provides two case studies that highlight collaborative, community-based planning processes recently applied to Phong Nha-Ke Bang National Park (Hübner et al., 2014), a UNESCO World Heritage Site in Vietnam (Box 6.4), and a system of protected areas in nine countries through the COMPACT Programme (Box 6.5). Both examples suggest that collaborative planning can be proactive approaches to building community consensus and capacity for managing community resources and the impacts, both positive and negative, from tourism (Principles 6 and 9). More examples of best practices in tourism planning are documented in Melenhorst et al. (2013) and GiZ (2014c). Besides management planning, business planning is also important to protected area tourism as it is directly linked to revenue generation, visitor flow management, and investment needs for infrastructure, services and staff. More discussion on the sustainable finances is provided in Chapter 10.

Box 6.4. Planning Process Case Study: Phong Nha-Ke Bang National Park, Vietnam



A panoramic view of the eastern entrance of the Phong Nha-Ke Bang National Park (Left). © Li Migura. Discussion in a participatory planning meeting (Right). © Maximilian Roth

Described as one of the most important ecological zones in the world, Phong Nha-Ke Bang National Park (PNKB NP) is located in the central Vietnamese province of Quang Binh. In 2003, the park was declared a UNESCO World Heritage Site (WHS) for its geological and geomorphological values, specifically its unique limestone karst formations and cave system. The designation as a World Heritage Site helped promote tourism in the Quang Binh province, with tourist arrivals increasing from 80,000 in 1999 to over 400,000 in 2012.

Rapid tourism development quickly increased pressures on the ecosystems in the region and the communities living within the national park buffer zone who rely heavily on the local natural resources. In 2005, the Vietnamese government began a collaborative development project with the German Federal Ministry for Economic Cooperation and Development (BMZ). The project was implemented in 2007 by the People's Committee of Quang Binh province (PPC) and two German development organisations, the Deutsche Gesellschaft für Internationale Zusammenarbeit, (GIZ) and the Deutsche Entwicklungsbank (KfW), both on behalf the Federal German Ministry of Economic Cooperation and Development (BMZ). The project focused on the core zone of the PNKB NP and the buffer zone, which includes 13 communes and 157 villages. Seeking to alleviate pressures on the region's natural resources, the project sought to create a management plan for the park to protect the biodiversity and ecosystems, support the local population through sustainable development of the buffer zone, and promote sustainable tourism in the park region (Hübner et al., 2014).

Over the course of three years, a participatory process developed the Sustainable Tourism Development Plan (STDP) 2010-2020. The process consisted of several interviews conducted with local stakeholders on issues of public-private partnership, product development, and marketing. Approved by the PPC and serving as the major planning tool for local and provincial authorities, the STDP outlines the future development of tourism in the PNKB NP region and includes management, development, and implementation guidelines.

The project also focused on land use planning, land allocation, and development planning in the buffer zone. The Green Village Development Plan (VDP), a tool to integrate conservation measures and village development planning, also resulted from a participatory process between local villagers, local authorities, and the PNKB NP management board and staff. A series of meetings were held in each village to raise awareness on the conservation of the PNKB NP, WHS status, government wildlife policies, and threats to villagers from environmental degradation (e.g., increased flooding due to soil erosion). Following the meetings and the creation of a working group comprised of local villagers, participatory impact

assessments were conducted to identify current land use and livelihood opportunities, and how such activities impacted park ecosystems and wildlife. Through the impact assessment, priority activities were identified and used to develop a five-year Green VDP on the village and commune levels. Final plans and budgets, once approved by the district, were then integrated into the district's Socio-economic Development Plan.

Within the first few years of the eight-year project timeline, significant collaboration among government authorities, park managers, and local communities resulted in mutually-agreeable management and development plans for the PNKB NP, local enterprises, and communes and villages (Hübner et al., 2014). These plans illustrate how participatory planning processes can simultaneously address the growing need to conserve the valuable resources of the PNKB NP region, support local livelihoods, and sustainably develop tourism.

Sources: GIZ, 2013, 2014a and 2014b, and Hübner et al., 2014.

Box 6.5. The COMPACT Programme

Since 2000, the Community Management of Protected Area Conservation Programme (COMPACT) has explored a process for engaging local communities in the conservation and co-management of UNESCO World Heritage Sites. Specifically, COMPACT builds on the idea that “community-based initiatives can significantly increase the effectiveness of biodiversity conservation in World Heritage sites while helping improve the livelihoods of local people” (Brown & Hay-Edie, 2013, p. 3). The programme is a collaborative venture between the UNDP/GEF Small Grants Programme (SGP) and the United Nations Foundation (UNF). Building on the established model of the SGP, which has approved small grants for conservation initiatives in over 120 countries, COMPACT focuses on achieving the same success at a national scale for globally important protected areas by working with communities in and around World Heritage Sites. Similar to the SGP, COMPACT uses small grants of up to US\$ 50000 to support coordinated clusters of community-based conservation projects. Through the COMPACT assessment and planning process, tourism is often identified as a core component of the local economy, as well as potential threat to the WHS if left unregulated.

The first two phases of COMPACT focused on projects in eight current or proposed World Heritage Sites, spanning nine countries:

- Belize Barrier Reef Reserve System, Belize
- Morne Trois Pitons National Park, Dominica
- Mount Kenya National Park, Kenya
- Sian Ka'an Biosphere Reserve, Mexico
- Puerto Princesa Subterranean River National Park, Philippines
- Mount Kilimanjaro National Park, Tanzania
- Djoudj-Djawaling Transboundary Biosphere Reserve and World Heritage Site, Senegal and Mauritania
- Group of five protected areas in Southwest Madagascar

The geographically large and diverse sites in which COMPACT has implemented initiatives offered an opportunity to employ a landscape approach in a variety of ecological and socio-economic environments. The COMPACT methodology, which is highly participatory in nature, incorporates three components: a baseline assessment, conceptual model, and site strategy. Designed to provide scientific rigor and flexibility for local decision makers, the method establishes a foundation for future monitoring and assessment, including of tourism development and impacts.

For example, over the past decade of COMPACT involvement in Dominica, the number of environmental projects on the island has experienced steady growth. Many communities living near the Morne Trois Pitons National Park (MTPNP) now engage in sustainable tourism activities and COMPACT grantees have taken leadership roles in the National Ecotourism Association and the MTPNP Geotourism Stewardship Council. Repeat analysis since the baseline assessment for COMPACT in 2000 indicates many sites have established practices to promote biodiversity conservation and community representatives have increased capacity to manage the resources and monitor and evaluate projects. The indigenous Kalinago youth are also involved in research and recording of traditional herbs and fruit to create biodiversity initiatives, help diversify tourism in the region, and maintain traditional ecological knowledge of the Carib people. Additionally, although there are no delineated buffer zones around MTPNP as is common with WHS, the nearby village of Cockrane has established its own buffer zone to help protect park resources.

In Belize, the COMPACT baseline assessment focused on the Belize Barrier Reef Reserve System and identified unsustainable fishing and tourism practices as a common threat to the WHS. At the same time, the community assessment identified tourism and fishing as the most important activities to local livelihoods. To help align conservation goals with economic goals, COMPACT helped facilitate the transition

of some fishers to tourism by providing training for tour guides, scuba dive masters, and sport fishing guides. “The involvement of fishers in alternative livelihoods in the tourism sector has significantly reduced threats from tourism activities and facilitated the transition of fishers to the tourism industry” (Brown & Hay-Edie, 2013, p.23). That transition has also generated stewards for the marine resources that now serve as the backbone for both conservation efforts and local livelihoods.

In all eight protected areas, COMPACT has leveraged lessons learned from over 430 implemented projects to track progress over time and develop strategies to encourage conservation from the protected area to local, national, and regional levels. The unified structure for assessment and planning in COMPACT has demonstrated success across several ecosystems and countries and highlights strategies for engaging local communities in the co-management of WHS. Looking ahead, the method developed by COMPACT and lessons learned is being promoted as a toolkit for new initiatives within the World Heritage Convention.

Sources: Brown & Hay-Edie, 2013; GEF Small Grants Programme, 2012; Hay-Edit et al., 2012.

6.6 Community Engagement

As stated earlier, affected groups in tourism or visitor management in protected areas should be engaged as consensus and partnership is needed for implementation of any effective management decisions (Principle 9). The case studies in the preceding section illustrate the utility of community engagement in tourism resource planning. However, the principle of community engagement goes beyond affected communities and can include the public at large who are stakeholders for the future of protected areas. This is particularly crucial for the increasingly urbanised world in which urban inhabitants may be disconnected from protected areas and nature in general (Trzyna, 2014). Community engagement through effective communication channels (Principle 10) can build public support of protected area conservation and management. Box 6.6 provides an excellent example of citizen engagement and environmental education in a nature reserve located in the Talgar Region near Almaty, Kazakhstan. More best practice examples of community engagement are provided in Chapters 8 and 9.

Box 6.6. The role of Almaty Nature Reserve in changing the perception of a protected area among local population in Kazakhstan

Almaty Nature Reserve occupies a territory of 71,700 ha on the northern slope of Transili Alatau, one of the Northern Tyan-Shan mountain ranges. The Reserve has a status of a strict nature reserve of IUCN category 1A and is one of 10 reserves in Kazakhstan. (UNDP, 2011). Flora of the Reserve includes 1,100 species of higher plants, more than 50 species of rare plants including 26 listed in the Red Data Book of Kazakhstan, a publication similar to an endangered species list. Abundant species include wild apricot trees (*Armeniaca vulgaris*), Sivers' apple trees (*Malus Sieversii*), and Kolpakovskiy tulips (*Tulipa kolpakovskiana*). Faunal diversity is very rich with 2,000 species of identified invertebrates and 255 vertebrates, including 3 fish species, 2 amphibians, 6 reptiles, 177 birds and 42 mammals. Mammals include the Tian Shan brown bear (*Ursus arctos isabellinus*), snow leopard (*Uncia Uncia*) and stone marten (*Martes foina*) (Dzhanyspayev, 2006).

The Reserve is an attractive destination from an ecotourism perspective due to its rich biodiversity, pristine ecosystems and proximity to the major metropolis of Almaty (25 km) with more than one and a half million people, modern tourism infrastructure and international airways connections. However, visitation to the Reserve is largely limited to August through October due to tick warning, snow falls, and risks related to avalanches and mudflows in other seasons. Since its establishment in 1931, it did not have public access; only scientists from the research institutions across all Soviet Union could conduct their research on its territory. Some educational visits to the museum of the reserve were organised for the schoolchildren and college students from Talgar town and Almaty's "Station for Young Naturalists".

The town of Talgar, the closest settlement to the reserve, was founded in 1859 and has a population of 50,000 people (Akimat, 2012). Protective measures lead to the formation of a negative attitude among local population. It was due to the fact that prior to the establishment of the reserve, locals could come to the mountains freely for leisure, and berry, mushroom and fruit-picking which contributed significantly to family budgets. Therefore, the main challenge for members of staff was to change the perception of the protected area among the local population. The locals needed to see the reserve as a necessary element for the protection of nature and have a positive image of it. The chosen strategy to achieve the set goal included three components: environmental, educational and public.

The *environmental* component relates to the main purpose of establishing the Reserve - to protect natural mountain complexes of the Transili Alatau, including its flora and fauna. The *educational* component includes close collaboration with the schools in Talgar. For example, members of staff of the reserve reached an agreement with local schools to incorporate teaching hours in subjects such as biology, ecology, nature study by the members of staff of the reserve as well as planned visits to the reserve's museum. The tandem between teachers and members of staff helped improve environmental education for schoolchildren and used the Nature Museum of the reserve as a place for children's practical lessons, where they studied animals and plants of the area. The schoolchildren are also involved in the "March for Parks" annual action which will be described below. The *public* component consists of important initiatives such as "March for Parks", an organisation of ecological camps and activities. The public component also includes working closely with the media and public bodies and producing publications, leaflets and brochures.



A Reserve educator shows children rare plant species in the Nature Museum. © A. Vishnevskaya

Since 1996, members of staff of the Reserve have taken an active part in the international rally “March for Parks”, which include activities such as ecological fora, seminars, round tables, open classes, ecological crews, tree planting, participation in exhibitions, video shows, and excursions to the Nature Museum in Almaty Nature Reserve. This initiative has grown from a one day event to a large scale event of national significance that attracts considerable media attention and reaches more than 10,000 people in two months. A competition among all protected areas of Kazakhstan is held for the best initiative in the “March for Parks” rally. In 2010 Almaty Nature Reserve won the first prize from the Ministry. In 2011 members of staff of the Reserve received another award – for the best film about the reserve.

In 2003, the first ecological camp hosted 100 students during the month of August. Since then, the Reserve welcomes ecotourists every year. The number of participants varies each year. Children who come to ecocamp not only enjoy outdoor living in tents, but also learn a lot about the flora and fauna of the reserve from the daily classes given by the members of staff of the reserve. At the end of their stay, children share their impressions of participating in the ecocamp in their drawings, questionnaires and stories to family members and peers.

The ecological club “Talhis” has existed in the reserve since 2002. Its main activities are directed towards raising ecological awareness among youth, working with local communities and attracting attention of the relevant bodies to the environmental issues. For example, in 2012 more than 10 events were conducted, including a round table in the Central Library of Talgar, forest fire presentations in Maralsay gorge, a “Birds Day” in private Issyk zoo, “Day of snowdrops”, Earth Day, and an ecological rally dedicated to the Victory Day. Some activities are planned and conducted in partnership with the bordering Ile Alatau National Park.

In more than 10 years, members of staff of Almaty Nature reserve were successful in forming positive images of the protected area among the local population. Support from the local communities is vital for the development of ecotourism in protected areas and cannot be underestimated. Currently, more than 50% of the population speaks favourably of Almaty Nature Reserve. These results were achieved by close and systematic work with schools and colleges, regular presence in local and national media, conducting different activities such as “March for Parks”, ecological camps as well as participating in implementation of ecological projects with international organisations.

The members of staff of the reserve will see their work successful if the population of Talgar develops a more positive attitude to the protected area. The plans include developing responsible ecotourism, continuing educational work and building partnerships. These include the production of films, active engagement in social media, and continued work with schools and colleges with the use of innovative technologies such as interactive mobile boards. Other plans include developing partnerships with the protected areas and higher education institutions worldwide, participating in global international projects and playing an active part as members of international environmental organisations. Some opportunities for collaboration include students' field work in collaboration with the departments of zoology, botany, geology, geomorphology of higher education institutions globally (e.g., "Endemics of Transili Alatau" or "Geomorphological features of Almaty Nature Reserve").

6.7 Management Planning for Commercial Tourism and Individual Visitors

Protected areas need to manage the planning, development, operation and decommissioning of tourism activities in order to ensure that development is sustainable. This means that the integrity of the natural resources is not undermined by tourism infrastructure or activities, the livelihoods of local people do not deteriorate (and are in fact enhanced), and the local economy is strengthened. Managers of protected areas may address two main areas of management: commercial tourism and individual visitors.

6.7.1 Commercial tourism management

In the preparation for inviting commercial tourism operations into protected areas, park management authorities may wish to identify and outline the commercial opportunities that exist, and to describe how they could be implemented (Thompson, 2009). The protected area agencies may also undertake pre-feasibility studies to establish the viability of concessions, and any areas that need more detailed analysis (Varghese, 2012).

Subsequently, the process of commercial tourism development involves three main constructs (Eagles et al, 2002):

- (1) **Policy and legal framework** for contracting commercial operations outlines best practices for how programmes are defined and regulated;
- (2) **Prospectus development process** outlines how commercial opportunities are defined, structured, priced and brought to the market and how suitable operators are selected; and
- (3) **Contract management** and oversight outlines best practices for how contracts are managed once an operator is in place.

The **policy framework** generally refers to public administration guidelines and implementation strategies that satisfy both public interest and respond to collective needs such as poverty reduction, land ownership, extent of private sector involvement, sustainability components, biodiversity and environmental management, local communities' rights, and high-quality visitor

experience. The **legal framework** refers to the hierarchical set of valid and effective rules and regulations governing specific subjects (Spenceley & Casimiro, 2012).

The **prospectus development** outlines how commercial opportunities are defined, structured, priced and brought to the market and how suitable operators are selected. The prospectus acts as a guide for the agency responsible for managing the commercial opportunity process. It outlines aspects of the procurement phase, including stages of requests for proposals, choosing bidders and negotiations with them (Spenceley & Casimiro, 2012).

Once a commercial agreement has been agreed, and a contract signed, there may be a lengthy period of time (e.g. 10-30 years) during which the concession is managed. The management of the contract not only relates to the technical clauses within the agreement between the parties, but also in the relationship between them. During this period the protected area management authority needs tools and mechanisms to: (1) manage and monitor the commercial operation, to ensure that performance is satisfactory, and (2) provide incentives for high standard operators.

A commercialisation manual can be a useful tool to guide the management of the process, by giving clear information to all parties on how each element of the contract should be conducted. Elements that can be included in such tools include the following principles (SANParks, n.d.):

- **Contract terms** (including obligations, rights, term, options for renewal, transfer of rights, risks, conflicts, intellectual property)
- **Project life cycle**
- **Communication channels**
- **Environmental and conservation requirements** (including integrated environmental management; environmental control officers; cultural and natural resources; biosphere manipulation; game control; monitoring and research; patrols; numbers of beds; water; fire management; traversing; problem animals; alien biota; firearms; staff issues; aircraft and vehicles; game drive procedures; off road driving; guided walks; codes of conduct; safety)
- **Technical infrastructure management** (including construction and design; power; water extraction; communications infrastructure; waste management; roads and tracks)
- **Environmental and technical monitoring mechanism** (construction and operation)
- **Social and empowerment requirements** (including shareholding, training and promotion, business opportunities for local communities)
- **Financial and contractual requirements** (including concession fees, minimum rental, fixed fees, annual fees, monitoring)
- **Breaches** (including financial, empowerment, and environmental breaches, and processes for remedial action – contact, final letter, performance bond, formal notice and termination).
- **Fixing fines and penalties**
- **Code of conduct** (including working relationships with concessionaires, permanent and temporary residents)
- **Background information:** Protected area policies and regulations; Templates for reporting; Templates for applications

6.7.2 Individual visitor management

Managing independent visitors also requires attention from protected area managers. Certain basic facilities need to be in place to support visitors (e.g. information, signage, roads and trails, ablutions, waste disposal facilities, and rules or codes of conduct).

The quality of visitor experiences can be monitored easily through feedback forms, which can be provided through cards that visitors complete during their visit, or through online questionnaires. PAs can use this information to highlight any areas that are underperforming (e.g. in terms of maintenance, cleanliness etc.) and also to invite suggestions for how the visitor experience can be enhanced (e.g. with improved interpretation, facilities etc.). Furthermore, if adequate personal information is collected for each visitor, they can be integrated into marketing and promotion campaigns, for example by sending information to them on special offers, new attractions and experiences.

Of course errant behaviour by visitors also needs to be managed and monitored, to ensure that tourists do not damage the environment, for example through littering, speeding, trampling off trails, or illegally harvesting flora and fauna. Managers may wish to establish a series of checks and balances to identify, correct and penalise behaviours that are contrary to the rules and regulations of a protected area.

By ensuring that tourists have enjoyable experiences, that exceed their expectations, protected areas can improve their opportunities for word-of-mouth advertising among the friends and family of those who visit.

6.8 Guidelines

A list of guidelines is provided below to summarise the discussion points in this Chapter:

- The overarching precautionary principle and ten management principles provide critical guidance for protected area managers who must balance conservation and visitation/tourism goals. These principles should be reflected in planning and management decisions.
- The concept of visitor capacity helps conceptualise the management challenge of balancing visitation and conservation in protected areas, but its utility in protecting resources and visitor experience has been limited.
- Management frameworks offer an effective mechanism to incorporate and implement management principles. A number of frameworks have been developed which share common elements. Full implementation of a management framework requires consistent commitment and significant resources. Protected area managers without such conditions may still apply the logic and most critical elements of these frameworks to support their decision making.
- Collaborative planning of protected areas for tourism can help build community consensus and capacity to manage tourism resources and associated impacts, both positive and negative.
- Community engagement is important not only for affected communities but also the public at large. Engaging the public effectively will go a long way in support of protected area management goals in different ways.

- A clear commercialisation manual with all essential elements is most critical in guiding all phases of commercial tourism development and operations.
- Management of individual visitors should be guided by management principles. Expectations and behaviour standards should be communicated to visitors effectively to enhance compliance and ensure the quality of visitor experience.
- Encouraging a broad range of visitors through advocacy and support across demographics

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7. Management and Monitoring Strategies

7.1 Introduction

Management principles, frameworks and processes, as presented in the last chapter, are the building blocks for proactive and adaptive management of visitation in protected areas. Different protected areas may find one of the management frameworks more feasible, or they may develop a management model appropriate for their contexts. Regardless the management framework or process used, its consistent implementation can result in informed, traceable and defensible management decisions, including broad strategies and more specific actions, practices and tools. This chapter starts with an overview of management strategies, including basic concepts and classification. More specific management tools are discussed in Chapter 8.

An essential component of any application of management framework or strategy is a commitment to sustained monitoring, which is a coordinated effort to track current conditions and evaluate efficacy of management action. This chapter provides general guidance on management and monitoring strategies with a number of case studies from different continents.

7.2 Management Strategies

Management of tourism and recreation use in protected areas is commonly classified in two ways (Manning & Anderson, 2012). One classification system is based on strategies – basic conceptual approaches that relate to the achievement of desirable objectives. Strategies describe the ways in which management practices work rather than the management practices themselves. The second classification is based on the commonalities among specific management practices and tools (Cole et al., 1987; Anderson et al., 1998; Manning & Anderson, 2012).

7.2.1 Demand and Supply

This classification of management strategies consists of *four* basic strategies. Two of them manipulate supply and demand: the supply of tourism opportunities may be increased to accommodate more use and/or spread use more evenly; or, the amount of tourism and recreation may be limited through restrictions or other approaches. The other two basic strategies treat supply and demand as fixed, and focus on reducing the impacts of use by modifying visitor behaviour, or enhancing the ‘resistance’ of parks and protected areas (Fig. 7.1).

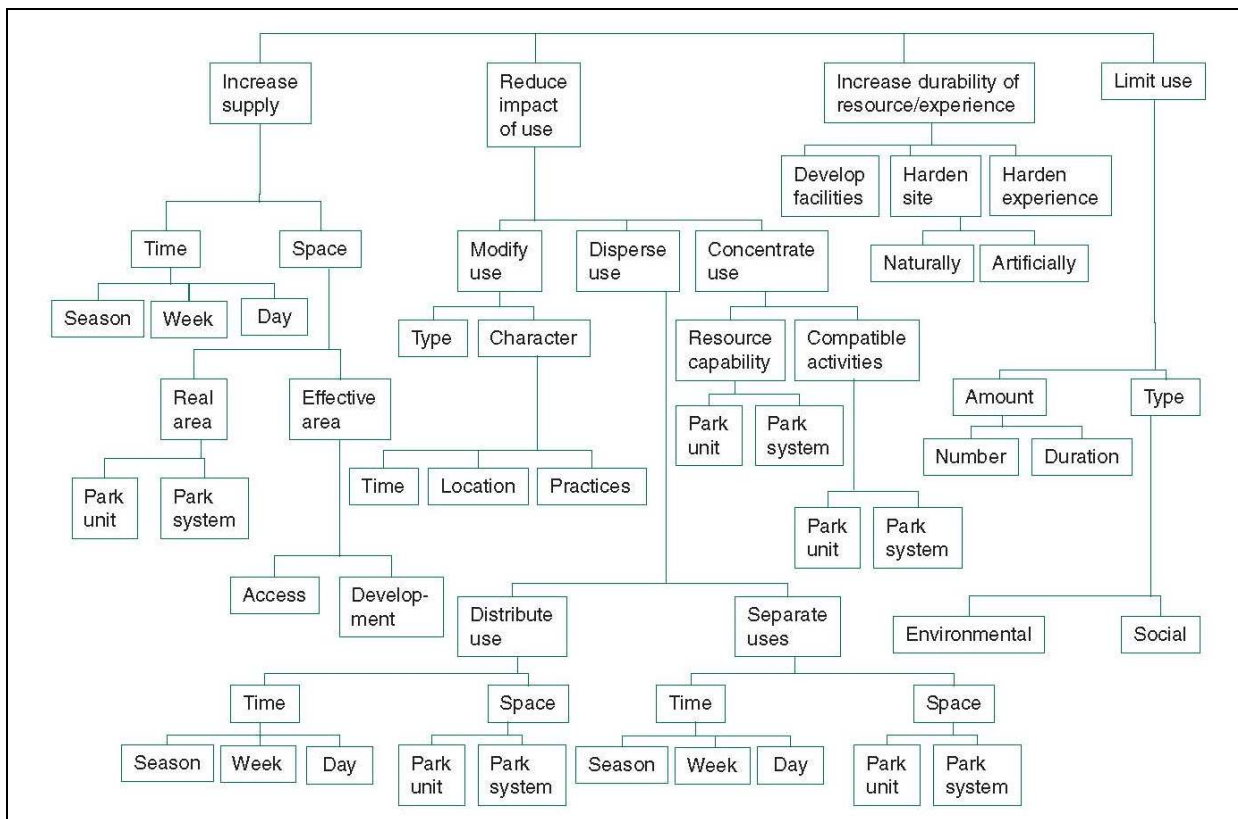


Figure 7.1. **Strategies for managing tourism and visitor use.** (Manning & Anderson, 2012)

Within the first of these basic strategies – increasing the supply of tourism opportunities – there are several distinct sub-strategies. Supply can be increased in terms of time or space. With respect to time, the use of parks and related areas is typically concentrated in a small percentage of all potentially available days and hours. If some peak use can be shifted to lower use periods, then some of the pressure of overuse might be relieved. The more traditional way to consider increasing supply is through expansion of the area available for recreation (e.g., more and/or larger parks, more developed facilities).

Reducing recreation demand or limiting the amount of use parks and protected areas receive is a second basic strategy for managing tourism. Again, several sub-strategies are available (Fig. 7.1). A limit may be placed on all recreational uses. This limit may be indirect, through the regulation of lengths of stay, which excludes as few users as possible, or be more direct, through the imposition of use ceilings. Alternately, managers may focus on limiting selected types of uses, which have high impacts.

Treating demand and supply as fixed, a third strategy for managing recreation and tourism use of parks focuses on reducing the impact of recreational use through modifying use patterns or activities (Fig. 7.1). Use patterns may be altered through encouraging more concentrated or more dispersed use. Recreation may be concentrated in areas where natural resources such as soil and vegetation are relatively resistant to impacts. It may also be concentrated based on compatibility; users with similar activities, values and motivations may be grouped or concentrated together. Dispersing recreation relies on the philosophy of distributing use so that no one area receives an

unacceptable level of impacts. Managers may focus on distributing use over time or space. Selected recreation activities may have to be reassigned elsewhere or eliminated from a park altogether due to excessive environmental or social impacts. An alternative is to modify the character of recreation use. In this way, potentially damaging activities might not have to be eliminated, but rather altered with respect to their timing (e.g., limited to the dry season), location (e.g., restricted to areas below tree line), or practices (e.g., elimination of campfires).

The last basic strategy for managing recreational use involves enhancing the resilience and resistance of parks and protected areas (Fig. 7.1). Resources may be hardened to bolster their resistance to recreational impacts. This may be done in a semi-natural fashion, through such means as planting hardy species of vegetation, or in a more artificial way, through engineering practices such as surfacing heavily used sites.

7.2.2 Management Practices

A second way to classify tourism and recreation management is by management practices – actions or tools applied by managers to accomplish the management strategies outlined above. Restrictions on length of stay, differential fees, and use permits, for example, are management practices that can advance the strategy of limiting tourism or recreation use. Six broad categories of management practices have been identified: 1) information/education, 2) use rationing and allocation, 3) rules and regulations, 4) law enforcement, 5) zoning, and 6) site design/facility development/maintenance (Cole et al., 1987; Anderson et al., 1998; Manning & Anderson, 2012). All of these management practices have been effective. They are often classified according to the directness with which they act on visitor behaviour (Table 7.1). Direct management practices act directly on visitor behaviour, leaving little or no freedom of choice (e.g., rules and regulations). Indirect management practices attempt to influence the decision factors upon which visitors base their behaviour (e.g., information/education). As an example, a direct management practice aimed at reducing campfires in a wilderness environment would be a regulation barring campfires, and enforcement of this regulation. An indirect management practice would be an education programme designed to inform visitors of the undesirable ecological and aesthetic impacts of campfires, and to encourage them to carry and use portable stoves instead. The relative advantages and disadvantages of direct and indirect recreation management practices have received substantial attention. Generally, indirect management practices are favoured, but when these prove ineffective, direct approaches are necessary (Hall & McArthur, 1998; Manning & Anderson, 2012). More elaborate discussion on specific management tools illustrated with case studies is provided in the next chapter.

Table 7.1. Example of direct and indirect management practices.

Type	Examples
<i>Direct</i> (Emphasis on regulation of behaviour; individual choice restricted; high degree of control)	<ul style="list-style-type: none"> • Impose fines • Increase surveillance of area • Zone incompatible uses spatially (hiker only zones, prohibit motor use, etc.) • Zone uses over time • Limit camping in some campsites to one night, or some other limit

	<ul style="list-style-type: none"> • Rotate use (open or close roads, access points, trails, campsites, etc.) • Require reservations • Assign campsites and/or travel routes to each camper group in backcountry • Limit usage via access point • Limit size of groups, number of horses, vehicles, etc. • Limit camping to designated campsites only • Limit length of stay in area (maximum/minimum) • Restrict building campfires • Restrict fishing or hunting • Require or encourage visitors with guides
<i>Indirect</i> (Emphasis on influencing or modifying behaviour; individual retains freedom to choose; control less complete, more variation in use possible)	<ul style="list-style-type: none"> • Improve (or not) access roads, trails • Improve (or not) campsites and other concentrated use areas • Improve (or not) fish and wildlife populations (stock, allow to die out, etc.) • Advertise specific attributes of the area • Identify the range of recreation opportunities in surrounding area • Educate users to basic concepts of ecology • Advertise underused areas and general patterns of use • Charge consistent entrance fee • Charge differential fees by trail, zone, season, etc. • Require proof of ecological knowledge and recreational activity skills

Source: Manning & Anderson, 2012.

7.3 The Integrated Role of Monitoring

Monitoring entails repeated assessments of environmental and social conditions of a protected area for certain specified purposes, which commonly include science, education, management and/or community development. Monitoring is a common activity in protected areas, although its focus is often biased toward ecology and natural resources. Indeed, numerous monitoring programmes exist with the purpose of monitoring physical and biological phenomena. Data and knowledge derived from them have proved invaluable in understanding the patterns, processes and interrelationships in nature. Most endangered species protection programmes are accompanied by committed monitoring programmes. Less common, however, is monitoring programmes that are intended to directly support sustainable tourism and visitor use in protected areas. This section focuses on this specific type of monitoring, illustrated with a range of examples from different continents.

Best practice management of tourism and recreation visitation in protected areas benefit from timely information that is relevant to managers in making decisions. Monitoring does not guarantee effective management if the quality of monitoring data is sub-standard, or if monitoring results are not properly communicated or utilised (Miller & Twining-Ward, 2005). However, without the support of monitoring tourism and visitor management would have lower chance to be effective and adaptive. Consequently, monitoring should not be viewed as luxury, it is an indispensable part of any proactive or adaptive management. It is an integral part of all contemporary frameworks discussed in Chapter 6.

Monitoring may sometimes be viewed as an expensive effort that is unaffordable to protected areas with low budget or staffing. Depending on the indicators to be monitored, some monitoring programmes are indeed costly. However, monitoring is not always expensive as it can be designed or implemented at different levels. The cost can be further reduced through the participation of community volunteers, visitors or tour/concession operators in data collection (Miller et al., 2012).

To ensure successful implementation of monitoring that yields useful information, monitoring programmes should have a direct tie to management needs. For example, the indicators should be directly related to the management objectives and protected area values which are the very reason why the protected area exists. Chapter 2 provides a concise discussion of such values, which include biodiversity, ecological, cultural and recreation. For example, a monitoring programme developed for an IUCN Category II protected area would likely focus on biodiversity, conditions of tourism infrastructure and visitor experience, while a monitoring programme for an IUCN Category VI protected area would likely include multiple social and economic indicators.

There are several key areas of monitoring need common to protected areas, including the resource base, infrastructure, use, impacts, and experience. Each area is discussed concisely in the following sections.

7.4 Monitoring Strategies

7.4.1 Basic considerations

To ensure an effective and sustained monitoring programme with useful outputs, managers should consider the following questions (Eagles et al, 2002):

1. *Why monitor* – Is monitoring intended to detect long-term resource or use trends, supporting a management framework, or short-term efficacy evaluation of a management strategy or tool?
2. *What to monitor* -- What indicators are clearly linked to protected area values or directly relevant to management decision making? What type of impact (environmental, economic, social, cultural) is most important? Comparing input (e.g., amount of visitors, tourist behaviour) and output/outcome indicators (e.g., economic benefit, visitor experience or ecological impact), what is most critical for managers to track if monitoring for both types of indicators is not feasible?
3. *Where and when to monitor* – Should monitoring take place in most sensitive habitats or areas that show signs of rapid change? Should monitoring take place in only in the sensitive seasons (e.g. breeding season for birds) or throughout the year to evaluate seasonal changes? What indicators should be monitored more frequently than others? What should trigger a change in monitoring frequency?
4. *Who should monitor* – Should data be collected by managers such as wardens or rangers? Or should it be done by academic researchers? Can some or all parts of a monitoring programme be run by a local community? What agency and community capacity does a protected area have to support a sustained monitoring programme? What level of training is needed to ensure data quality? Can the data be reported by tour or concession operators?

Thorough consideration of these questions would go a long way in ensuring the benefits of monitoring that is kept at reasonable cost. Numerous guidelines and handbooks are available to provide examples of monitoring methodology and programmes (e.g., Hornback & Eagles, 1999; WTO, 2004; Miller and Twining-Ward, 2005). Readers are encouraged to consult these resources in addition to reviewing the following discussion.

7.4.2 Tourism infrastructure

Best practice in any environmental impact management programme of tourism infrastructure necessarily involves monitoring; and effective ecological monitoring is itself relatively expensive. To monitor the impacts of treated sewage outflows into an ecologically significant creek system, for example, with sufficient detail to detect ecological threats, requires frequent and year round measurements of physical parameters such as turbidity, chemical parameters such as nitrogen and phosphorus, microbiological parameters such as faecal coliforms and particular protozoa and bacteria, and populations of any threatened fish and macroinvertebrate species such as crayfish. These parameters need to be measured at control as well as impact sites. Zhangjiajie National Park in China, for example, contracted a nearby university to establish and operate a water quality monitoring laboratory inside the park, to track all these parameters both upstream and downstream of various visitor toilet facilities.

Monitoring diffuse impacts is less straightforward. Effective management of any new invasive plant or animal species, for example, generally depends on detecting the very first individuals when they are initially introduced. This is the principle underlying border quarantine procedures. National quarantine agencies, however, have both the legal power and the financial resources to search every person at every entry point. They also have networks of primary industries inspectors continually searching for species which escape this screening process. Even so, they are still only moderately effective. For a protected area, monitoring for new invasive species requires continual vigilance by rangers or other field staff with sufficient taxonomic expertise to recognise non-native species, even when they are cryptic. The only sign of feral cats, dogs or foxes, for example, may be the remains of kills and an occasional scat. Introduced rats and mice may be detected only through routine trapping, until they reach ineradicable plague proportions. Invasive plants may not be detectable until they flower and set seed. Invasive pathogens may not be detected until they have widespread effects on native plant or animal species. These difficulties are even more severe in marine protected areas, where a variety of vessels can discharge untreated human waste and untreated ballast water, largely undetected. Large scale tourist infrastructure commonly leads to greatly increased boat traffic; and even if onshore pump out facilities are provided, they are not always used, especially if fees are charged.

7.4.3 Tourism resources

Sustainable tourism and visitation in protected areas is dependent on the integrity and condition of natural resources, including physical landscapes and the biodiversity contained within. Results from natural resource monitoring provide input to tourism management decision making,

especially those natural resource elements that: 1) afford tourism or recreation opportunities, 2) contribute to visitor experience or 3) are directly affected by tourism and visitor activities. Box 7.1 provides an example of tourism resource (wildlife) monitoring programme in Namibia that was primarily motivated by tourism.

Box 7.1. Community-based natural resource monitoring in Namibia: The Event Book System



Antelopes (*Oryx* spp.) moving on a conservancy land in Namibia. © Ralf Buckley

Community-based natural resource monitoring

Community-based natural resource monitoring (CBNRM) is a form of public participation in natural resource management (Conrad & Daoust, 2008). In more general terms, community-based monitoring can be defined as “a process where concerned citizens, government agencies, industry, academia, community groups, and local institutions collaborate to monitor, track, and respond to issues of common community concern” (Whitelaw et al., 2003). CBNRM is different from traditional natural resource monitoring programmes since it allows local community members to determine which aspects of the resource should be monitored and often involves public participation in data collection and analysis (Stuart-Hill et al., 2005).

CBNRM in Namibia

CBNRM was introduced in Namibia as a solution to illegal poaching as well as promoting tourism opportunities and supporting wildlife preservation. In 1983 conservationists began to recruit poachers to become game guards who protected game species and reported illegal poaching. In 1996 the establishment of conservancies started the CBNRM movement, giving certain rights to communities to benefit from wildlife on communal land (Ashley & Barnes, 1996). The early monitoring systems central to these conservancies were designed by external experts, data was collected by conservancy members, and analysis was performed by external experts. Results were often not returned to the conservancies, or were returned with lengthy delays (Stuart-Hill et al., 2005). The low sustainability in these early conservancies is attributed in part to the lack of full involvement of local conservancy members.

The Event Book System

The CBNRM programme known as the “Event Book System” was implemented in Namibia in 2000 to create more sustainable conservancies. In the Event Book System members of the local community decide what to monitor, collect data, and perform all analyses. Data collected are retained by the community, are collected annually by the Ministry of Environment and Tourism, and used in decision making for natural resource management at local and national levels (Stuart-Hill et al., 2005).

Monitoring indices are determined during a workshop involving both community leaders and community rangers, in which a brain-storming session is followed by an in-depth discussion of the community's priorities for natural resource management. After the monitoring indicators are determined, standardised binders are distributed for data collection. These binders contain colour-coded sheets to avoid confusion between levels of data: yellow sheets are provided for data collection, blue sheets for reporting within one year, and red sheets for tracking long-term trends (Stuart-Hill et al., 2005). Blue sheets are collected regionally each month, and transferred to long-term reporting charts at the end of each year. Conservancies go through an annual audit by external stakeholders and data is collected with permission from conservancy members. Original data belongs to the conservancy and never leaves the conservancy (Stuart-Hill, 2011).

Conservancies within the Event Book System generally have three levels of institutional hierarchy including community rangers, a natural resource supervisor, and a conservancy manager or elected chairman. Local knowledge is combined with scientific knowledge of external experts to form sound data collection, reporting, and analysis of natural resources with local relevance (Stuart-Hill et al., 2005). This multi-level structure is believed to contribute towards the sustainability of the programmes.

Sustainable practices in community-based monitoring

The Event Book System is considered an example of sustainable CBNRM. As of 2010 there were over 50 programmes in Namibia (Boudreaux & Nelson, 2011), and has been implemented in Mozambique, Tanzania, Botswana, and Cambodia (Stuart-Hill, 2011). While some have used it as an example of the one of the world's longest-running payments for ecosystem services schemes (Naidoo et al., 2011), others have questioned the transfer of socioeconomic benefits to the community (Boudreaux & Nelson, 2011; Collomb et al., 2010).

Through this and other examples of CBNRM, several points can be identified which may contribute towards the creation of sustainable CBNRM programmes:

1. **Community involvement** is required at all stages of the planning and implementation process.
2. **Multi-level implementation** of CBNRM programmes potential for multiple levels of stakeholders to collaborate on CBNRM projects.
3. **Simplification and standardization of methods** improves the accessibility and transparency of CBNRM programmes. Low technology methods are widely accessible in more remote locations. Clear methods and description of responsibilities can improve programme implementation.
4. **Motivation of local community members** is a precursor for the success of a CBNRM programme.

7.4.4 Tourism and visitor use

The amount, type and distribution of recreation and tourism visitation are fundamental data for protected areas, although such data are not routinely or systematically collected in many protected areas (Hornback and Eagles, 1999). Some of the most common visitor or tourist use variables include:

- **Visit count** – the number of individual visitors entering or leaving a protected area regardless of the length of stay
- **Visitor nights** – the count of persons staying overnight in a protected area
- **Visitor hours** – the total length of time, in hours, that visitors stay in the protected area

- **Visitor days** – the total number of days that visitors stay in the protected area
- **Visitor spending** – the total consumption expenditure made by a visitor, or on behalf of a visitor for goods and services during his/her trip and stay at a protected area

Hornback and Eagles (1999) produced a useful set of guidelines for visitor use monitoring. They identified five general levels of public use data reporting: the initial, basic, intermediate, developed and advanced levels. As the level increases there is an associated increase in cost and staff time, but it also results in data with higher accuracy and greater detail. The choice is largely based on the extent to which tourism is a key management objective, output and outcome indicators desired and constraints such as funding and staffing. Other useful references on visitor use monitoring methods and long-term monitoring programmes include Watson et al. (2000) and Capozzi and Taylor (2014). Box 7.2 provides one of the most elaborate examples of visitor use monitoring programmes developed by Nordic and Baltic countries.

Box 7.2. Standardised visitor monitoring: A coordinated effort between Nordic and Baltic countries



Concentrated trail-based activity in Tyresta National Park, Sweden (Left). © Yu-Fai Leung. Dispersed bog shoeing activity in Soomaa National Park, Estonia (Right) © Mark Ballantyne

Visitor information is essential to protected area management, including resource protection, ensuring quality visitor experiences, participatory planning processes, and policy development. Planning and policy decisions are two examples where regional, national, and international visitor data can play an important role. However, many methods and technologies exist to gather visitor information at the site-level, often making comparisons across sites, agencies, and countries difficult. Established guidelines for monitoring visitor use in protected areas can help identify common methodologies, key indicators, and standard reporting criteria to allow for the comparison of reliable data at multiple spatial and temporal scales.

The “*Visitor Monitoring in Nature Areas: A Manual Based on Experiences in the Nordic and Baltic Countries*” represents one of the first coordinated efforts between multiple countries to develop complementary visitor use data collection and reporting measures. Funded by the Nordic Council of Ministers and the Swedish Environmental Protection Agency (Naturvårdsverket), the manual details common methods and recommendations of key indicators for onsite visitor monitoring and suggests

results reporting formats for protected areas in the Nordic (i.e., Sweden, Finland, Norway, Denmark, and Iceland) and Baltic (i.e., Estonia, Latvia, and Lithuania) countries.

Key indicators important to protected area management and relevant at multiple scales include visitor counts, profiles, activities, expenditures, motivations and satisfaction as well as trip characteristics (i.e., duration, distribution). Model survey questions are also included to assist with rapid survey development and standardization of questions of international importance for comparison. Result reporting for established methods also suggests using detailed data rather than categories for easier comparison. For example, recording age in broad categories limits the ability to compare across sites or countries if different categories are employed. Instead, the actual age in years more readily allows for comparison across sites.

The manual has been published in English, Swedish, Finnish, Estonian, and partly into Norwegian for implementation across the Nordic-Baltic region, with example visitor monitoring efforts from protected areas around the region. For example, the Natural Heritage Service (NHS) division of Metsähallitus, the managing agency of state-owned protected areas in Finland, implemented a visitor monitoring programme in over 400 of the country's protected areas. The programme consisted of continuous visitor counting in protected areas (e.g., national parks, national recreation areas, wilderness areas) and a visitor survey conducted every five years using harmonised guidelines from Metsähallitus and the manual.

Over 2.1 million visits were recorded for national parks alone in 2012. Data are stored in ASTA, an NHS database system containing uniform survey and visit information. The database enables comparisons between site specific protected areas and the country as a whole, tracks economic impacts and overall visitor satisfaction at both the site and national level, and allows for the integration into other databases to ensure broadly and openly disseminated data. Results from the coordinated visitor monitoring efforts across Finland have identified and accounted for differences in amounts of visitation, visitor profiles and visitor segmentation across its protected area system. Future efforts will integrate ASTA data with visitor data from RMK's KÜSI, Estonia's forest management agency's visitor information database, as a step toward international comparisons.

Sources: Kajala (2007), Kajala et al. (2009) and Kajala (2013)

7.4.5 Visitor impact monitoring

Visitor activities and behaviour can exert significant pressure and ultimately induce undesirable changes in facility, natural resource and landscape conditions (Newsome et al., 2013; Hammitt et al., 2015). There are a variety of impacts that can result from visitor use and behaviour. Common impacts include ground vegetation due to excessive trampling, tree and shrub damage, deteriorating conditions of formal recreation infrastructure such as visitor attraction sites and trails, proliferation of visitor-created trail networks and sites and resulting habitat disturbance and fragmentation, inappropriate visitor interactions with wildlife, introduction of exotic species (Monz et al., 2010; Pickering et al., 2010; Leung, 2012; Barros et al., 2014). Some of these impacts, such as soil compaction, are severe in intensity but its ecological consequences are localised. In contrast, some forms of visitor impacts, such as wildlife disturbance and trail-associated habitat fragmentation can be spatially extensive and/or long term (Reed and Merenlender, 2008; Leung et al., 2011; Ballantyne et al., 2014). From the visitor experience perspective, visitor impacts at both local and broad scales can influence the quality of experience. As a result protected area managers are generally concerned about visitor impacts. Monitoring can yield objective information for

managers to track visitor impact problems over time and evaluate management actions taken to reduce the problems.

Indicators for monitoring visitor impacts have been developed for a wide variety of ecological facility components (Buckley, 2003; WTO, 2004). Table 7.2 provides a summary of common foci and methodologies in visitor impact monitoring programmes. Monitoring can be focused on the recreation infrastructure, which is supposed to sustain visitor impacts through design and management. Ecological resources can also be the focus of visitor impact monitoring efforts, especially for sensitive landscape, habitats or species. Visitor use and behaviour can be monitored to evaluate impact-causing behaviour, such as littering and off-trail walking. The selection of monitoring focus and specific indicators is largely dependent on the management objectives. Some indicators, such as soil erosion are common across regions or ecosystems, while others, such as disturbance of certain wildlife species and unique tourism infrastructure, may be region-specific (Leung, 2012).

Low cost programmes typically involve repeated photographs taken from the same location of concern, often referred to as the photopoint (Lucey & Barraclough, 2001; Augar & Fluker, 2014). Changes in resource condition can be detected or quantified by comparing a series of images over time. Mid and high cost programmes require field equipment such as GPS unit, infrared cameras, measuring tapes, soil testing tools, vegetation quadrats. Categorical or numerical measures are taken by trained field staff or volunteers, resulting in richer dataset. Handbooks and protocols have been developed for recreation sites (Cole, 1989) and trails (formal and informal) (Marion and Wimpey, 2011).

Table 7.2. A summary of common monitoring approaches to visitor impact indicators.

Monitoring Focus	Low Cost	Mid Cost	High Cost
<i>Recreation infrastructure</i> (trails, campsites, scenic overlooks, etc.)	Repeat Photography	Fixed transects	Comprehensive inventory and assessment
<i>Ecological Resources</i> (soil, vegetation, wildlife, water)	Repeat Photography	Fixed transects; camera traps	Detailed ecological assessment
<i>Visitor use and behaviour</i> (type and distribution of use, evidence of non-compliance deprecative behaviour, etc.)	Visitor Counts	Behaviour observation or mapping	Camera/video monitoring; visitor surveys

Several research databases have compiled a catalogue of visitor impact indicators. Examples include the Wilderness Recreation Searchable Database (<http://leopold.wilderness.net/recData/>) and the US National Park Service's Indicators and Standards Database (<http://usercapacity.nps.gov/search.aspx>). These resources can be consulted by protected area managers as they determine what indicators to measure and what methodological options have been developed for each indicator. Box 7.3 provides an example of an ongoing visitor use and impact monitoring programme in Yosemite National Park, USA. This programme was initially established in 2004 to support the park's visitor use planning efforts through implementation of an adaptive management model derived from the Visitor Experience and Resource Protection Framework (Chapter 6).

Box 7.3. Monitoring of visitor use and impact indicators in Yosemite National Park, USA



A popular visitor attraction in Yosemite National Park, Glacier Point (Left). Informal trails and related disturbed areas are one of the selected visitor impact indicators for Yosemite National Park (Right). © Yu-Fai Leung

Yosemite National Park (YNP), established in 1894 and declared a UNESCO World Heritage Site in 1984, is located in California, USA. YNP is renowned for its biodiversity and valued landscapes, attracting nearly four million tourist visits each year. Many of these landscapes and ecosystems are associated with the two major rivers in the park, the Merced and Tuolumne, both of which are federally recognised for their biological, cultural, and recreational value. The United States' National Park Service (NPS) is mandated to protect the natural and cultural resources within the park for which it is known, as well as provide for visitor enjoyment. As part of park management, early monitoring programme efforts included indicators identified in specific site management plans, such as the Merced River Plan. However, given its ability to gather important baseline data to monitor for change, the programme has since become a long-term, park-wide resource and visitor use monitoring programme.

In 2004, YNP began developing, testing, and refining protocols for the collection of data related to the health and performance of natural and cultural resources, as well as conditions influencing visitor experience. These indicators were chosen by a collaborative group consisting of park managers and planners, interagency partners, contractors, and academic institutions based on the values identified in management plans for the park and rivers. After early pilot tests, monitoring has continued every year using refined protocols. Refinements included the elimination of data redundancies and streamlining of condition categorizations where appropriate to increase reliability and sensitivity. Table 7.B1 outlines eight major indicators monitored as part of the programme, including key parameters and monitoring intervals.

List of monitoring indicators in Yosemite National Park as part of the Visitor Use and Impact Monitoring Programme:

Indicator	Description
<i>Water Quality</i>	<ul style="list-style-type: none"> Gauges water quality, a value protected in YNP. Parameters: nutrient levels, <i>E. coli</i>, and total petroleum hydrocarbons. Most sampling is conducted upstream and downstream of heavy use areas in order to detect changes potentially caused by human use. Standards are set for each water quality parameter tested.
<i>Riverbank Condition</i>	<ul style="list-style-type: none"> Gauges the condition of the riverbank along the Merced River in Yosemite Valley. Soils and vegetation that stabilise the banks of the river are essential to the integrity of riparian ecosystems. Parameters: channel morphology, vegetation condition, and people at one time counts at riverbank sites (see “Extent of Visitor Use variables”, below, for more information). Parameters within this indicator are collected at different time intervals, according to the time scale at which changes occur.
<i>Extent and Condition of Visitor-Created (Informal) Trails</i>	<ul style="list-style-type: none"> Gauges the proliferation and condition of informal trails in meadows and the resulting fragmentation of meadow habitat. Parameters: weighted mean patch index, largest five patches index, total impact extent, total impact percent, and condition class. Areas of high concern can be identified and more intensive action can be applied where impact levels are high. The data can be paired with vegetation datasets using geospatial and statistical analyses.
<i>Natural Soundscapes</i>	<ul style="list-style-type: none"> Gauges park soundscapes, the ambient noise setting, measured in frequency-weighted decibels (dBA) to capture human-caused sound events. Analysis is qualitative, impacts are evaluated in terms of four factors: (1) context, (2) intensity (negligible, minor, moderate, major), (3) duration, and (4) type of impact (beneficial, adverse). Sounds are monitored based on presence of loud noise and hourly change in exposure. Standards of acceptable loud noise and hourly change in exposure are set by time of day (daytime or night time) for each of two zones (wilderness and non-wilderness).
<i>Archaeological Site Conditions, Stability and Integrity</i>	<ul style="list-style-type: none"> Gauges the condition of archaeological sites, which are cultural contributors to the ORV for the river corridors. Parameters: condition, stability, and integrity of archaeological sites. Disturbances monitored include trampling and soil compaction from camping and social trails; artefact theft or movement; vandalism; fire ring construction; ground disturbance from digging, rock or feature displacement; and feature destruction. At each site, the degree of disturbance is rated for each type of visitor impact present: (A) negligible, (B) partial loss – repairable, (C) partial loss – irretrievable, or (D) total loss – irretrievable. Sites are designated as low or high vulnerability. Standards are set for the amount of disturbance accepted at each site type.
<i>Extent of Visitor Use variables</i>	<ul style="list-style-type: none"> Gauges park visitor use activity, reflecting visitor use levels and behaviours that potentially cause negative impacts such as crowding, user conflict, and noise. Parameters: people at one time, people per viewscape, boats at one time, vehicles at one time. These are translated into densities, such as square feet per person or linear waterfront feet per person at beaches. Counters are also used to detect the number of visitors on trails and cars entering the park. These parameters can be used to monitor points of interest such as trails, attraction sites, and in-river recreational sites. Standards are established to determine the number of people, vehicles, or boats acceptable or preferable in each target location.
<i>Wilderness Encounters</i>	<ul style="list-style-type: none"> Gauges the visitor use, density levels, and opportunities for solitude that visitors experience in designated wilderness areas. Parameters: hourly average number of encounters per day with groups, individuals, and stock, monitored by discreet trail segments. Standards are established regarding maximum number of encounters with other parties

	per hour, as well as the percent of the time this number should be attained.
<i>Wildlife Exposure to Human Food</i>	<ul style="list-style-type: none"> • Gauges wildlife feeding, a concern in many National Park units. Human-bear interactions have been of particular concern in Yosemite National Park. • Parameters: rate of compliance with food storage regulations at campgrounds and parking lots. • The indicator is not always possible to detect, since researchers cannot look inside tents, vehicle trunks, etc. Compliance rates were high but did not necessarily coincide with a reduction in total number of bear incidents at all sites.

Baseline measurements from repeat monitoring are used to establish scientifically based standards for long-term planning and management. A Field Monitoring Guide, which includes indicator selections and monitoring schedules, as well as annual reports with results and proposed standards, are publicly available on the YNP website and have been widely shared in public meetings. To ensure the sustainability of the large-scale monitoring programme and in addition to dedicated staff, YNP has engaged park partners and interns in data collection, proving both time and cost effective. Through the sustained long-term monitoring programme, YNP ensures science driven management to conserve biodiversity in the park and provide high-quality visitor experiences for current and future generations.

Source: Yosemite NP (2014)

7.4.6 Visitor experience monitoring

The quality of visitor experience is an essential indicator of protected areas where recreation and tourism is an important management objective (McCool, 2006). Monitoring the quality of visitor experience provides managers valuable information about the natural resource, facility and service elements that influence the nature and quality of visitor experience, either positively or negatively. Informal feedback given by visitors on service feedback card, visitor logs or social media provide some hints of visitor experience, although such information may be biased toward the two extremes, highly positive or highly negative experience. More systematic ways to monitor visitor information involve on-site visitor surveys at tourist/visitor centre or main access points at protected areas. Post-visit mail-back, email or Internet survey techniques are also feasible options if visitor contact information can be efficiently extracted from registration or service reservation records or directly from the visitor on a tablet device (e.g., iPad). Box 7.4 and 7.5 provide two examples of visitor monitoring with an experience component from Canada and Czech Republic, respectively.

Box 7.4. Willmore Wilderness Park, Alberta, Canada: An example of visitor monitoring using multiple techniques



Horse users are an important user group in many protected areas so monitoring numbers and trends is important over time for park managers. © Debbie Mucha

Willmore Wilderness Park is approximately 4600 km² and is Alberta's largest wilderness provincial park. It was created in 1959 (officially named in 1965) and is located in the Rocky Mountains straddling the Alberta and British Columbia provincial border. It lies adjacent to Jasper National Park which is a member of the UNESCO Rocky Mountain Parks World Heritage Site. Willmore has a diverse ecological landscape which is home to a variety of flora and fauna species such as wolverine (*Gulo gulo*), Fisher (*Martes pennantei*), the Grizzly Bear (*Ursus arctos*), Whitebark Pine (*Pinus albicaulis*) and Porsild's Bryum (*Mielichhoferia macrocarpa*). Willmore Wilderness consists of rugged, remote, and extensive natural landscapes capable of providing rare and unique wilderness experiences and a wide array of recreational activities. In addition, Willmore is valued historically and culturally and has a rich and fascinating historical array of aboriginal traditional users, fur traders, outfitters, trappers, explorers, and adventurers.

Existing visitor data collected for Willmore Wilderness Park was sparse and out-of-date. Due to the park's physical remoteness, the challenges associated with monitoring dispersed wilderness visitors, and limited resources, there were limited attempts to gather relevant information of this kind. There was no registration requirement (or user fee) for park visitors so it was not possible to gather visitor information from registration permits. Without visitor information (e.g., numbers and activities) it was difficult for park managers to make accurate decisions about the park. Considerations such as staffing, park patrols, trail design and maintenance, visitor experience, communications and messaging, and trailhead infrastructure are reliant on accurate visitor information. Visitor information is also strongly inter-linked with the ecological aspects of the park making it critical information to gather for gaining a holistic parks management perspective. As such, visitor information for Willmore Wilderness Park has been identified by park managers as an important knowledge gap in park management. Willmore Wilderness Park is popular both recreationally and politically, so a solid evidence-based management plan was required that is based on sound visitor information. Willmore is an excellent example of where gaining an improved

understanding of park visitors would provide useful information for park managers and personnel, commercial operators, the park visitors themselves, special interest groups or user groups, as well as the general public.

The purpose of this project was to acquire an improved understanding of Willmore Wilderness Park visitors. This project utilised a mixed-methods approach that augmented traditional study instruments (e.g., surveys) with recent and emerging technologies (e.g., trail cameras and Global Positioning System Tracksticks). Self-administered trail surveys were distributed through trailhead kiosks, local visitor information centres and through the Internet. In-depth surveys were mailed out to users who provided their contact information on the trail surveys. Visitor characteristics and visit information were acquired by placing trail cameras (Reconyx PC) at the main trail entrance at each of the four staging areas into Willmore (on the Alberta side). GPS Tracksticks were deployed to capture satellite-based route information about users and to also test their practicality within a wilderness setting. Lastly, a series of semi-structured questions were posed to park users in an in-depth interview that focused on their relationship to the park (either through the telephone or in-person). Interview participants were selected through a snowball sampling technique. The multiple techniques utilised in this project produced a wealth of visitor information for Willmore. The table below summarises the fundamental research questions and to associated study instrument. Through analysis techniques these data have been transformed into valuable and powerful information that park managers can use to make important decisions about Willmore. This information also provides valuable information which can be used to maintain and improve visitor experiences within the park.

Project research questions and associated study instruments

Research Questions	Study Instrument
What is the visitation level of individual staging areas in Willmore Wilderness Park?	Trail cameras
What are the visitor characteristics, motivations, familiarity (awareness), risk perceptions, and management preferences of Willmore users?	Trail survey, in-depth mail survey, and trail cameras
What are the spatial patterns of visitor use?	GPS Tracksticks and trail survey
What are the trip characteristics and the main activities of Willmore users?	Trail survey, in-depth mail survey, and trail cameras
What is the relationship between visitors and the park?	In-depth mail survey and interviews (in-person/telephone)

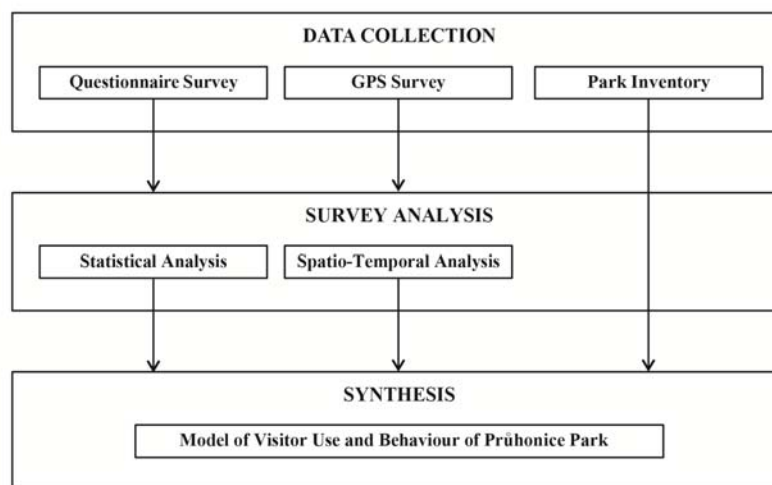
The lesson learned by this case study is that it is feasible and achievable to monitor visitors using multiple methods that include the use of innovative and emerging technologies. This project was undertaken with limited resources within a large study area and produced valuable park visitor information. However, visitor monitoring cannot just exist as a snapshot in time. Ongoing monitoring should be implemented in order to reveal long-term visitor trends. By understanding more about park users, this project will help balance conservation with recreation objectives within Willmore Wilderness Park.

Box 7.5. Monitoring the patterns of visitor experience at Průhonice Park, Czech Republic



A panoramic view of the trail system of the Průhonice Park (Left). Popular visitor activities focus on walking, taking pictures and view plants and flowers (Right). © Luis Monterio

Průhonice Park, classified in 1992 as a UNESCO World Heritage Site as part of the Historic Centre of Prague, is one of the most intensively used parks in the Czech Republic. Covering an area of approximately 250 ha and with 30 km of trails, it is located 15 km southeast of Prague city centre and stands out for its special combination of ecological and cultural values, together with an important outdoor recreational component. Due to these high-quality values and privileged location within Prague's Metropolitan Area, it annually receives an average of 155,000 visitors, primarily from April through September, with the most intensive use during April and May. On a sunny day in May more than 3,000 visitors may visit the park. Due to its high popularity, both during weekends and high season, at certain times some park areas are crowded while others have a low level of use. Impacts caused by thousands of visitors every year and usage led to some management concerns, and the need to more broadly discuss the dynamics and inter-relationships between park spaces and visitors. In response to these concerns, a research programme aiming to monitor the visitor's experience in Průhonice Park was carried out in order to understand and analyse visitor movement and behaviour patterns. The research was based on a hybrid approach consisting of two main complementary parts: questionnaire and GPS surveys. This was structurally divided into three main stages: data collection, survey analysis and data synthesis, as illustrated in the schematic representation below.



© Luis Monterio

During eleven random days in June 2012 (eight weekdays and three weekend days) visitors were contacted at the park's main entrance and invited to voluntarily participate prior to registration. If visitors decided to participate in the study, they were briefly introduced to research aims and asked to fill in a simple socio-demographic questionnaire, which took between 5 and 10 minutes to complete. Respondents were then given one of ten available GPS-units and asked to carry it during the remainder of their park visit. Once completed, the GPS-unit was returned to the survey representative and all data downloaded onto a Geographic Information System (GIS), where spatial and temporal analyses were carried out. In this research programme, all units were returned resulting in a total of 112 completed visitor surveys. The GPS dataset was linked with equivalent questionnaires in strict association with visitor type, and information was generated regarding the most popular places, preferred itineraries, time spent at each site, and distance and speed of travelling. Results were furthermore overlapped with a GIS data inventory of Průhonice Park's trail system with the different attractions and facilities. This allowed the production of more realistic scenarios regarding typical visitor movement patterns, preferences and behaviours within the park. As expected, the park is mostly used near the main entrance and visitors of all types tend to spend between one and two hours in the park, covering an average distance of 4.2 km per visit. Highest visitor use was found near cultural and natural locations, such as the castle complex, ponds and botanical garden. Therefore, it was possible to identify different park areas according to susceptibility to being crowded and predict degradation due to human activities. This example shows how important it is for Průhonice Park management to adopt long-term monitoring of visitor movement and use patterns in order to protect the natural and cultural values for which it was originally classified, as well as improving visitor experience.

7.4.7 Monitoring management effectiveness

The importance of assessing management effectiveness for protected areas has increasingly recognised. The IUCN World Commission on Protected Areas has established a six-element framework for assessment and detailed guidelines for its implementation (Hockings et al., 2006). Visitation and tourism indicators can be important set of assessment criteria under one or multiple assessment categories (Hockings et al., 2006). Examples include tourism-related legislation and policy, governance, infrastructure, resources to support visitor management, and efficacy of management actions. Repeated assessments of these criteria serve as a monitoring mechanism to track performance of tourism and visitor management at the protected area or protected area system level.

The World Heritage Outlook programme of IUCN provides another example of management effectiveness monitoring for this select group of protected areas. The key element of this programme is the Conservation Outlook Assessment that reports effectiveness on major management issues and the current status of values being protected by the World Heritage Site. As many World Heritage Sites are also prime tourism attractions, the effectiveness of managing individual tourists and commercial tours likely forms a subset of assessment indicators across various World Heritage Sites. Box 7.6 provides an overview of this programme.

Box 7.6. Natural World Heritage Conservation Outlook Assessments



The World Heritage Outlook user interface on the IUCN website. © IUCN

Acknowledged as the world's most exceptional natural areas, natural World Heritage sites protect significant examples of geologic, ecologic or biologic processes, aesthetic importance, and crucial natural habitat for biodiversity conservation in both terrestrial and marine ecosystems. However, 25% of the 222 designated natural or mixed class (i.e., natural and cultural) sites are affected by myriad conservation threats like infrastructure development, poaching and climate change and 8% are listed as in danger (IUCN, 2014a). In response to increasing concern over the status of many of this sites, the International Union for the Conservation of Nature (IUCN) began a global initiative, the World Heritage Outlook, to monitor the status of all natural World Heritage sites and the natural elements of mixed class sites, highlight successes in conservation and proactively identify management actions necessary for continued protection. Previous assessments by the IUCN focused on sites with documented conservation issues only (IUCN, 2014a). Monitoring and evaluating all sites in allows for a continued and proactive protection of the outstanding universal values of natural World Heritage sites and the high standards set by the World Heritage Programme.

The IUCN World Heritage Outlook provides the first global assessment of the state of all natural World Heritage conservation using Conservation Outlook Assessments. Conservation Outlook Assessments (COA) follow a standard methodology to identify the current state and value trends of a site, document threats affecting those values, and measure the effectiveness of protection and management using the IUCN protected area standards (IUCN, 2014a). The assessments are desk-based and completed by IUCN experts, including members of the IUCN's World Commission on Protected Areas (WCPA). Designed to complement existing evaluation and monitoring criteria, the assessments follow a five step process:

Conservation Outlook Assessment Process:

(list adapted from <http://www.worldheritageoutlook.iucn.org>)

- Step 1: Identify and describe values
This step uses published reports and relevant sources to describe a site's biodiversity and World Heritage values for which it is protected and managed.
- Step 2: Assess threats

A defined checklist is used to identify threats to a site and allow for consistency across sites and assessments. Threats are rated using one of five categories, ranging from very low threat or low threat to high threat, very high threat or data deficient.

- Step 3: Assess protection and management
The current status of 14 defined protection and management issues are rated using five rankings, including highly effective, effective, some concern, serious concern or data deficient.
- Step 4: Assess current state and trend of values
The current status and trend of site values are rated using five ratings, ranging from good or low concern to high concern, critical, or data deficient.
- Step 5: Assess conservation outlook
The projected conservation outlook for the site is based on the findings from the previous steps and provides an overall rating of good, good with some concern, significant concern, critical or data deficient.

Reports and classifications of sites are accessible through the World Heritage Outlook interactive web map (<http://www.worldheritageoutlook.iucn.org/>). Reporting guidelines promote accuracy, clear referencing, replicability, and data transparency to facilitate the communication of good management practices of well-managed sites throughout the IUCN's World Heritage Programme (IUCN, 2014b). Additionally, the reports are used to communicate the benefits of natural World Heritage sites and conservation efforts to stakeholders and serve as an information repository for future assessments.

7.5 Guidelines for Management and Monitoring Strategies

This chapter has outlined strategies for managing and monitoring tourism and visitor use. Below are a set of guidelines to serve as a summary.

- A clear understanding of management objectives and policy is necessary in deciding management strategies and actions
- Management strategies can be direct through rules, regulations and law enforcement, or indirect through site design, visitor education and communication. Indirect strategies are often preferred but direct strategies sometimes are necessary or more effective.
- Monitoring is essential for effective management of tourism and visitation. As such monitoring design and indicators should be tied to management objectives and protected area values.
- Monitoring for sustainable tourism and visitor management can be devoted to tourist infrastructure, tourism-related natural resources, visitor impacts, and visitor use, behaviour and experience.
- There are different options for visitor use and impact monitoring, from low cost to high cost. Managers should make an appropriate selection on the level and frequency of monitoring based on the information need and logistical constraints.
- Monitoring data are particularly valuable when integrating with other biophysical or social science data from other monitoring programmes to afford analysis and evaluation of possible causes of problems, potential threats and possible management strategies.
- Monitoring can be carried out by different groups. For certain governance structure shared monitoring partnership should be sought.
- Monitoring results can be utilised not only for management but also for visitor education and communication.

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8. Tools for Tourism and Visitor Management

8.1 Introduction

As illustrated in earlier chapters, tourism and recreation visitation has the potential of contributing to protected area goals such as conservation, community development, enjoyment and education and physical health. Similarly, potential negative impacts to protected areas can also result if tourism and visitor use is not effectively managed. These impacts can degrade vital natural and cultural resources as well as the quality of the visitor experience. Fortunately, there is wide range of management tools or specific management practices that can reduce the potential impacts of tourism in protected areas. This chapter identifies, discusses, and illustrates a range of tourism and visitor management practices.

A wide variety of management tools have been developed and applied (Europarc Federation, 2012; Manning and Anderson, 2012). This chapter is not an attempt to catalogue all best practices that are occurring around the world. Instead it provides an organised discussion of thirteen categories of visitor management strategies and practices (Section 8.2.1 to 8.2.13) and illustrates with selected examples. Examples were solicited from the IUCN-WCPA Tourism and Protected Areas Specialist Group membership and the larger professional and academic community. The Sustainable Tourism Best Practice Guidelines website provides links to a greater number of management tools.

Management tools are means to an end, and each tool has its own implementation cost, be it administrative, monetary, social/community or visitor experience. As such, before adopting a particular tool, whether as a proactive or reactive measure, protected area managers should consider carefully what value they are trying to protect to justify such tool and the context in which these tools will be applied. This chapter provides a host of examples, which have demonstrated success in their own application. This global sharing of best practices helps managers identify and imagine the range of options for each strategy they have chosen. The extent to which each best practice can be transplanted to another country and even another protected area within the same country must be fully considered. A consistent planning framework or similar decision-making framework (Chapter 6) and articulated management strategy (Chapter 7) would be a good mechanism to evaluate and justify the tools for application.

8.2 Tourism and Visitor Management Tools

8.2.1 *Regulatory and Planning Tools*

Three commonly used regulatory, or direct management practices include limitations on visitor use, rules and regulations, and zoning. Substantial attention has been placed on limiting visitor use to minimise the impacts of tourism on park resources and the quality of the visitor experience. Use rationing can be controversial and is generally a management practice of last resort because it

runs counter to the basic objective of providing public access to parks and protected areas. However, rationing visitor use may be needed in some places at some times to protect important park resources and the quality of the visitor experience.

Five basic management practices are used to ration and allocate tourism and recreation opportunities: 1) reservation systems, 2) lotteries, 3) first-come, first served or queuing, 4) pricing, and 5) merit (Stankey & Baden, 1977; Cable & Watson, 1998; Whittaker & Shelby, 2008; Manning, 2011). A reservation system requires potential visitors to reserve a space or permit in advance of their visit. A lottery allocates opportunities or permits on a random basis. A first-come, first-served or queuing system requires potential visitors to wait for available spaces or permits. A pricing system requires visitors to pay a fee for a permit, which may 'filter out' those who are unable or unwilling to pay. A merit system requires potential visitors to 'earn' the right to a permit by virtue of demonstrated knowledge or skill (e.g., low impact recreation behaviour). It is important to note that there are variations of each of these five basic approaches to rationing and allocation. For example, lotteries weighted to provide some advantage to people who have been unsuccessful in previous lotteries, and pricing conducted by means of an auction.

A critical element of use-rationing and allocation practices is fairness. Parks and protected areas are commonly public resources managed by government agencies. Use-rationing and allocation practices must be both efficient and equitable. This issue is especially germane to the use of pricing as a rationing practice as it raises the possibility of discriminating against selected groups in society based on socio-economic status.

Rules and regulations are a common tourism and recreation management practice, though their use can be controversial (Lucas, 1982, 1983; Monz et al., 2000; Manning, 2011). Common applications of rules and regulations in tourism and outdoor recreation include group size limits, assigned campsites and/or travel itineraries, area closures, length of stay limitations, and restrictions or prohibitions on recreation activities and behaviours that have substantive resource and/or experiential impacts. The importance of encouraging visitors to comply with rules and regulations was emphasised in a study of the U.S. national park system that found that visitors who did not follow rules and regulations caused extensive damage. Managers must effectively communicate rules and regulations to visitors. Visitors should be informed of the reasons why applicable rules and regulations are necessary, of sanctions associated with failure to comply, and of recreation activities and behaviours that can be substituted for those not allowed.

Zoning is another basic category of tourism and recreation management (Manning et al., 2011). Zoning simply means assigning certain recreation activities to selected areas (or restricting activities from areas). Zoning can occur in a temporal dimension as well as in a spatial sense. It can also be an alternative management prescription, used to create different types of tourism/recreation opportunities. Zoning is widely used to create and manage a diversity of tourism and recreation opportunities. The basic concept of zoning is at the heart of the Recreation Opportunity Spectrum (ROS), a concept and framework that has been widely applied in managing parks and protected areas (Clark & Stankey, 1979; Brown et al., 1978, 1979; Driver & Brown, 1978; Dearden & Rollins, 2008). Zoning is also used in outdoor recreation to restrict recreation activities from environmentally sensitive areas and to separate conflicting recreation activities. Box 8.1 provides a long-standing example of zoning from Grand Canyon National Park. In the general management planning of Uganda's protected areas, a zoning system conceptually

similar to ROS is applied to determine the type of accommodation, transportation and tourist activities, including group size (Bintoora, 2014).

Box 8.1. Grand Canyon National Park planning and zoning

Grand Canyon is one of the 'crown jewel' national parks in the United States, and its status as a World Heritage site ratifies its importance on a global scale. The Colorado River is the living heart of Grand Canyon National Park. For the past six million years, the river has eroded and exposed the canyon as the vast Colorado Plateau has been uplifted several thousand feet by tectonic forces, a process that is ongoing. The river has been a vital source of water for local Native American tribes for 12,000 years, has provided inspiration to artists and writers, and been the focus of some of the most intensive environmental controversies in American history. In recent years, the Colorado River has also become a mecca of white-water boating, boasting nearly 300 miles of free-flowing river with over 100 major rapids, some of them requiring expertise and experience to negotiate.

A new management plan was recently implemented to protect the river from overuse. The objective of the plan is to *"conserve park resources and visitor experiences while enhancing river running recreational activities."* The plan relies on several management practices, including limiting use, rules and regulations, and zoning as outlined above. Recreational use of the river is strictly limited to minimise the potential impacts of use on park natural and cultural resources and to protect the quality of the visitor experience. These limits apply to both commercial (licensed companies) and non-commercial (private individuals) trips. For example, non-commercial users of the river must obtain a permit and permits are based on a sophisticated 'weighted lottery system', which replaced a previously used queuing system that generated waiting periods over 20 years. This system requires non-commercial boaters to file an application each year with preferred launch dates for the following year, and applications are selected at random. However, the chances of being selected are enhanced if potential trip leaders have not boated the river in recent years. This is to help ensure that those who are unlucky in the lottery system are more likely to be selected in future years.



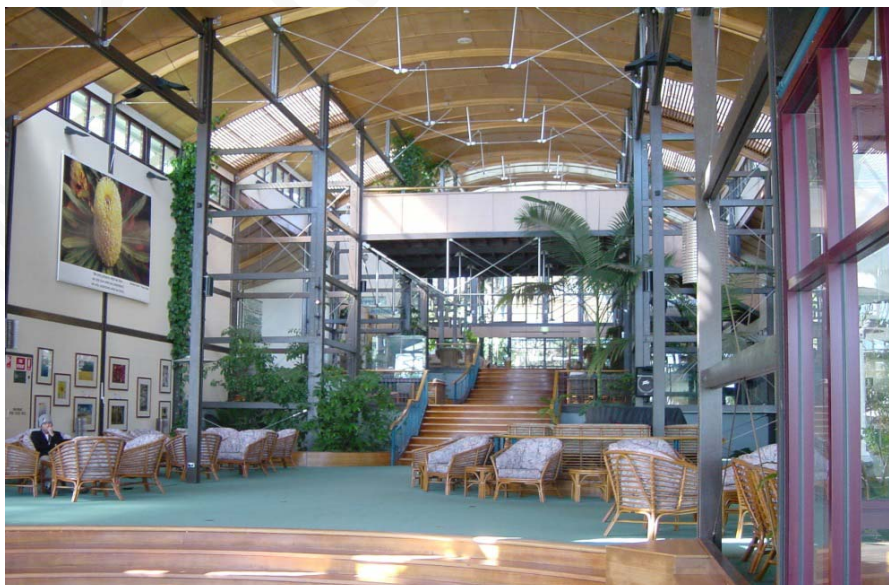
Rafting through the Grand Canyon. © Robert Manning

Rules and regulations are also an important component of the new management plan. For example, commercial boat passengers must be accompanied by a National Park Service-approved guide on all hikes and visitors are not allowed to use upper Elves Chasm during certain seasons to protect threatened plant species. The plan also incorporates both spatial and temporal zoning. The river is divided into three spatial zones designed to offer three different types of visitor experiences. As well, temporal zoning is used to address the issue of conflict between motorised and non-motorised use; motorised use is allowed only from April 1 through September 15 of each year.

8.2.2 Site Design and Sustainable Infrastructure Development

The impact of tourism infrastructure on a protected area depends significantly on where and how facilities are sited. Environmental impact assessments (EIAs) are a necessary first step in determining appropriate location and scale of developments. Input from local communities, developers, tourists and park management is essential in this process. Sustainable design strives to create an intimate association between a facility and the ecosystem in which it is constructed (Box 8.2). An understanding of the natural processes of the ecosystem will allow developers of site buildings to avoid the need for costly ecosystem modifications, turning natural features such as gravity, wind, water sources, vegetation and shade into assets. Factors that should be considered when developing a new tourism service site include: views, natural hazards, traditional activities, transportation access for staff and tourists, climate, slope, access to natural and cultural features, energy and utilities, proximity to relevant goods and services, and staff availability and housing. Significant cost savings can arise by paying attention to these considerations, in addition to achieving aesthetic and enhanced visitor experience outcomes (Sweeting et al., 1999).

Box 8.2. Biodiversity principles for siting and design of hotels and resorts



Kingfisher Bay Resort on Fraser Island, Queensland, Australia, a facility certified by both Green Globe and Ecotourism Australia. © Yu-Fai Leung

Preventing long lasting and irreversible biodiversity impacts from hotel and resort developments is particularly important if these developments are located within or adjacent to protected areas. Impacts are determined by: the size and location of the area cleared for development and by where construction activities will take place; the choice of construction methods; the sources amount and type of materials, water and energy used to build the hotel; the location of temporary camps for construction workers; the adequacy of storage facilities for construction materials; and, the amount of construction waste that will have to be disposed of. Biodiversity considerations need to be integrated in the early planning phase of development, generally defined as the siting and design of hotel and resort developments.

IUCN has identified five biodiversity principles to support all relevant stakeholders involved in the siting and design stages of hotel and resort developments. The principles provide a holistic approach to integrating biodiversity considerations, whilst emphasising the importance of stakeholder involvement. The principles can be integrated into relevant policy and planning processes, including Environmental Impact Assessment (EIA) procedures, National Biodiversity Strategies and Action Plans (NBSAP), national and local management plans, tourism development plans, and the environmental management strategies of hotel corporations and developers.

The IUCN Biodiversity Principles for Siting and Design of Hotels and Resorts are as follows:

1. Adopt an ecosystem-based approach in tourism development planning
2. Manage impacts on biodiversity from hotel development and attempt to achieve an overall positive contribution
3. Design with nature and adopt nature-based solutions
4. Respect, involve and support local communities
5. Build collaboration among stakeholders

The recently published *Biodiversity Principles for Siting and Design of Hotels and Resorts* (IUCN, 2012b) provides an overview of each principle and case studies to illustrate some of the measures that can be adopted to implement the principles.

The continued prosperity of the hotel and tourism sector depends on the conservation and health of local ecosystems. As such, nature should be recognised as a key element of tourism attraction and resources must be conserved to benefit the tourism and hotel sectors. It is in the interest of all players to ensure that biodiversity considerations are included in decision-making.

Source: IUCN, 2012b

Interpretation centres, washroom facilities, hotels, cabins and campgrounds, restaurants, parking lots, trail heads, and many other facilities can all be included in an overarching category of tourism infrastructure. The key challenge is to ensure these facilities are sustainable, in tune with the local ecosystem and local cultures. See Box 8.2 for more information. General guidelines include: choose materials based on sources that minimise damage and exhibit properties such as durability, recyclability, availability and sustainability; incorporate design that is in keeping with the local cultural landscape; take advantage of climate conditions for cooling, energy and other needs; and use native plant species for landscaping and natural insect control (Sweeting, Bruner, and Rosenfeld, 1999).

Not providing facilities can reduce visitor numbers (Pedersen, 2002). If that is a goal of a particular park, or a site within a park due to social capacity issues or negative environmental impacts, then moratoriums on new developments or the removal of existing infrastructure may be warranted. See Box 8.3 for an example of how Wadi El-Hitan World Heritage Site was designed to enhance both environmental protection and visitor experience.

Box 8.3. Wadi El- Hitan-Valley of the Whales World Heritage Site, Egypt: Designing for protection and inspirational visitor experiences

Wadi El-Hitan-Valley of the Whales lies 170 km southwest of Cairo, in Egypt's Western Desert. Designated as a World Heritage Site in 2005, Wadi El-Hitan is the most important site in the world for demonstrating the evolution of Eocene-aged whales (38-42 million years before present) from land animals to marine animals. Prior to its World Heritage designation there was no form of management oversight and fossil collecting and indiscriminate four-wheel drive vehicle access threatened its values. World Heritage recognition and protection within Wadi El-Rayan Protected Area (gazetted under the National Parks Act), together with donor funding from Italian Cooperation and Wadi El-Rayan's twin park – Gran Sasso National Park in Italy, enabled effective planning, management and eco-tourism development activities to proceed. A key ingredient was the preparation of the project plan, which provided a thorough and coherent story for the development concept and the sequencing of the many inter-related components.

Main elements of this initiative that pertain to site design, infrastructure and transportation include:

- **Access route to the site:** Through an environment impact study, five alternative routes to the site were evaluated against five criteria: length of road and ease of construction; impacts on protected area values; operational effectiveness; potential for economic benefits to local communities, and; suitability for visitors.
- **Conservation of fossil values:** Securing the core fossil area required physical barriers to close the valley; signs and targeted communications; and, daily enforcement patrols. One cubic metre blocks of locally quarried limestone were placed 1.5 metres apart. This method was effective, low maintenance, fit in with the natural landscape and provided local employment.
- **Visitor needs:** A visitor survey and visitor management plan considered the types of services that should be provided, such as shaded structures to escape the sun, an orientation area, parking, washrooms, a cafeteria, transportation within the site, a craft shop, and camping.
- **Interpretation:** The core area was planned as an Open Air Museum, featuring local handcrafted materials. Seven kilometres of walking paths were defined in the desert sand. Fossil sites were delineated with clay columns, hand-braided palm rope and baked clay signs. Interpretive stations were constructed from mud brick and plaster and fashioned to mimic the surrounding landforms, and house graphical display panels that tell the story of the fossils and climate change.
- **Travel within the core area:** Travel mode within the core area was carefully considered in view of the extreme heat in summer, age of visitors, and wilderness character of the site. The travel methods selected as appropriate were walking, camel, and camel cart as they are sustainable, clean and provide additional local business opportunities.
- **Site planning:** Site planning identifies the precise placement of infrastructure, taking into account: anticipated numbers of visitors, their movement around the facilities, and types of vehicles.
- **Facility design, materials and methods:** Architectural plans and guidelines were developed to respond to the unique character of the sandstone cliffs, the hot climate and to harness the combined creative talents of local communities and artists. Through mimicking earth tones, textures and shapes, the mud brick and plaster structures have minimal visual impact on the fossils or the landscape. The earth structures are both durable and degradable; when they disintegrate they will

fade back into the earth without scarring the landscape.



Wadi El- Hitan-Valley of the Whales World Heritage Site with eco-architectural features © Dan Paleczny

- **Site construction:** Construction proceeded with extreme caution; any mud mixing was performed over removable plastic sheets and trails were clearly marked for the movement of labour and materials. Donkeys were used for the transportation of materials. Construction relied on the use of local craftsmen and labour, which fosters a sense of ownership and pride within the community in addition to providing employment benefits.
- **Evaluation tools:** Monitoring the fossil resource and visitors, and carrying out enforcement patrols are key elements of evaluation. An evaluation of management effectiveness helped to establish a practical context for World Heritage site status reporting.

This case shows that thorough planning on a number of inter-related topics is needed early in the park planning process, which can be challenging when there is pressure to move forward with development. Ongoing monitoring, site and facility maintenance, staff training, visitor surveying, enforcement, and evaluation of effectiveness are important tools for maintaining world-class eco-tourism sites.

8.2.3 Sustainable Transportation and Travel Patterns

Sustainable transportation initiatives have received special attention in US national parks, as the proliferation of automobile use in that country has produced special challenges there. In June 2013, the National Parks Foundation awarded \$250,000 in grants to support sustainable transportation in five US national parks. Through these Transportation Scholars grants, transportation specialists work with the park agencies to create solutions for unsustainable transportation. Solutions include improved public transit access, biking trails and thoughtful

signage and park trolley systems. A useful product from this programme is a *NPS Congestion Management Toolkit* which provides an extensive collection of tools with guidance on problem solving and tool evaluation (USNPS, 2014). A compilation of research that supported this programme is also available (Manning et al., 2014). In Ottawa, Canada, the Park and Cycle sustainable transportation programme offers 15 parking locations for commuters/travellers who may switch from car to bicycle to continue their journey along biker-friendly routes. Two of the parking lots are located in the capitol's Gatineau Park, a large nature park (National Capitol Commission, 2012). In De Hoge Veluwe National Park of the Netherlands, a bicycle-only policy is adopted that no vehicles are allowed to the park. Instead, bicycles are provided to visitors as part of their entrance fee, and visitor can pick up and return bicycles in multiple locations inside the park.

8.2.4 Law Enforcement

Law enforcement in parks and protected areas is required to support the protection of natural resources and visitors. Various law enforcement tactics can be used, and for any given park or protected area the choice is guided by the type of infractions that need to be enforced and the presence of criminal activity. Generally, law enforcement has two categorizations, soft and hard.

Soft enforcement entails measures taken by management, such as park design and signage or the mere presence of a park ranger or law enforcement officer, or assisted by tour operators and concessionaires (Wynveen et al., 2007). Soft enforcement is always present to some extent. Conveying rules to the public, which they are often unaware of, is a particularly important soft enforcement technique (Manning and Anderson, 2012). In addition, conveying the reason for the existence of rules and the penalty for non-compliance adds to the effectiveness of this soft enforcement tactic.

Hard enforcement is the use of traditional, urban enforcement methods such as the issuance of citations, fines and arrests (Wynveen et al., 2007). The use of soft enforcement is not always effective at preventing undesirable and unlawful behaviours in parks; however, the use of hard enforcement can have a negative impact on visitor experience. The type of enforcement used at any given park must be carefully chosen to strike a balance between visitor safety and compliance to rules, and visitor enjoyment (Manning & Anderson, 2012). Much of the available literature on law enforcement in parks and protected areas is about the controversial nature of how hard law enforcement should be. There has been very little research done on the effectiveness of different types of enforcement.

As urban sprawl increases and cities are located increasingly closer to parks and protected areas, the incidence of crimes, such as drug use, vandalism and assault increases (Wynveen, 2007). The above infractions require hard enforcement strategies. The presence of police officers at parks that have experienced crime makes the majority of visitors feel safer. On the other hand, at parks and protected areas that are farther away from cities, the incidence of illegal poaching and harvesting is higher. In conservation areas in Africa, the presence of park staff and anti-poaching patrols, both on foot and in car, can increase species protection; however, as with any other tool, enforcement is contingent on the financial resources of the park (Hillbourn et al., 2006). See Box 8.4 for an example of law enforcement measures at Virunga National Park.

Box 8.4. Controlling gorilla poaching at Virunga National Park, Democratic Republic of Congo



Rangers on patrol in Virunga National Park, Democratic Republic of Congo. © Virunga National Park

Virunga National Park, on the eastern boarder of the Democratic Republic of Congo (DRC) is also a World Heritage site and the oldest national park in Africa (Virunga National Park, 2011). It encompasses diverse environments such as savannah, lava fields, plains, forests, valleys and mountains, and contains a variety of species including the critically endangered mountain gorilla (*Gorilla beringei beringei*). The park has, and continues to be, plagued by gorilla (amongst other species) poachers and illegal deforestation. The efforts of park management, outside agencies and the parks rangers have had a positive effect on mountain gorilla populations in the park, with an increase of 14 per cent in the last 20 years (WWF Global, 2014).

The park rangers are the front-line defenders of the mountain gorillas and the park. Their job is an extreme example of park enforcement; rangers are armed with guns, and, efforts to stop poachers have resulted in 150 ranger deaths in the past 20 years (Virunga National Park, 2011). The park collects donations on its online website to support projects. For example, the Congo-hounds project is an upcoming anti-poaching effort that will utilise Bloodhounds, trained to track poachers, in the park. Funds are also collected to support the widows and families of killed rangers, or the purchase of a surveillance aircraft. Unfortunately, funding and equipping these park rangers is a large task and cannot be completed by the park or the DRC alone. The World Wide Fund for Nature (WWF), the International Gorilla Conservation Programme (IGCP) and other organisations help fund anti-poaching and conservation efforts via money and supplies. An example of this is the 450 stoves donated by WWF to rangers and their families in the central region of Virunga National Park. As well, WWF and IGCP spread awareness about park issues and educate the public (IGCP, 2013; WWF Global, 2014). This is done with the hopes of gaining more financial and public support for the anti-poaching and conservation efforts in Virunga National Park, an ongoing battle that many parks and protected areas experience worldwide.

8.2.5 *Security and Safety*

Park and protected area visitors face potential safety concerns from other visitors, wildlife, environmental hazards and illegal activities occurring within parks. As well, the security of the protected area against human threats can be a concern. Management is tasked with the job of minimizing such concerns via various measures, depending on the type of threat that is present.

The presence of law enforcement officials or park officers is one way to minimise all security concerns. Their mere presence has been found to increase feelings of safety amongst visitors (Wynveen et al., 2007). This can be a costly solution that is not always viable. It can be especially problematic in developing countries where using partnerships and locals to monitor and patrol the protected area is a potential solution (Coad et al., 2008). Serious issues such as illegal poaching and guerrilla fighting can threaten the safety of the park and of park visitors (Virunga National Park, 2011). Outside help from NGO's and sustained efforts against these threats is a way to minimise these concerns.

The use of indirect measures is an effective way to minimise less serious security issues. Indirect measures are design and education efforts that influence visitors. For example, park signage and interpretive messages can guide visitor behaviour in positive ways (Marion and Reid, 2007). They can educate visitors on how to act when, for example, encountering dangerous wildlife. They can also inform visitors about potentially dangerous trail or weather conditions. The advent of more advanced technology and the popularity of personal mobile devices mean that park information transmission can become more sophisticated. A European design, WebPark, is a location-based service that allows individuals to use their mobile device to obtain information about the park, including trail conditions and avalanche warnings (Geoinformatics, 2003), which can be delivered to mobile devices as alerts. It can also be used to access emergency services if required.

Developing codes of practice, policies and collaborating with outside agencies is another way to minimise safety concerns. Codes of practice can influence development and construction, visitor use numbers and restrict certain activities to maximise safety (Eagles et al., 2002). Outside tourism operators may be co-operative with these efforts but it is also possible that they may not heed park rules and regulations. Prohibiting those operators from practicing their business in the protected area may be necessary to prevent non-compliance. All of these measures can heighten the security of parks and protected areas so that the parks and their visitors are safe.

8.2.6 *Economic and Marketing Tools*

Examples of sustainable finance of protected areas through tourism are discussed in Chapters 4 and 10. In addition to finding ways to increase revenues from tourism to support conservation, creative finance management can be used to shape park visitation. Multi-tiered pricing involves setting prices based on visitors' age, place of residence and other factors. Quite often park agencies will charge more to out-of-country visitors than to domestic residents. Lower fees for domestic residents acknowledges their contributions to a country's tax system and also capitalises on long-haul tourists' ability and willingness to pay more money for leisure opportunities.

Differential pricing is characterised by different prices being charged based on service offered. For example a campground situated on a scenic river site might be more expensive than one located

in a less desirable location. Differential pricing can be an effective tool in addressing over visitation, either at a particular site or park or during a particular season. Charging higher prices during peak season or for entrance to highly popular sites may reduce crowding. However for public parks, pricing strategies always have to consider equity issues – public access needs to be maintained especially for disadvantaged groups or local stakeholders who may be impacted by indirect costs associated with the presence of a park. Private reserves may not be concerned about equal access, and in fact may use higher prices to send messages of quality and exclusivity to potential wealthy clients.

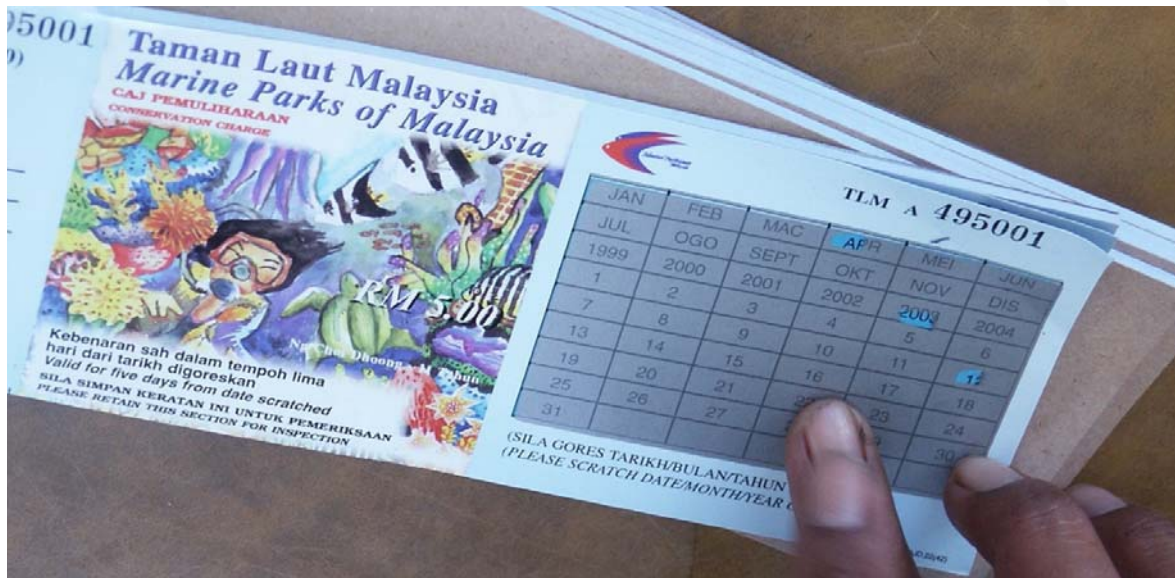


Figure 8.1. Entry fee for a Malaysian marine park. © Elizabeth Halpenny

8.2.7 Marketing and Communications

Parks and protected areas have only recently begun to embrace marketing as an integral approach to achieving park management objectives. Park agencies increasingly acknowledge the usefulness of market-focused social science research twinned with effective communications strategies (Hall and McArthur, 1996; Archer and Wearing, 2002). This acceptance is driven in part by agencies' increased accountability and obligations to meet performance criteria, including visitor satisfaction and increased visitor numbers, as well as more prevalent directives to be more outwardly focused, ensuring an understanding of the needs and opinions of different communities (Wearing et al., 2007).

Marketing is creating, communicating and delivering offerings that have value to customers, clients and society at large. It traditionally entails a focus on the 4Ps, products (offerings), pricing, promotion, and place (distribution) (Halpenny, 2007). While park efforts may focus marketing activities on the market research that seeks to understand the needs, characteristics and behaviours of park visitors, marketing efforts can also focus on stakeholder groups, employees, and many other audiences. The focus of park agencies must remain aimed at the long term sustainable protection of the natural environment and the provision of benefits for all relevant stakeholders (Wearing et al., 2007).

Park agencies can engage in different subtypes of marketing. **Social marketing** is marketing that prioritises outcomes that will benefit society as well as the individual. For example, Parks Victoria partnered with health care professions to promote their Healthy Parks, Health People campaign. As part of this campaign doctors prescribed a visit to a park to patients which result in improved human health.

Increase Energy - Lower Stress

Prescription TRAILS *GET UP AND GET MOVING!*

R_x for Health:
Get Up and Get Moving!

Congratulations on deciding to increase your physical activity!
Here is the plan we discussed to start you on your way.

Date: _____

Start with: _____ minutes _____ days per week

Gradually increase to: _____ minutes _____ days per week

Where: _____

We will review this plan at your next visit.

_____ Health Care Provider Signature

Sleep Better *Walk the Dog*

Enjoy the Outdoors

Copyright © 2010 New Mexico Health Care Takes On Diabetes

Figure 8.2. **Albuquerque Prescription Trails New Mexico, Prescription Pad: A social marketing example** © American Trails

In **Relationship marketing** developing long term mutually beneficial relationships between park agencies and stakeholder groups is paramount. This includes fostering positive and supportive internal relationships within a park organisation. An annual volunteer recognition event is one mechanism for fostering positive relations with park stakeholders. Coordinating a visiting journalists programme is a second approach (Wearing et al., 2007). A park agency's understanding of the diverse perceptions of the stakeholder groups it serves is essential to the success of relationship marketing efforts (Borrie et al., 2002).

Demarketing is used when park managers need to discourage demand for a setting or services. Decreases in visitor numbers can result in reduced environmental impacts and enhanced visitor experiences. Methods of demarketing can include increasing prices, creating a queuing system, promoting less or promoting to select audiences. Promoting alternative offerings that may satisfy the same needs and wants or highlighting the difficulties of over visitation such as environmental degradation are other ways to demarket a site (Armstrong & Kern, 2011; Crompton & Lamb, 1986).

With **comarketing** the park agency and its partner promote an offering and share the results of that promotion with each other. It is a financially savvy means to expand communication opportunities as each can take advantage of the partners' reach into distinct audiences. Partnering with a media organisation, especially one with excellent Internet reach is a highly effective

approach. An example of this is the collaboration between National Geographic Traveler and the US National Park Service; these two organisations worked together to promote tourism to the Waterton Glacier International Peace Park World Heritage site and the communities surrounding these parks. They branded this initiative, the “Crown of the Continent” raising awareness of the region’s tourism and environmental stewardship development.

A final niche marketing approach, **experience marketing** immerses park visitors in the creation and delivery of a park experience, producing a very memorable and relevant outcome, which in turn can result in positive emotional ties and behaviour change. Parks must pay particular attention to setting the stage for the experience, engaging all senses, individualizing experience, tailoring the experience to a particular client group, keeping it fun, and providing memorabilia (O’Sullivan & Spangler, 1998; Pine & Gillmore, 1999; Ellis & Rossman, 2008). Box 8.5 provides a case study from Parks Canada.

Box 8.5. Parks Canada’s use of market research data and experience marketing

Parks Canada has focused heavily on understanding who their clients are and how to deliver memorable, transformative experiences that are tailored to individuals visiting (and who may visit) their parks. This is driven by an understanding that parks must be made relevant to Canadians and a connection between visitors and Canada’s parks must be forged and reinforced if political support is to be maintained for nature conservation in the country (Jager & Halpenny, 2012). To understand their current and potential clients better Parks Canada invests in social science research that documents current visitor’s attitudes towards and use patterns of the parks. This involves park surveys as well as

monthly research panels that ask past park visitors about specific park tourism subjects (e.g., opinions about human-wildlife conflict or effectiveness of reservations systems). The agency also pays for nationwide telephone surveys of Canadians to capture information of non-park visitors and purchases market data from market research firms to augment their understanding of social, economic and cultural trends that shape Canadian’s opinions about parks and their decisions to visit protected areas.



In collaboration with the Canadian Tourism Commission and research firm Environics Canada, the agency has identified 9 distinct experiential user types who visit Canadian parks. This Explorer Quotient (EQ) programme uses psychographic research that explains why people travel and what experiences they seek. Distinct EQ experiences are staged by Parks Canada at each park to meet the needs of each of these user types. For example, in Gros Morne National Park a “Personal History Traveller” can meet ‘Louise’ at the Broom Point Inshore Fishery to learn about her stories of hardship and reward living as a fisherwoman on Newfoundland’s rugged shores, or visit the restored Mudge brother’s cabin to try out

the canning techniques they once used to preserve salmon. Park visitors can take the Explorer Quotient quiz, and prior to their visit to specific parks, download a list of offerings available at that park that are tailored to their specific travel interests. See http://www.pc.gc.ca/voyage-travel/qe-eq/qe-eq_e.asp for more examples. When combined with other sources of market data, the EQ programme assists Parks Canada to make sound decisions on how to develop and facilitate experience opportunities.

A second important social science data set is Environics Analytics' segmentation system called PRIZM C2 that classifies Canada's neighbourhoods into 66 unique lifestyle types based on psychographic and demographic data. When cross referenced with the EQ programme data Parks Canada can target promotions to specific neighbourhoods across the country, increasing the efficiency and effectiveness of communications efforts. See <http://www.environicsanalytics.ca/data/segmentation/prizmc2> for more information about PRIZM C2 and example of its use with Canadian park visitors at: <http://www.environicsanalytics.ca/blog/ea-blog/2014/07/11/summers-here-but-some-are-not>

Communications is one aspect of promotion efforts associated with marketing. Park agencies continually strive to achieve effective communication by considering who the audience is, tailoring the message to that audience, considering what 'noise' will interfere with the accurate interpretation of the original message, and the context in which communications is taking place. Feedback, an indication from the recipient that the message was received and understood, is also an essential aspect of communication. Stakeholder meetings, in person consultations, and on-line discussion groups are all essential tools for facilitating understanding and collaboration between park managers and tourism stakeholders, be they community members, tourism entrepreneurs or park tourists. Clear and tailored messages are essential for written communication tools such as park signage, web sites, newsletters and brochures. However, visitors are also communicated to through indirect channels such as park employee demeanours and uniforms, web site visuals and the state of repair of tourism infrastructure. An example of efforts to communicate the World Heritage brand is described in Box 8.6.

Box 8.6. Gunung Mulu National Park, Malaysia: A best practice case study in communicating World Heritage to visitors



World Heritage emblem on park signage (Left) and at reception area of the park (Right). © Lisa M. King

Inscribed in 2000, Gunung Mulu National Park is a 52,864-ha World Heritage site located in the remote northern part of Sarawak State in Borneo, Malaysia. The park contains a diversity of karst features including large limestone pinnacles, enormous cave chambers and over 295 km of surveyed cave passages. The park's spectacular biodiversity includes seventeen vegetation zones protecting over 3,500 species of vascular plants (UNESCO, 2013a); and, animals such as sun bears, clouded leopards, pangolins, and hornbills.

World Heritage is a relatively new UNESCO brand in Malaysia with the first two sites designated in 2000 (UNESCO, 2013b). Many Malaysians are unaware of the brand and what is embodied by the concept. Gunung Mulu park management addresses the issue by subscribing to good branding practices and adopting a communication strategy. For example, the World Heritage emblem is placed prominently on entrance signage and interpretive panels throughout the park's tourist precinct. The World Heritage brand name is part of the park's site-specific logo and is boldly displayed in the visitor reception area (*See Plates above*). The World Heritage symbol is visible on staff uniforms and is consistently placed on park brochures. Information about World Heritage and the park's Outstanding Universal Values is presented on interpretive panels in multiple locations to increase the potential for information to be conveyed to and remembered by the visitor.

Additionally, Gunung Mulu National Park possesses an array of world-class facilities and installations designed to foster emotional engagement between the visitor and the park's Outstanding Universal Values through the provision of exceptional on-site experiences. The canopy walkway is one way the park offers visitors new personal experiences and perspectives on the park.

Gunung Mulu National Park is a case study exemplifying excellence in World Heritage branding practices. The successful transmission of visitor awareness and knowledge of the World Heritage brand and positive feelings regarding the concept stimulates appropriate visitor behaviours that benefit not only the sustainability of the park (King et al., 2012) but support the transfer of these attitudes to other World Heritage sites.

8.2.8 Use of Technologies

The presence of technology in parks and its use by park agencies for improving facilities, managing park visitation and enhancing visitor experiences is not a new phenomenon. A major area of

technology application is facility design which increasingly incorporates eco-friendly and sustainability concepts (see also Section 8.2.2). Many of the sustainable design concepts are implemented through the use of technologies in renewable energy and materials. Section 8.2.2 has provided a concise description. Box 8.7 provides another example of green building supported by technologies.

Another area of technology that has changed rapidly in recent years is the advancements in computing and communication power and mobility. Satellite phones, GPS enabled smart phones and other navigational devices help park visitors to travel into the backcountry with greater ease, however research has documented that these same visitors take greater risks due to the inaccurate perception that these devices can minimise the risks of wilderness travel. Access to cell service and the provision of Wi-Fi in park campgrounds and interpretive centres pose benefits and drawbacks. If they can accomplish a few hours of work through this connectivity visitors may linger longer in parks, thus facilitating extended family vacations. Youth may be more inclined to visit a park with their parents if access to their virtual community is a possibility. However this constant connection to the outside world may erode the restorative properties of nature, disrupt social bonding opportunities, and restrict physical activity benefits that are traditionally associated with park visits.

Technology use by the park agency to facilitate park visitation has also advanced (Box 8.8). Examples include: Buses powered by alternative fuels are used to transport large numbers of tourists sustainably, GIS planning tools used to integrate conservation and visitor experience goals, and satellite enabled feeds from visitor counter devices ensure visitor monitoring is more accurate and timely. The internet has revolutionised how park agencies communicate to stakeholders. Park visitors can participate in on-line blogs about their favourite parks, observe conservation in action through park hosted webinars, and make campground reservation in real-time with 360 degree views of their selected campsites. Park agencies use social media such as Facebook and Twitter to communicate urgent news such as wildfire outbreaks and build communities of supporters with shared park interests.

Box 8.7. Parks Canada green building

The Canada Green Building Council awards green buildings with the Leadership in Energy and Environmental Design (LEED) accreditation in three categories: Silver, Gold and Platinum. Platinum is the designation reserved for buildings that meet the highest standard of sustainable site development, water efficiency, energy efficiency, materials selection and indoor environmental quality (CaGBC, 2013).

The park operations centre at Gulf Island National Park Reserve in Sidney, British Columbia was the first LEED Platinum accredited building in Canada (Parks Canada, 2010a). It received this accreditation in September 2006, and serves as a symbol of Parks Canada's commitment to environmental stewardship and sustainability.

The centre has minimised its environmental footprint via reduced energy consumption and the use of recycled material (31 per cent of the centre's materials content is recycled) (Royal Architecture Institute of Canada, 2011). Compared to an equally sized and operational building, the centre has a measured 69 per cent reduction in energy consumption that has been accomplished in various ways. A natural ventilation system utilises sea and land breezes to circulate air throughout the building.

Windows that can open at each workstation and in each office allow for additional circulation and provide natural lighting. The sun's effort is complemented by the use of energy efficient light bulbs, of which, only two were replaced from 2007 to 2011. Sunlight is also used to produce energy; 7 per cent of the centre's energy is provided via solar panels located on the roof. A heat pump extracts heat from the ocean, which is used to heat the centre and the hot water tank. As well, collecting rainwater and storing it underground for the centre's plumbing, and the park marina's wash-water, has helped to reduce the centre's energy needs and ultimately its environmental footprint.

This Parks Canada building provides an illustration of environmental stewardship that can serve as an example of the way that park visitors should approach life—by being green (Parks Canada, 2010b).

Box 8.8. The Application of Information Technology in Jiuzhaigou Valley National Park, China



Famous waterfalls in Jiuzhaigou Valley National Park, China. © Chengzhao Wu

Jiuzhaigou Valley (Chinese for “Nine Village Valley”) is located in the Min Shan mountain range, next to the Upper Min River – one of the sources of Yangtze River, at Northern Sichuan, South Western China. The valley stretches over 720 sq km with an extra buffer zone of 598 sq km. The superb landscapes of Jiuzhaigou Valley are known for their iconic narrow conic karst landforms, fabled blue and green barrier lakes, and spectacular waterfalls. It is also the habitat for a number of endangered plant and animal species. As one of the thirteen Giant Panda Sanctuaries. In 1992, Jiuzhaigou Valley National Park (IUCN Category V) was declared a UNESCO World Heritage Site.

Jiuzhaigou Valley is home to over 1,000 native Tibetans in 110 families. Starting 2006, 7 RMB (Chinese currency) from each ticket sale annually is compensated to residents living on site as living expenses. Resident shareholders buy in 49% of the stock for the associate company. In 2012, on average, residents each gained 29, 000 RMB from their stock share. Of the 1, 226 residents living inside the Jiuzhaigou National Park, 95% of them are employed, of which, 87 people have their jobs directly related with site management, which composites 17% of the employees on the payroll under the Jiuzhaigou Valley Administration Bureau. The tourism industry in Jiuzhaigou Valley directly contributes about 30% of the GDP in Aba District.

Modern information technology has been utilised in this protected area to support management and

improve tourism services. A platform, established to collect and manage information and facilitate policy-making processes, uses satellite navigation and communication technology to integrate multiple advanced technologies and methods, including a GIS (Geographic Information System), RS (Remote Sensing), a GPS/CNSS (Global Positioning System/Compass Navigation Satellite System), RFID (Radio Frequency Identification), EB (Electronic Business/Commerce), and VR (Virtual Reality). It is hoped such a platform will help optimise the business operations and public relationships, including the alleviation of crowding and during peak season. Other expected functions of this platform include constant, accurate monitoring of ecosystem changes within preserve, so that alerts about natural disasters are more rapidly disseminated and emergency responses are better planned.

8.2.9 Education and Interpretation

Education and interpretation are often core objectives of the management of protected areas. Historically the recognition of the educational value of protected areas was an important element driving the individuals and organisations involved in their creation. Protected areas are still perceived to have enormous value as places people can visit to learn about ‘un-spoiled’ nature and/or ‘unique’ cultures, and develop positive attitudes towards conservation. Education and interpretation programmes facilitate this appreciation. They are also valuable tools for addressing visitor-associated impacts.

There are many excellent examples from around the world of high quality educational activities that involve local people offering dedicated services and well-designed materials and facilities. However, if we consider more precise definitions of education and interpretation, in practice it is mainly forms of interpretation rather than education that are available. **Interpretation** has been defined as an educational activity that aims to reveal meaning and relationships through the use of first-hand experience and illustrative media, rather than the communication of factual information (Tilden, 1957). More recently the US National Association for Interpretation (NAI) describes it as a communication process that forges emotional and intellectual connections between the interests of the audience and the inherent meanings in the resource (NAI, 2013). Where performed well, whether in the context of, for example, guided tours, visitor centres, or published media; it can be highly effective in achieving its objectives (Box 8.9). In contrast, the broader process of **education** is concerned with the culture or development of personal knowledge and understandings that involve the growth of character, moral and social qualities in the learner. It is a process of capacity building whereby the learner is helped to develop a sufficiently complex understanding of the subject to enable him or her to relate it to pre-existing understandings, attitudes, and perhaps deeply held values. In this context Stables’ (1993) distinction between ‘functional’, ‘cultural’, and ‘critical’ forms of literacy is useful. He defines:

Functional literacy – as the ability to decode what is represented in the black marks in this text. To understand the literal meaning of e.g. ‘species’, ‘wildlife’, ‘biodiversity’

Cultural literacy – as the ability to know the received wisdom about something that sets it within its cultural context.

Critical literacy – as the ability to make sense *in your own terms* of the ideational potential of a text/ concept/idea - to ‘get behind’ and interpret it in terms of its ideological underpinnings.

Some might argue that existing best practice in protected area educational provisions already seeks to develop a critical literacy amongst visitor learner groups. However, by far the greatest proportion of offerings can be described as operating at the 'functional' and, at best, the 'cultural' levels. One fundamental problem in pursuing a critical engagement is the fact that the great majority of tourists, no matter how sensitive they might be to issues concerning, for instance, their own impact on the environment and place, are present at a specific protected area in order to enjoy themselves. It is likely that they are unwilling to engage with fundamental questions that might challenge their very presence in the protected area. Similarly, the management and the communities involved with any protected area must tread extremely carefully so as not to adversely affect the opinions of visitors and cause a significant reduction in the value of revenue streams.

Box 8.9. Interpretation Centres in the National System of Natural Protected Areas in Peru



Paracas National Reserve Interpretation Centre. © Jorge Chávez

Peru's National System of Natural Protected Areas is an essential part of the country's natural heritage; it is one of the most diverse systems in the world. It has an area greater than 22 million hectares covering almost 17 per cent of the country. Its main objective is to preserve representative samples of the natural diversity of the country. The environmental services it provides are also very important; tourism is considered essential among the activities to be developed in the natural protected area system.

The System of Natural Protected Areas aims at developing sustainable and diversified tourism, with minimal negative impacts. In line with the objectives of the National System of Natural Protected Areas, tourism is understood as a tool for encouraging public use and access to these areas. To this end, key guidelines for tourism have been developed. These include: ensuring minimum social and environmental standards in operation, quality and competitiveness in service; contributions to the knowledge of natural and cultural resources in the areas through the development of environmental awareness; and the generation of economic incomes.

One of the main resources used to meet these guidelines has been the development of interpretation centres located in ecosystems as diverse as the Amazon jungle, high mountains, wetlands and coastal deserts. These have been funded by internal funds as well as donor funds. The purpose of these centres is to inform and educate visitors in a simple, agile and didactic way; using high technology and other

basic resources to deliver the message.

Paracas National Reserve, on the southern coast of Peru, is a recently completed centre. It displays information about the historical, geological, paleontological, oceanographic, biological and socio-economic value of the 335 thousand hectares of the Reserve. Interpretation combines resources such as a video room, life size reproductions of marine species, posters and photographs, a novel 'wind tunnel' that recreates the high winds 'Paracas' that regularly hit the area, as well as video and sound systems about existing natural diversity and its relation with local populations. This Interpretation Centre cost US\$800 000 and was built with the support of the Spanish Agency for the International Development Cooperation. This is an example of the future of environmental interpretation in Peru.



Interpretation Centre Education Panel. © Jorge Chávez

Box 8.10. Participatory history: engaging visitors through knowledge and skills based interpretation (Photo © Jake Paleczny)

Samuel de Champlain and Mattawa River are two of Ontario, Canada's 330 provincial parks. They are located on the Mattawa River – recognised today as a Canadian Heritage River. Between the early 1600s and the 1850s Europeans—employed as voyageurs--traded with Canada's First Nations, using large voyageur canoes to transport cargo over rugged river highways.

Today, the parks feature 200 camping sites, a store, more than 20km of hiking trails, a back country canoe route and a Visitor Centre. During summer 15-20 people staff the park facilities. Six interpreters provide a range of free traditional interpretive programming like guided hikes, children's programmes and evening programmes. For a modest fee, visitors can participate in the Voyageur Adventure Tour programme. Through first-hand experiential learning, participants gain an appreciation of Canada's history and develop a strong connection to the Mattawa River.



On a Voyageur Adventure Tour, 10 participants spend 1.5 hours paddling a replica 30' (11m) voyageur canoe on the Mattawa River. A brief introduction lays out necessary safety precautions and sets the scene. Recalling the place-specific words of Canadian icons like Alexander Mackenzie reveals an unexpected historical significance to this place. Once out on the river, interpretation begins with the tangible components of the immediate setting like the canoe, paddles and period clothing of the voyageurs. Costumed interpreters sing the traditional songs of voyageurs while paddling, creating an authentic, uninhibited atmosphere. As the initial novelty of being in a voyageur canoe starts to fade, interpreters engage participants with skill based activities around paddling and maneuvering the canoe. Then the interpreters begin adding on cultural elements by telling stories and teaching participants voyageur songs. Interpreters recall place specific historic records, eliciting personal stories and experiences that provide a point of connection between today's visitors and the Mattawa River.

Like any good story, the climax comes before the end when the interpreters provoke the participants to shed the relaxed, romantic pace of the tourist paddler and adopt the rapid pace of a business driven fur trader! Herein is the moment of "coming together" when participants engage fully; as they pull hard on their paddles and feel the splash of the water and the surge of the canoe under their rapid voyageur strokes. The accompaniment of their own singing voices mingling with the words of past travelers helps them transcend time in this special place. As the action falls and the programme moves towards the conclusion, interpreters invite participants to reflect on their experience and test their original notions of voyageurs and fur trade history against their new experience.

The Voyageur Adventure Tour has a strong foundation in a clear, accessible, place-based theme. Participatory learning experiences are highly engaging for the participants, and incorporating skills helps avoid information overload. Visitors are truly participants in both a physical sense as they paddle, and in an intellectual sense as they discuss, question and have fun!

8.2.10 Certifications

Tourism certification generally involves a voluntary, third party assessment of a tourism enterprise's conformity to a set of standards. Certification can be used to inspire park based tourism operators to achieve specific sustainability targets. Some have suggested that a certification label awarded to tourism businesses can be used as a marketing tool to attract and reassure tourists about the responsibility and sustainability of the operators activities while in a park. Debate remains on the ability to influence travel consumer trip decision as many tourists are

unaware or unsure of what the many certification labels mean (Font et al., 2007; Esparon, 2013; Haaland & Aas, 2010).

Park agencies can give operational preference to companies that are certified by a sustainable tourism schemes such as Green Globe, Green Key and the Sustainable Tourism Eco-certification Standard (STEP) or regional programmes such as Costa Rica's Certification in Sustainable Tourism Programme. This is only recommended if the park agency feels the certification scheme genuinely assesses and supports operators' efforts engage in sustainable practices. The rigor of many of these programmes remains contested (Spenceley & Bien, 2013).

In addition to park-based tourism operators pursuing certification, parks themselves can seek eco labels; for example they can pursue certification of specific buildings (e.g., LEED – Leadership in Energy and Environmental Design) or daily operations efforts (e.g., ISO 14001 Environmental Management Standard)

Park systems can initiate their own certification system in which sustainability targets are set and which each park must strive to meet. PAN Parks' Sustainable Tourism Certificate is one example of a regional certificate system intended to denote parks that are both ecologically and socio-economically sustainable with this award. A second regional park certification system, the European Charter for Sustainable Tourism in Protected Areas certificate is guided by 10 Charter Principles (Box 8.11; see also Chapter 6). The ECST Charter Toolbox defines the necessary criteria, minimum standards and monitoring indicators to be used for appointing a certificate to a park with sustainable tourism. The key objective is strengthening the connection between protected areas, local communities and nature (Balandina et al., 2012). At the global scale, as introduced in Chapter 3, the Global Sustainable Tourism Council (GSTC) is developing criteria and seeking international consensus on them for future certification and accreditation programmes. More details are provided in Box 3.3.

Box 8.11. Promoting partnerships through the European Charter for Sustainable Tourism and PAN Parks

Two schemes in Europe promote partnerships for sustainable tourism as a key element of protected area management. One, the *European Charter for Sustainable Tourism* is a practical management tool, which helps protected areas to continuously improve sustainable development and the management of tourism, taking account of the needs of the environment, the local population and local tourism businesses. This helps to strengthen links and understandings between protected-area managers and their partners in the business communities in and around protected areas (Europarc Federation, n.d.; 2012). The other is *PAN Parks*, which also has a strong emphasis on building links between protected area managers, businesses and other local partners in joint development and the implementation of Sustainable Tourism Development Strategies (PAN Parks, 2013).

The European Charter for Sustainable Tourism and PAN Parks are both award schemes that provide practical support, including detailed guidance and checklists on sustainable tourism and creating local partnerships, as well as technical visits in some cases, to candidate areas as they prepare to apply for awards. Awards are bestowed following evaluation and verification visits by teams of independent verifiers, and are must be renewed at set intervals subject to further verification assessments.

European Charter for Sustainable Tourism in Protected Areas: Guiding principles.

1. Connecting stakeholders.
2. Preparing and implementing a sustainable tourism strategy and action plan.
3. Addressing key protected heritage issues, globally and locally.
4. Providing quality experiences for visitors.
5. Communicating and interpreting effectively.
6. Encouraging site and heritage specific tourism products.
7. Training and increasing a knowledge base for stakeholders.
8. Supporting the quality of life for local residents.
9. Focusing on local products and labour.
10. Monitoring impacts and proceedings and managing adaptively.

The European Charter can be awarded to protected areas of all kinds and sizes, while PAN Parks focuses on protected areas that are at least 20,000 ha in size, with a wilderness core area in excess of 10,000 ha. Apart from this, their guidance and approaches share many common features, and the Europarcs Federation, which runs the European Charter, and PAN Parks collaborate in several projects.

At the core of both schemes is the understanding that the long-term management of protected areas needs the support of local partners and needs to provide local communities and businesses with economic opportunities that are compatible with each areas conservation objectives. Achieving this requires: i) consensus amongst the various partners - including civil society groups, local municipalities, businesses, and protected area managers – and, ii) methods, such as local forums, for these partners to jointly agree on long-term strategies as well as on day-to-day management. Sustainable tourism provides opportunities for economic activities in and around protected areas, has relatively low environmental impacts, and also enables visitors to experience conservation in action, raising their awareness and encouraging their future support.

By linking the effective management of protected areas and sustainable tourism by businesses, the European Charter and PAN Parks provide a strong incentive for protected areas and tourism businesses to work together to protect and enhance each area's natural and cultural heritage, for and through tourism, and to protect it from excessive tourism development. The two schemes emphasise that tourism needs to support, and must not reduce, the quality of life of local residents, and to increase benefits from tourism to the local economy.

In 2014 there were 13 PAN Parks certified protected areas, and 119 protected areas in 13 European countries have signed the European Charter for Sustainable Tourism – engaging in a process of sustainable tourism planning and initiatives.

For more info: www.europarc.org/ and www.panparks.org/

8.2.11 Concessions

Concessions are the primary means of engaging the private sector in conservation. A business will have a concession agreement, a lease, licence, permit or easement, to operate their business inside a protected area (e.g., see Table 8.1 for types of concessions in New Zealand). This contract

stipulates the key terms and conditions, such as duration, type of operation, environmental conditions and fees that the business must operate under. Types of tourism concessions include ski areas, hotels, guided walking, hunting, 4x4, fishing, aircraft landing activities as well as heli-biking and heliskiing, ballooning, filming, rafting and boat transport or cruises, guided canyoning, mountaineering and rock climbing and retail activities. Concessionaires provide a number of important opportunities for assisting park agencies to achieve their conservation goals. Fees and rentals contribute to funding protected areas, and tourism concessions enhance visitor and education outcomes through good interpretation and by providing a quality visitor experience. In developing countries concession activities provide a vital link between local communities, rural development and conservation. In developed countries concession operations provide important economic outcomes that help to justify investment in conservation.

Table 8.1. Concession types and process, an example of how concessions are categorised and processed in New Zealand

Concession	Definition	Process	Examples
<i>Permit</i>	Granted up to 10 years, activity based	Generally non-notified, 5 - 45 working days for simple applications (up to 65 working days for complex)	guiding - including walking, tramping, climbing, hunting, fishing, biking, kayaking and canoeing
<i>Licence</i>	Granted up to 10 years non-notified, or 30 years notified*	Either the non-notified approach or the below notified approach applies	Renting a Department owned building and hiring recreational equipment, to cover the skifield area (not the buildings) crops, grazing and weather stations
<i>Lease</i>	Granted up to 30 years involves an interest or exclusive use of the land	Notified: 85 working days if no submissions received (up to 140 working days if submissions received but no hearing, or 160 working days if submissions received and a hearing)	Fixed structures such as hotel buildings, airports, cafes, bungee jumping structures, telecommunications facilities
<i>Easement</i>	Up to 30 years for services or access	Can be notified or non-notified	Roadways, pipelines, water pipes, telecommunications lines

*In New Zealand 'notified' means that the Departments intention to grant a concession must be advertised in local or national papers and the public have the right to make submissions and can request the right to be talk to their submission at a hearing.

Concessions are generally overseen by a small group of specialised park agency staff who understand commercial tourism operations and work with protected area operational staff and decision-makers to administer and award concession opportunities. The management and awarding of concessions opportunities can occupy a significant amount of a park manager's, director's or a minister's time. Table 8.2 demonstrates the scale and scope of concession work for a number or protected area agencies.

Table 8.2. Concession scale and scope in five countries

Characteristics	Country/Agency				
	US NPS	Parks Canada	New Zealand	Namibia	Australia (GBRMPA)
<i>Number of concessions</i>	600 contracts plus 6000 commercial use authorisations	2752 leases, licenses, business licenses	3700 of which 43per cent are business related	45	940 (approx.) tourism permissions
<i>Income from concessions</i>	US\$60m	CAD\$8.2m	NZ\$14.3m (from tourism and other concessions)	N419m	AU\$8m (approx.) through an environmental management charge
<i>Self-employed (full-time equivalent)*</i>	200 (40 in head office)	30	25	3	22
<i>Timeframes for small process concessions</i>	2 years (excl. plan changes)	3-6 months	65 days (2 months)	3-12 months	8-10 weeks, four months to run an expression of interest process (EOI)
<i>Timeframes for processing large concessions</i>	2 years (excl. plan changes)	60 days effort (non-continuous)	160 working days (5 months)	12-24 months	Approval for major projects such as a pontoons may take considerably longer
<i>Structure (centralised or decentralised)</i>	Centralised over US\$3m	Tender	Regionalised processing centres	Centralised	Application on a first come, first served basis. Capped opportunities through EOI
<i>Preferred allocation mechanism</i>	Tender	Centralised for large scale issues, decentralised smaller concessions and for relationship management and monitoring	Receive applicants from the private sector	Direct award to communities, tender, auction and directly with applicants	Centralised processing and contract management, field staff do compliance

Figure 8.3 highlights the main components of a concession. No matter how small or large a concession system is, all of these components need to be present to some degree. For example, countries that have a small concession system may only need a spreadsheet to manage their concessions and their work flow; however, for a large concession system specific databases may be developed to undertake this work. Standard contracts, web information, planning approaches and process, environmental impact assessment and monitoring will always be necessary components of concession work. Additional components should also be considered such as supporting operators to interpret protected area values, contribute to conservation and understanding the economic impact of parks through concessions. The most overlooked, but most important component of concession management is staff. Concession staff need to have a diverse range of skills from EIA, tourism knowledge and most of all relationship skills. These skills need to be developed and retained. There should always be a commitment to the continuous improvement of the concession system and consultation of the tourism industry is essential in this process of review.

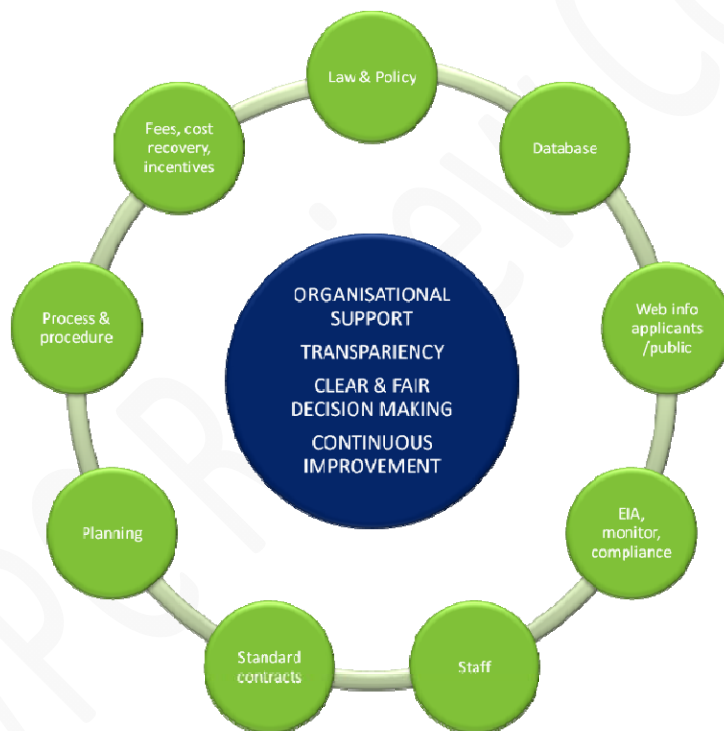


Figure 8.3. **Principles and components of a concession system.**

A protected area agency should permit and manage concessions in a manner that complements their own provision of recreation opportunities. There are often two key issues associated with planning concession opportunities. First, there are not enough concessions. Many protected area agencies want to further develop their concession system to garner the potential benefits of doing so. Challenges arise in identifying, planning and allocating new prospects for tourism businesses. Generally this means the park agency itself will employ staff and develop processes to identify and

award business opportunities, make sites or business opportunities market ready and make it easy for quality operators to invest.

The second planning challenge in the concession area is a contrast to the first, there are too many concessions. The impact of this is that the park may become over commercialised, and the visitor experience or the parks landscape and ecology may be degraded as a result. There may even be a number of illegal operations. It is very difficult to simply terminate concessions when they provide jobs and income but steps do need to be taken to manage the effects of concession operations in this situation. In this scenario, illegal operators can be closed down, activities can be concentrated to constrain impacts, fees can be increased and rationing systems such as quota based tenders and auctions can be put in place to manage use within resource constraints.

Because it is a commercial function operating largely on public conservation lands, transparency, fair decision-making and continuous improvement are vital principles that must be applied to this area of work. Information around the number of concessions, applications being processed, who concessionaires are, standard contract terms and consideration processes, as well as the ability for the public to be involved in concession planning, are all part of making the concession function transparent. Concession staff should not be the decision-makers, it is their job to make recommendations and advise the decision-maker. Who the decision-maker is and the criteria for decision-making should also be clear and obvious.

Some protected area agencies predominantly use tenders while others accept and process applications. There are a range of allocation tools and mechanisms that a park agency should be able to use that includes expressions of interest, direct award and even auctions. Each of these tools has its own strengths and weakness and the mechanism used should suit the situation and the outcomes sought from the opportunity. Auctions and tenders can help to get the best price but they can also be used to allocate rights fairly and equability when demand exceeds supply and to lift overall performance of operators across a number of areas.

Allocation and consideration processes for concession business opportunities must be based on sound legal principles and clearly stated decision-making criteria. The range of award processes that a park agency uses needs to be documented and legally checked. They must be also clear, transparent and publicly available; below is an example from the United States National Parks Service (Figure 8.4).

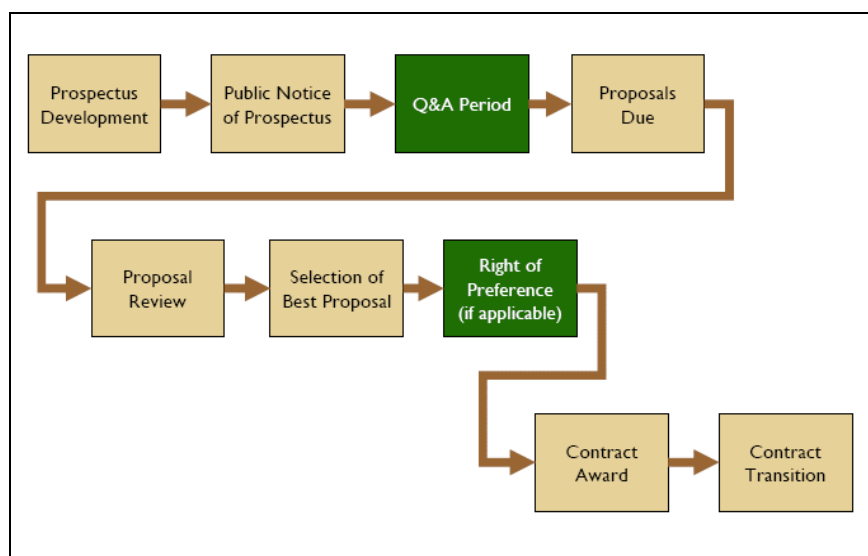


Figure 8.4. **Contract solicitation and award process from the U.S. National Park Service.**

Investment, ideas, intellectual property and innovation from the private sector should be encouraged. The allocation or consideration of applications should give the private sector confidence that when they come forward with new and innovative ideas they will be considered. Additionally, the general public and the private sector must have confidence and trust in the protected area agency's concession processes, otherwise further investment will be severely constrained.

The conservation challenge in many countries is larger than what park agencies can achieve on their own. Many park managers recognise this and engage the public, volunteers and concessionaires in worthy projects to help. Concessionaire involvement in conservation can be great for biodiversity outcomes and good for business. Having concessionaires actively engaged in conservation should be encouraged and operators can contribute in a number of ways. Three case studies in Boxes 8.12 to 8.14 illustrate this well. The new UNDP Manual on Tourism Concessions (UNDP, 2014) provides detailed guidelines on all aspects of concession planning and management with more examples.

Box 8.12. **Case Study: Wilderness Safaris - conservation and community**

The Wilderness Wildlife Trust is an independent entity set up by Wilderness Safaris. It supports wildlife management, research and education projects throughout southern Africa. A portion of each guest's safari fare is allocated to the Trust, and 100 per cent of these funds go to trust-approved projects. An example of the trusts work involves the reintroduction of Rhinos into the Okavango Delta in Botswana.

In 2001, Wilderness Safaris, together with the Department of Wildlife and National Parks in Botswana, initiated a programme that has resulted in more than 32 white rhinos being released in the Okavango Delta. The first group of four white rhinos arrived at Mombo in November 2001; Wilderness Safaris purchased the animals and financed the construction of bomas, much of the transport and most of the monitoring costs. A further 22 rhinos arrived as a result of an innovative 'rhino-for-roan' swap between South Africa and Botswana. Since August 2004, no less than 11 rhino calves were born in the

wild, all to mothers released in the programme. The total white rhino population now stands at over 38. The classification of the black rhino as 'locally extinct' became redundant as of October 2003, when the first four black rhino - two males and two females - were released into the Okavango Delta. These conservation efforts are also good for business since guests to Wilderness Safaris' camps in the area now have the privilege of encountering rhino on game drives.

Wilderness Safaris also have a social programme called Children in the Wilderness. This programme aims for sustainable conservation through the leadership development of rural children in Africa. Backed by the belief that for conservation to be successful long-term, rural children should know about and understand the importance of conservation and its relevance to their lives. This is a life skills programme focusing on the next generation of decision-makers. It works by Wilderness Safaris closing a camp for a few days each year; 16-30 pre-selected children from neighbouring schools and communities between the ages of 10 and 17 are then hosted in the camp. Since 2001, 4500 children have been hosted in Wilderness camps in seven countries (Children in the Wilderness, 2013). The programme is so successful it is able to attract a range of other sponsors.

The true test of whether a tourism operator is contributing to conservation is to ask the question: would the environment be worse off if this operation did not exist? The more a protected area agency can encourage genuine conservation outcomes the better the agency. There are some simple, low cost ways to encourage operators to become involved in conservation including:

1. Sponsor a national tourism award around operators engaged in conservation
2. Champion these operators on the agencies website
3. Champion these operators in tourism tradeshows, tourism conferences and in media travel and magazine articles
4. Make commitment to conservation a tender selection criteria

Box 8.13. Jordan Case Example: Royal Society for the Conservation of Nature



Tourists experiencing the desert landscape in Wadi Rum Protected Area, Jordan. © Mei-Yee Yan

The Royal Society for the Conservation of Nature (RSCN) is a non-governmental organisation devoted to the preservation of Jordan's natural resources. Established in 1966 under the patronage of the late

King Hussein, the RSCN has been given the responsibility by the Government of Jordan to protect the Kingdom's natural heritage. It is one of the few organisations in the Middle East to be granted this kind of public service mandate to manage public lands.

RSCN introduced its innovative people-centered approach to protected area management in 1994 in the Dana Biosphere Reserve near Petra. Working directly with local villages and Bedouin communities, income-generating projects have been created that utilise the Reserve's natural beauty and wildlife to generate employment opportunities. These include small handicraft enterprises and a range of tourism facilities, including campsites, guesthouses and an ecolodge. Such ventures continue to make nature conservation important to the lives of Dana residents and create a constituency of local support for the Reserve.

Wild Jordan is the socio-economic development and ecotourism division of the RSCN. Wild Jordan's mission is to develop viable nature-based businesses within and around RSCN's protected areas in order to bring tangible economic and social benefits to local communities and generate financial, political, and popular support for nature conservation throughout the Kingdom of Jordan. Through Wild Jordan, RSCN has created business ventures using natural assets to create economic and social benefits for local communities. Such ventures are making nature conservation important to the livelihood of local communities, while providing alternatives to hunting and overgrazing, which continue to pose threats to wildlife habitats. The RSCN and Wild Jordan manage the following reserves, many of which have accommodation facilities: Dana Biosphere Reserve, Azraq Wetland Reserve, Mujib Nature Reserve, Ajloun Forest Reserve, Dibein Forest Reserve, and the Dead Sea Panoramic Complex (RSCN, 2013)

A recent RSCN innovative venture is a concession agreement granted to manage the 26 room Feynan Ecolodge at the Western edge of the Dana Biosphere Reserve. Dana is an area of tremendous variety in terms of wildlife, geology, landscape and night-time stargazing. Owing to its diverse elevations and geographical formations, the Dana Biosphere Reserve hosts a wide array of flora and fauna. Over 800 plant species thrive within the reserve, three of which are unique to Dana; 449 different animals have been recorded, including threatened species such as the sand cat, Syrian wolf, lesser kestrel and spiny-tailed lizard.

Renowned architect Ammar Khammash constructed the Feynan Ecolodge in 2005. Before the lodge was built, the land was utilised as a campsite by archaeologists conducting studies and digs in the area. The RSCN developed the campsite into an ecolodge to provide economic opportunities for local communities and generate revenue for the conservation of Jordan's wild places. In September 2009, EcoHotels, a commercial enterprise, was granted a concession to manage and operate the lodge, offering travelers an opportunity to experience Jordan's wilderness, meet its native people and explore its ancient history, with minimal impact on the environment. A major constraint is the hot summer, which limits tourist activity; alternative scientific and educational options are being explored (Feynam.com, 2013).

Box 8.14. Public-private management of Šargan-Mokra Gora Nature Park in Serbia

Nature park Šargan-Mokra Gora, originally a part of Tara Mt. National Park, was designated the status of the Landscape of Outstanding Features 'Šargan-Mokra Gora' in 2005. When its area was enlarged from 3,678.23 ha to 10,813.73 ha in 2008, it received the status of Nature Park, a natural asset of exceptional national importance of the 1st category. It is managed as an IUCN category V (Protected landscape) area.

Limited Liability Company 'Nature Park Mokra Gora' manages this protected area, which is one of 9 of

protected areas in Serbia managed by a private companies or NGOs. The famous film director, Emir Kusturica, has had a vital founding and managerial role in Šargan-Mokra Gora Nature Park which brought many innovative aspects to the park's operations. There are about 30 company employees in four sectors: Management, Administrative and Accounting Services, Supervision, and Maintenance.

Activities in the park include scientific research, conservation, education and tourism and the park is accessible to visitors throughout the week. There are no fees, but the management provides the whole set of tourism activities to visitors and the revenues from this are all brought back into park operations.



Park landscape: preserved natural and local values. © Ilija Resimić

Some of the key factors underlying the evolution of the Nature Park include:

- **Commitment from an individual:** Today a member of the Nature park assembly, Emir Kusturica has invested his own resources and reputation into the park. He created Kustendorf, an international film and music festival that has brought many famous international and domestic figures to the Park. This had generated interest in, and drawn numerous visitors to the park.
- **Employment of tourism resources:** The Park is one of the most famous destinations in Serbia; it has an advantageous geographical position and good connectivity. The park offers various tourism opportunities including: the magnificent nature; a bounty of thermal-mineral waters; the ethno-village Drvengrad (*The Wooden City*) created from restored authentic Old Vlach log cabins; skiing grounds; the unique Šargan's Eight (outdoor museum and tourist railway); and traditional products created by and the hospitality of villagers. Drvengrad is now a place where cultural events occur and where numerous artists and athletes from around the world

gather.

- **Sustainable planning:** With the help of state ministries, the park management contributes to both local communities as well as the protection of nature. These contributions have included – sewage, plumbing, high-speed internet connection, wastewater treatment and fire protection systems.
- **Local support of young generations:** Local elderly inhabitants have some difficulties understanding and accepting the rules and restrictions in hunting, tree-cutting, building etc. posed by the management. On the other hand, the younger generations perceive these things as a means for sustainable development of the area.

Sources:

Nature park “Sargan-Mokra Gora” - parkprirodemokragora.org/index.php?l=16

Kustendorf Film and Music Festival - kustendorf-filmandmusicfestival.org.

8.2.12 Partnerships

As was demonstrated in the concessions section, partnerships are an important part of sustainable management of tourism in protected areas. For a partnership to be truly successful park agencies must ensure:

1. It requires that all partners decide on, understand, and agree on their roles and responsibilities and document them in writing
2. All those involved should equally shoulder the duties and commitment
3. It must be mutually beneficial
4. Mechanisms must be in place to evaluate the success and benefits of the partnership
5. Communication is crucial

Partnerships between park agencies and NGOs, communities or the private sector can be highly rewarding, but also highly challenging as each group has different goals as well as different ways of achieving them. Below three case studies (Boxes 8.15 to 8.17) provide some lessons relating to the role of partnerships in achievement of visitor management in protected areas. Canadian Tourism Commission also published best practice guidelines for collaborations between protected areas and tourism operators, which can serve an example for similar documentation of best practices in other parts of the world (Pam Wight and Associates, 2001).

Box 8.15. Cooperative planning and management of Ni'iinlii'Njik (Fishing Branch) Protected Area in Yukon, Canada



Photographing grizzly bears at Ni'iinlii'Njik Protected Area. © Government of Yukon

Ni'iinlii'Njik (Fishing Branch) is a 6,500 km² Yukon government-Aboriginal cooperatively-managed protected area in northern Yukon, Canada. The area includes: a 5,400 km² wilderness preserve and a 170 km² ecological reserve administered under the Yukon *Parks and Land Certainty Act*; a 900 km² habitat protection area administered under the Yukon *Wildlife Act*; and 140 km² of land owned by the Vuntut Gwichin First Nation. Initially identified for protection through the 1995 Vuntut Gwichin Land Claim Agreement, the area protects important cultural and natural values, including a concentration of salmon and grizzly bears that provide a special eco-tourism viewing opportunity.

The agreement and jointly developed management plans provide for governmental, academic and private sector partnerships:

- **Management planning:** A Committee of Managing Agencies was set up to plan and manage the area cooperatively. The plan set the stage for low-level visitation, supported by trained private sector guides and minimum facility development, research and monitoring, and risk planning.
- **Risk management planning:** The partners developed a bear-human risk management plan to identify how operational requirements and safety procedures would minimise the impact on bears and salmon, minimise conflict between bears and humans, and define appropriate responses in the event of a conflict. Private sector specialists in bear behaviour and guiding were involved, and later the eco-adventure company prepared a viewing plan to address how the bear-human risk plan would be implemented.
- **Research and monitoring:** Simon Fraser University conducted research to document bear and salmon populations and baseline patterns of bear behaviour in the viewing area. They also prepared a monitoring protocol. This work enables the evaluation of management effectiveness.

- **Facility development and operations:** A commercial joint venture was established between the Vuntut Gwitchin Development Corporation and a private sector eco-adventure company experienced in bear viewing. Residents of the First Nation community of Old Crow were involved in the construction of the cabin facilities, which were designed and located to fit into the wilderness character of the area. Low-level visitation (four visitors plus one guide at a time during the fall viewing season) is intended to minimise potential impacts and risks. Recreational hunting is not permitted, and the First Nations who have subsistence rights to harvest wildlife has voluntarily closed the area to harvesting.

Through this work, over the last 18 years, a number of lessons about partnerships have been learned:

- **Cooperate and partner early in the process:** Partnerships require trusting relationships, which in turn need time to be established and need to be nurtured on an ongoing basis.
- **Focus on building capacity:** The joint venture approach enables the coming together of private sector expertise and local experience, and promotes the building of local capacity.
- **Respect roles and authorities:** Be clear about who has lead roles and decision-making authorities. In this case, Yukon government leases the facilities to the joint venture partners, thereby reducing the amount of capital investment required by the partners, while retaining authority over the facilities.
- **Developing a common management approach:** Through the process of jointly developing management plans and activities, the needs of the partners can be better understood and applied. For example, in the absence of fully knowing all implications, there could be agreement on applying a precautionary approach to setting limits on the level of use to reduce risks on species and visitor safety. While aiming to be comprehensive, patience is also required, because at times, there can be pressure to allow access before all necessary planning and preparations have been put in place. Phasing in and testing operations can be helpful in addressing problems before they become problems.

Box 8.16. Successful public-private alliance: the case of Tambopata Research Center and the Tambopata National Reserve, Peru

The partnership between Rainforest Expeditions (RE), the Tambopata Research Center, and Peru's National Service of Natural Areas Protected by the State (SERNANP) is an excellent example of a successful public-private alliance that promotes conservation and tourism. An ecotourism concession contract was signed between tour operator Rainforest Expeditions and SERNANP in 2006 for access and use of a small area of the Tambopata National Reserve in southeastern Peru, in the Amazon jungle. This contract is renewable every 20 years.

In 1989, Eduardo Nycander and Kurt Holle founded the Tambopata Research Center (TRC) to host ecotourism and to conduct macaw conservation research (the Tambopata Macaw Project). In 1992, they founded the for-profit ecotourism company Rainforest Expeditions; TRC was its first lodge. Currently, the company has two more lodges, one of them operated with a local community.



Tambopota Research Centre lodge. © TRC – Manu Lodges

The Tambopota Research Center (TRC) is a lodge with eighteen bedrooms. It was built over twenty years ago to accommodate tourists and researchers and protect the adjacent macaw clay lick, which is the largest known of its kind. The lodge is located in an area where one can see dusky headed titi, squirrel, brown capuchin, howler and spider monkeys as well as capybara, caiman, agouti and white-lipped peccary. The small-scale infrastructure and operations, as well as the permanent presence of researchers and naturalist guides, make TRC an excellent place to investigate the wildlife of the Amazon.

In accordance with the agreement between RE and the State, the following is being executed:

- a. **Development of scientific research and other publications.** Since its inception, RE has supported scientific research, primarily on Psittacidae (parrots), by supporting grants for volunteers of the Macaw Project. Several studies have been carried out that have increased the knowledge of parrots and macaws, species that play an important role in the dynamic of the clay lick. All this work has resulted in twenty-six publications (thesis, reports, journal articles, conference abstracts, among others).
- b. **Generation of direct and indirect jobs and training.** As part of its policy, RE prioritises the recruitment of staff from native communities or from the Madre de Dios Region (MDD), where the lodge is located. Several members of the Infierno Native Community from near the lodge collaborated with its construction several years ago; they also take part in the Macaw Project. More than 27 per cent of TRC workers are members of this community and more than 50 per cent are from the MDD Region. RE implements training courses in housekeeping, restaurant waiting, food preparation, guiding and skippering annually, which enable continuous improvement and specialization in those areas.
- c. **Good environmental practices.** RE respects the norms and regulations of the Reserve, and offers the company's and its workers' commitment to support the Reserve's management, and activities that will contribute to the conservation of the protected area.
- d. **Promotion of the Reserve.** By promoting its ecotourism proposal through the media, RE disseminates the value of biological and cultural diversity in the Region of Madre de Dios, particularly in Tambopata National Reserve. It also encourages the development of tourism rather than other activities that are harmful to the environment such as shifting agriculture and illegal mining.

Box 8.17. Park volunteers and citizen Science



A volunteer collecting visitor activity data in Yosemite National Park. © Chelsey Walden-Schreiner

Park agencies are increasingly dependent on volunteer assistance to run programmes, maintain infrastructure, and participate in stakeholder planning processes. These uncoerced and no-remunerated helping activities enable parks to meet their conservation and recreation provision agendas. Parks volunteers are engaged in these activities for personal benefit (e.g., enhanced job prospects or health outcomes) and altruistic reasons (e.g., assisting society through service); however they can also be motivated by a pre-existing love of nature. Understanding what motivates park volunteers is essential for park managers who hope to offer programmes that are meaningful and attractive to volunteers (Halpenny & Cassie, 2003; Cassie & Halpenny, 2003). Park volunteerism also serves the important role of forging stronger connections between a country's citizens and its parks (see Waithaka et al. 2013 for best practice examples).

A popular form of park-based volunteerism is citizen science. According to Dickinson and Benny (2012, p. 1), citizen science is, “public participation in organised research efforts, [and] hundreds of thousands of individuals around the world are ‘citizen scientists,’ people who have chosen to use their free time to engage in the scientific process.” It can occur along a continuum of project scales and protocols. The scale can be small, such as a project led by a single institution and one community of volunteers or very large, such as an international project with volunteers from multiple countries. Protocols can be very simple, asking volunteers to provide nothing more than ‘snapshot data’, which can be used to identify patterns and create databases. Alternatively, protocols can be very strict with volunteer data intended to contribute to an answer for a specific research question. Citizen scientists are sometimes volunteer tourists who have travelled specifically to a park to engage in research, but citizen scientists are more often outdoor recreationists (locals) who enjoy leisure opportunities in parks while at the same time contributing their energy and skills to science.

Park and protected areas' management can potentially use citizen science to develop effective interventions for resource management issues. This can be led exclusively by the park or protected area management, or it can be led by a university or other professional research institution. For example, in Victoria, Australia, the Victoria Marine National Park and Sanctuary Management started the *Sea Search* citizen science project (Parks Victoria, 2013). Sea Search uses community volunteers to gather information about the health and condition of the network of Victoria's marine parks and sanctuaries; volunteers use easy to complex collection methods. The method is chosen in collaboration with a park ranger; it is contingent on the time, commitment and expertise levels of the volunteer and the needs of the park. An alternative citizen science example is a study led by the University of York, in the United Kingdom. The study used volunteers to document sightings of over 250 species and showed that various species are colonizing parks and protected areas as they move north in response to

climate change (University of York, 2012). Park and protected area management can use this citizen science-driven study as a planning tool for the future.

Citizen science can lead to the development of inter-agency and community partnerships, create stewards out of volunteers and empower communities (Koss et al., 2009). It has the potential to be an effective tool; however, it must be used with caution. Strict collection protocols require that adequate training and education be provided to volunteers. Koss et al. (2009) found that trained *Sea Search* volunteers and scientists generally collected comparable data; but volunteers reported less diversity of algae species, which suggests that they did not have enough training. In order for citizen science to be viable, adequate training and instruction must be provided to volunteers at the outset of the study.

8.3 Efficacy Evaluation of Management Tools

This chapter has outlined a range of recreation and tourism management strategies and practices. A number of empirical studies have begun to evaluate the efficacy of these management approaches (Manning, 2011; Manning & Anderson, 2012). Because information/education is an indirect management practice that tends to be favoured by visitors, many studies have focused on this management approach. Information/education has been found to be effective in 1) influencing recreation use patterns, 2) enhancing visitor knowledge, especially about how to minimise the ecological and social impacts of recreation and tourism, 3) influencing visitor attitudes toward management policies, and 4) addressing depreciative behaviours such as littering and vandalism. For example, a study of visitors to the backcountry portion of Yellowstone National Park in the U.S. gave hikers a guidebook that described the attributes of less-used trails prior to obtaining a required hiking permit (Krumpe & Brown, 1982). Through a later survey of hikers and examination of permits, it was found that 37 per cent of this group had selected one of the lesser-used trails compared to 14 per cent of a control group, thereby reducing environmental impacts and crowding on popular trails.

Substantial attention has also been focused on the management practice of limiting the amount of use that parks and protected areas receive. Five management practices can be used to limit and allocate use as outlined earlier in this chapter. Each of these practices has potential strengths and weaknesses (Stankey & Baden, 1977; Manning & Anderson, 2012). For example, reservation systems may tend to favour visitors who are willing and able to plan ahead, but may be difficult and costly to administer. Lotteries are often viewed as eminently fair, but can also be difficult and costly to administer. First-come, first-served systems may favour visitors who have more leisure time or who live relatively close to a park or protected area, but are relatively easy to administer. Pricing is a commonly used practice in many societies to ration scarce goods and services, but may discriminate against potential visitors with low incomes. Merit systems are not widely used, but may help to lessen the impacts of tourism and recreation use; however, they may also be difficult and costly to administer.

Research on rules and regulations suggests that they can be effective in reducing the impacts of recreation, but that visitors are often unaware of rules and regulations or don't understand the reason behind them (Manning, 2011). A study conducted in several U.S. parks and protected areas found three basic regulatory approaches addressing campfires: a ban on campfires, designation of campfire sites, and no regulation (Reid & Marion, 2005). Findings from the study

suggest that banning campfires does not substantially reduce campfire-related impacts, but that no regulation results in excessive resource degradation. The authors conclude that the regulatory option of designating campfire sites along with banning axes, hatchets, and saws is likely to exercise reasonable control of campfire impacts while preserving the option of campfires, a practice that is highly valued by some visitors.

Relatively little research has been conducted on the efficacy of law enforcement in the context of parks and protected areas. However, several studies suggest that it can be effective. For example, a study at Mount Rainier National Park in the U.S. found that the presence of a uniformed ranger significantly reduced off-trail hiking (Swearingen & Johnson, 1995). Moreover, visitors tended to react positively to this management practice when they understood that the presence of a uniformed ranger was needed for information dissemination, visitor safety, and resource protection. A long-term study of four marine sanctuaries in the Philippines found improved ecological conditions of coral reefs and fish species abundance and richness and attributed this to law enforcement along with enhanced management activities and community support (Walmsley & White, 2003).

Facility development, site design, and maintenance are management practices that are primarily designed to protect natural and cultural resources from the impacts of visitor use. A number of studies suggest that these management approaches can be effective. For example, redesign of a popular camping area along the Appalachian Trail in the U.S. included closing and rehabilitating heavily impacted campsites in flat areas. These were replaced with smaller campsites in side-hill locations that offered more privacy and discouraged campsite expansion, reducing the total area of environmental disturbance and resulting in higher visitor satisfaction (Daniels & Marion, 2006). Another study used symbolic rope fencing along the margins of trails in Acadia National Park in the U.S. to discourage visitors from walking off trail (Park et al., 2008). This approach was found to be substantially more effective than several information/education practices. Facility development, design and maintenance can also be used to enhance visits, thereby generating positive outcomes for park visitors such as satisfying and meaningful experiences that result in return visitation, positive word of mouth promotion of the park as a destination, and related loyalty behaviours amongst visitors.

Certification appears to be a less effective visitor management approach, largely due the difficulty in administering evaluation programmes, but also because of tourists' lack of awareness of what different certification labels mean. Marketing's effectiveness, with its broad spectrum of tools ranging from pricing strategies to promotional efforts has demonstrated significant success and flexibility. Park managers have effectively used demarketing to dissuade visitors from journeying to parks during peak periods (Halpenny, 2007) or in engaging in particular activities or visiting specific sites with a park (Armstrong & Kern, 2011). In a US park, relationship marketing has been identified as a highly effective approach in fostering relationships between a public park agency and its constituents (Borrie et al., 2002). This leads to effective partnerships, essential to the success of any park in the management of visitors and their experiences. Concessions as well as other partnerships such as collaborations with NGO run citizen science programmes and environmental education programmes are essential for expanding the ability of parks to achieve conservation and public engagement goals.

A growing body of scientific and professional literature is exploring the effectiveness of a range of practices designed to manage the outcomes of tourism and recreation in parks and protected areas. These management practices are aimed at protecting park resources and the quality of the visitor experience. Research has generally found that a number of management practices can be effective and this offers guidance and encouragement to park and protected area managers. However, more research is clearly warranted on an expanding range of management practices and in a variety of park and protected area contexts.

One new development in management effectiveness assessment at a global scale is the *IUCN Green List of Protected Areas* programme, which entails a systematic process of nominating protected areas to the Green List. The selection is based on a set of performance standards on the effective application of management tools in protected areas for sustaining multiple benefits (IUCN, 2014f).

8.4 Guidelines

- Understand what values you are planning to protect, prior to selecting a visitor management tool.
- Comprehend the operational context in which the visitor management tool would be applied to determine if that tool would be appropriate.
- Establish a consistent planning framework or similar decision-making framework for selecting visitor management tools.
- Develop and consistently resource a mechanism for evaluating and justifying the use of particular visitor management tools.
- Continually search for new approaches to visitor management, searching beyond the conservation field for solutions.
- When determining what visitor management approach to employ, consider how the approach will impact equity, effectiveness, and efficiency.
- Infrastructure development and site design must be guided by the physical and cultural aspects of the local environment and traditions (e.g., availability of building materials, incorporating natural gradients, preserving sight-lines, use of indigenous vegetation).
- Infrastructure development must incorporate sustainable building approaches (e.g., durable and recycled(able) building materials, energy conserving technologies).
- Sustainable transportation should be encouraged through policies (e.g., bicycle-only roads), infrastructure (e.g., bio-fuel buses, bike rentals), and practices (e.g., discounted park entry fee for visitors on foot).
- Enforcement of regulations and laws should be commensurate with the level of infraction committed by visitors and tourism operators, and must balance safety and rule compliance rules with visitor enjoyment.
- Use fee pricing and related economic tools to manage the type and timing of visitation.
- Engage in differential park entry fee pricing to ensure access to disadvantaged groups and maximise revenues from visitors who can afford to pay higher fees.
- Achieve a strong understanding of your different constituents, prior to engaging in marketing strategies.
- Develop consistent, unique messages for different constituent groups.

- Select communications channels that are appropriate to the desired outcome (e.g., Twitter feeds produce instant updates during wildfire emergencies, Facebook posts are used to maintain relationships with park visitors).
- Use communication technology effectively to engage and educate visitors on-site, as well as off-site (e.g., park website, pod casts, travel apps, campground reservations, remote web cams for classroom access).
- Tailor environmental education or interpretation programmes for distinct visitor groups
- Be strategic about what park values are highlighted in environmental education and interpretation programmes.
- Move from environmental education and interpretation programmes that simply relay information, to programmes that emotionally engage visitors, and connect them with the values the park is protecting.
- Partnerships require a commitment from the park and partner to strive for continual improvement of their relationship through a regular review process and frequent communications.
- Partnerships should be mutually beneficial, and duties and commitments formally documented.
- A concession system must be resourced and maintained by the park agency to ensure effective management of concession activities in a park.
- Transparency, fair decision making and continuous improvement are vital principles that must be applied to concessions management.
- Share visitor management practice lessons with other park managers.
- Effective management of protected areas is recognized and shared through the IUCN Green List of Protected Areas Programme.

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9. Capacity Building for Tourism Management

9.1 Introduction

Given that a basic principle of nature-based tourism development is that experiences are dependent on the attributes of the area and the values contained within it (Eagles & McCool, 2002; Eagles et al., 2002), competent management is essential not only to protection of the area but to tourism as well. Management must see that visitor impacts are within acceptable conditions and make possible the kinds of experiences that are appropriate for the protected area (Cole, 2004; Jager et al., 2006). Building professional competency is one way of becoming more efficient in decision-making and implementation (McCool et al., 2012, pp. 94).

OECD (2006, pg. 12) defines capacity development (or building) as, *“the process whereby people, organisations and society as a whole unlock, strengthen, create, adapt and maintain capacity over time”*. The UNDP (1998; pg. xiv) notes that, *“strategies that stress continuous learning are also important”* in capacity development. This approach to defining capacity building is not much different from what is found in the literature (Pitkin, 1995; Strasdas et al., 2007) except that it focuses on development of critical thinking skills, which involve *“reasonable reflective thinking focused on deciding what to believe or do”* (Ennis, 1993, pg. 180). The discussion of capacity in this chapter is limited to human resources, although the limited availability of field equipment and tools can be a significant logistical capacity issue in some countries.

This chapter expands on this important topic from the last edition (Eagles et al., 2002) and provides a devoted discussion on capacity building for tourism. It starts with basic concepts and international examples of successful capacity building programmes or projects. Some barriers and issues are also identified. The chapter concludes with an organised set of guidelines for major actors.

9.2 Actors and Core Competencies

As discussed in Chapter 2, a variety of actors are involved in managing tourism in protected areas:

- local businesses that provide needed services (e.g., food, transportation, lodging, interpretation);
- commercial tour operators who conduct activities that generate visit experiences
- community and destination marketing organisations that promote the protected area;
- planners, architects, engineers and construction workers who develop and maintain facilities (e.g., roads, trails, visitor centres, toilets, overlooks);
- scientists who develop knowledge about the impacts of tourism and the types of experiences visitors seek at an area;

- other individuals who help communities and residents cope with social impacts and exploit new opportunities; and
- Management that holds the legal responsibility to protect an area's natural heritage, provide opportunities for high quality experiences and engage communities and residents in planning and management.

Governance also plays a key role in that it is through governance processes that public interests are identified, debated and legislated upon. Each of these actors plays an essential part in tourism development and management. Provision of appropriate and high quality visitor experiences requires an integrated approach involving each of these players. Each actor, therefore, requires a set of proficiencies and competencies to perform in a responsible, effective and efficient manner (McCool et al., 2012, pp. 93-94)

Different competencies are increasingly viewed as essential components of capacity (Competencies Working Group, 2002), and different actors have different requirements. Ultimately, the aim of capacity building programmes is to improve the effectiveness of protected area management. This is done by developing the capabilities of middle-level management in the conceptual, problem-solving arena rather than in the physical skill area. Building capacity is a process of communicating both physical (e.g., law enforcement, interpretation) and conceptual and critical thinking skills (e.g., reflection, understanding trade-offs, developing goals, creating alternatives, evaluating new challenges) (McCool et al., 2012), or as Horton and others argue (2003, pg. vi), 'thinking evaluatively'. These latter capacities are the less tangible ones and include capacities to (Wigboldus et al., 2010):

- Learn, focus and strategise;
- Predict, adapt and respond to volatile and ever-changing contexts;
- Motivate and inspire personnel;
- Communicate effectively with internal and external constituencies; and
- Learn and apply lessons learned to improve performance.

McCool et al (2012) identify *three* areas of professional competency needed by protected area managers:

1. Strategic competencies, which deal with the long range-thinking about the role of a protected area and how it fits in with local, regional, national and even international needs and expectations.
2. Planning competencies, which address the specific needs for integrating tourism, visitation and other protected area management goals along with addressing how the protected area can encourage economic development in a local area.
3. Operational competencies, which address the day-to-day needs of managing tourism and visitation.

In summary, professional capacities or competencies to manage tourism and visitation recognise the dynamic, changing and complex character of the 21st century, help management think through and reflect upon new challenges and opportunities, involve learning and problem solving skills, and prepare staff to be adaptive and skillful in the application of concepts. Building the capacity for management to achieve these competencies will be equally challenging, involve frameworks

that help develop critical thinking skills and potentially cover a broad array of tourism and visitor management arenas (McCool et al., 2012).

9.3 Capacity Building for Managers

Protected areas and protected area agencies that consider tourism as an important objective should have staff members who have expertise in tourism planning and management. This is no difference than having capable ecologists on staff in biosphere reserves. If staff are not trained in tourism and visitor management but are assigned to such tasks, it would be critically important to have opportunities for them to build such capacity.

Building capacity may involve a variety of approaches. Assuming that managers already hold a tertiary degree of some kind, such approaches include short courses and workshops, twinning, staff exchanges, conferences and symposia, mentoring, sabbaticals and educational leaves (McCool et al., 2012). Building capacity should occur within a programme (Ackoff, 1996) rather than being viewed as an event (McCool et al., 2012).

According to McCool et al, (2012), capacity building will also be tailored to the challenges and opportunities facing particular situations and regions. Each region is likely to be in a different stage of managerial development, facing different priorities, and existing within its own political, social and environmental context (McCool et al, 2012). Developing countries are vulnerable in conserving biodiversity because of prevailing economic development discussions that emphasise development for income and foreign exchange purposes (Luo & Lawson, 2011).

Jointly operated continuing education centres—involving both universities and NGOs - balance the practical with the conceptual and encourage debate and critical thinking (McCool et al., 2012). Globally, few continuously active capacity building programmes exist. However, there are some courses offered in the USA. For example, the Center for Protected Area Management and Training located at Colorado State University offers a month-long Spanish language course in management. This course has been offered for over 20 years, and emphasises operations, ecosystem services, administration and leadership, and climate change. A similar course, offered in English for three weeks is coordinated by the universities of Montana and Idaho. Operating for over 13 years, this course emphasises transboundary planning and climate change, integrated planning, community engagement and tourism management. Both of these courses are field oriented and are sponsored by the U.S. Forest Service. USAID and the U.S. National Park Service have sponsored more specific seminars concerning concessions management (McCool et al., 2012). At the state park level, the National Association of State Park Directors (U.S.) runs a State Park Leadership School in collaboration with North Carolina State University. Commenced in 2007, this two-year programme is intended to build leadership skills for mid-career state park administrators on all major competencies in state park management across the U.S.

There are also a small number of professional training examples beyond North America. For example, the University of Klagenfurt in Austria offers a M.Sc. degree programme on protected area management for career professionals. It is a 2-year curriculum run by a partner company

named E.C.O. Institut für Ökologie. It requires a total of 55 days on-site attendance with the target audience of protected area professionals in Central and Eastern Europe.

9.4 Capacity Building for Local communities: Concepts

Building local capacities for tourism development requires an understanding of what a community entails—including its boundaries and the recognised community stakeholder groups—and the factors that may hinder collaboration among stakeholders. The following ideas need to be considered to better address capacity building for communities: 1) spectrum of community engagement, 2) social communication and consultation with stakeholders, 3) approaches for community participation and 4) conflict management. Each of these concepts is described below.

9.4.1 Spectrum of Community Engagement

As mentioned in Chapter 4, tourism has multiple stakeholders, each with its own set of values, goals and expectations about tourism. This complex system of interests, power relations, and histories needs to be accounted for and considered when developing community capacity building efforts.

Community engagement can be defined as “*a planned process with the purpose of working with identified groups of people, whether they are connected by a geographic location, special interest or affiliation, to address issues affecting their well-being*” (State of Victoria, 2005, p.13). Capacity building efforts need to consider the diversity of community stakeholder roles, skills in place, and processes that will facilitate engagement of players in an effective manner. Success of community tourism ventures is highly dependent on the level of local commitment and ownership that results from effective community engagement processes.

Numerous stakeholder analysis and community involvement techniques exist and have been successfully used; see Table 9.1. Community members should be actively involved in identifying and mapping stakeholder groups to effectively define roles and responsibilities.

Table 9.1. List of categories of stakeholder analysis techniques

Technique	Description	Sources
<i>Stakeholder identification</i>	Identify stakeholder individuals and groups in the community related to tourism planning and development; these may be influenced, involved, and affected by tourism.	State of Victoria, 2005; Rietbergen-McCracken & Narayan, 1998
<i>Understanding Stakeholders' via matrices</i>	Map interests the groups may have in the outcomes of the project. Identify stakeholder expectations, influence, potential benefits they may perceive from tourism, and resources stakeholders may be able to contribute.	Chevalier & Buckles 2008; State of Victoria, 2005; Rietbergen-McCracken & Narayan, 1998
<i>Venn diagram</i>	Technique to map the relationship between stakeholders;	Chevalier & Buckles

<i>of stakeholder relationship</i>	visual image of relations.	2008; State of Victoria, 2005
<i>Social Analysis CLIP</i>	Technique to describe stakeholder collaborative efforts, Conflicts, Legitimacy, Influence capacity, and amount of Power (CLIP). Community members create a chart of power relations and collaborative efforts among stakeholder groups, groups that compete for resources or clients, and existing conflicts between groups.	Chevalier & Buckles 2008; State of Victoria, 2005.

Suggested guidelines for conducting community engagement are presented in Table 9.2 below. The community should be trained to be able to co-facilitate tourism planning practices (Bonilla 1997). This approach, based on inclusion and building community capacity, allows for local empowerment and ownership of the process.

For sustainable tourism development to occur, community engagement should be based on the idea of attaining local ownership. Giving decision-making power to stakeholders and a voice to different stakeholder groups (including those marginalised) is critical. In essence, there needs to be a move from the mere idea of informing communities about decisions already made, to a real empowerment of stakeholder groups, where they make decisions, facilitate processes, and implement, evaluate and manage change.

Table 9.2. Guidelines for community engagement

Step	Description
<i>Identify gatekeepers and leaders</i>	To be respectful to authorities and traditional institutions, it is critical to identify community leaders and request their authorization before any planning process is conducted.
<i>Identify stakeholders</i>	Community members should be actively involved in identifying different stakeholder individuals and groups (e.g., interested, affected by tourism, supporters and opponents of tourism, and vulnerable groups).
<i>Establish planning committee</i>	Form a planning committee with local government representatives and selected stakeholders. Ideally this committee should be trained to co-facilitate the planning process.
<i>Produce a map of stakeholders</i>	Participatory mapping of stakeholders by community members, based on their interests, attitudes towards tourism (for and against), influence, level on engagement, and relationship among stakeholder groups.
<i>Understand local decision-making processes</i>	Understand how decisions are made, and the culturally accepted channels for making decisions at the community level, especially concerning planning, economic development and conservation.
<i>Participatory planning</i>	Facilitate workshops where community stakeholders jointly define the problem, develop a situation analysis, create a future vision, draft goals and objectives, and brainstorm solutions and strategies.
<i>Joint learning, reflection and action</i>	Facilitate a process where stakeholders jointly learn, reflect and commit to taking actions. Roles and responsibilities, as well as benefits should be defined.
<i>Result sharing and consultation</i>	The process should include open consultation, communication in defining the future vision, goals, and results of the process. Evaluation and monitoring activities should be jointly defined.

9.4.2 Social Communication and Consultation with Stakeholders

Social communication is “an on-going dialogue and information flow... between and among interest groups . . . providing the conditions for interactive learning and informed decision making” (Borrini-Feyerabend et al., 2004, p. 153). It entails the inclusion and engagement of different community stakeholders, where information sharing and awareness are essential to the process.

Consultation includes a two-way communication, where local cultural norms and traits are respected; literacy levels and power relations are considered and addressed through sound communication strategies. It also includes assessing awareness and knowledge stakeholders have on tourism; information sharing and training should be considered for effective and informed decision-making to occur.

Capacity building and information sharing are important to allow for group reflection to occur in terms of the potential impacts of tourism, the opportunities and threats, and develop a future vision of tourism in their community. Learning and reflection should lead to a commitment to the implementation of actions, and a compromise by local stakeholders to resource investment. Principles to consider for effective social communication include (State of Victoria, 2005, p. 14):

- Members capability for dialogue;
- Commitment;
- Responsibility and contribution by all stakeholders;
- Continuity of actions by sharing roles;
- Collaboration and mutual sharing;
- Guiding principles of service, trust and respect.

9.4.3 Concepts and Approaches for Community Participation

Community participation is important for protected areas under all governance type, but it is especially essential for co-managed protected areas and community conserved areas (Chapter 3). Different approaches to community participation have been developed, theorised, and applied. Pretty developed a participation typology (1995) describing different forms of community participation (Table 9.3). The levels of community participation depend on political processes, money allocated for community inclusion, and vision and strategy related to community involvement. As presented in chapter 4, the higher the level of community participation, the greater the cost due to increase use of human and financial resources. It also entails an increase in time investment by community stakeholders.

Table 9.3. Pretty’s Participation Typology

Types	Characteristics
<i>Manipulative participation</i>	Participation is a pretence: people have no power.

<i>Passive participation</i>	People participate by being told what has been decided or has already happened
<i>Participation by consultation</i>	People participate by being consulted or by answering questions. Process does not allow any shared decision-making. Professionals are not required to include people's views.
<i>Participation for material incentives</i>	People participate by contributing resources (e.g. labour) in return for food, cash, or other material incentive. People have no stake in prolonging practices when the incentives end.
<i>Functional participation</i>	Participation seen by external agencies as means to achieve project goals; may include shared decision-making, but only after major decisions have already been made by external agents.
<i>Interactive participation</i>	People participate in joint analysis, development of action plans. Participation is a right. Structured learning processes.
<i>Self-mobilisation</i>	People take initiatives independently of external institutions. They retain control over resource use and decision-making.

Source: Pretty, in Mason (2008)

Obstacles to community participation in tourism may include the following: difficulty to maintain representation of diverse views throughout the tourism development process; loss of interest by several stakeholder groups during the process; decision-making takes longer in a participatory planning approach; and increased amount of resources required for effective community participation to occur (Mason, 2008). Other impediments may be the lack of development of common goals; difficulty to facilitate local ownership of tourism development processes; limited time or commitment of stakeholders to invest in tourism development processes; different levels of education, capacity and language skills between stakeholder groups; limited knowledge and/or awareness on tourism functioning.

9.4.4 Conflict Management

Conflicts may be a result of changing social, cultural, economic, environmental conditions, diversity of interests within and between groups or power imbalances (Borrini-Feyerabend et al., 2004). The following provides guidelines that may be considered by communities for managing conflicts. Remember, local conditions are different, so effectiveness of the tools may vary across communities. Also important is to understand and respect local norms or customary ways of managing conflict (Borrini-Feyerabend, 2004, p. 221):

- Start with small issues easy to settle;
- Promote personal relationship between the parties in conflict;
- Involve stakeholders when parties in conflict are to interrupt dialogue;
- Offer transparency and additional information about the controversy;
- Provide opportunities to vent frustrations;
- Present examples of similar conflict successfully solved.

Wisansing (2008) proposes a set of criteria to be considered when implementing capacity building initiatives. Table 9.4 below presents a list of criteria and description to evaluate community participation and reduce potential conflicts among stakeholder groups.

Table 9.4. **Evaluative criteria for community participation in capacity building efforts**

Criteria	Description
<i>Goals of participation</i>	<ul style="list-style-type: none"> • Democracy • Project's acceptability • Equally distributed benefits
<i>Who is(are) the affected community(ies)?</i>	<ul style="list-style-type: none"> • Tourism awareness and knowledge • Participants must acknowledge need for the capacity building efforts • Participation must be voluntary • Community institutional capacity • Identification of community leadership roles
<i>Who are tourism stakeholders?</i>	<ul style="list-style-type: none"> • Identifying affected stakeholders • Drawing representatives
<i>What methods should be used for effective public participation?</i>	<ul style="list-style-type: none"> • Empowerment and community building • Participants must be provided sufficient and timely training, funding and information • Timely notification of opportunities to participate must be given • Tourism related entities must be committed to a participatory process • The number of participants or representatives must be manageable • A realistic timeframe and resource must be set

Source: Modified from Wisansing (2008)

9.5 Capacity Building for Local communities: Programme Examples

This section provides examples to illustrate capacity building programmes that are designed for local communities. The Nicaraguan programme (Box 9.1) is a result of partnership between the local community in Ometepe, Nicaraguan government, and the Planeterra Foundation and an international tour operator. The core competencies addressed is market-based enterprise creation.

Box 9.1. Capacity building for communities in buffer zones



G Adventures and Planeterra Foundation team at a community restaurant, Ometepe, Nicaragua.
© Megan Epler Wood

Local tourism enterprises in buffer zones of protected areas frequently underperform the revenue aspirations of both their owners as well as the local NGOs, governments and international donors who have worked to foster small and micro-businesses. The problem is often deeply rooted in fundamental issues related to their business models – basic products and services do not address actual market demand and lack of diversified product leads to unprofitable, intense competition. Improvements in the processes that lead to the creation of markets and enterprise, including the formulation and financing of business concepts, are essential to advance local tourism business performance in protected areas.

In a study of 27 communities in Latin America which had received donor-based financing for community tourism, only 25% could offer financial records, all of which stated they were operating profitably. However independent analysis showed that 50% were operating at a net loss (Jones, 2008). Another study showed that of 150 community-based tourism initiatives funded by donors, average accommodation facility occupancy rates were 5%, which is unsustainable in business terms (Goodwin & Santilli, 2009).

In too many cases, the economic conditions of communities that adopt tourism businesses as an alternative livelihood strategy has not improved, because local businesses do not understand how to manage their businesses profitably and lack knowledge of how to link to regional and international markets. Capacity building needs to be carried out by individuals with a successful background in the tourism business economy. Communities need modules on evaluating the business marketplace in the region, assessing competition, developing an understanding of supply chains, understanding requirements and meeting demands of buyers in supply chains, management of local reservations and delivery of high quality experiences, business accounting, and business decision making for family businesses, community

businesses, and cooperatives. With proper business tools communities can effectively contribute to the social and environmental accounting goals resource managers seek to deliver with real numbers and a real understanding of their own triple bottom line.

There have been many cases of well-intentioned community business ideas failing because they lack distinct commercial value from similar products and services. Lack of knowledge of branding and marketing mean the marketplace becomes flooded with seemingly similar items, essentially indistinguishable to customers and end users.

Consider the case of community-based facilities on the island of Ometepe in Nicaragua (population 42,000) which contained eight community-based tourism projects in 2012. Six of those projects were seeking to attract visitors for home stays, with multiple households involved (between 11-60 homes in each community project). Funding for the different community initiatives had come from either the Nicaraguan government or domestic Nicaraguan foundations. The Planeterra Foundation surveyed the projects as part of a process for engaging in more effective, market-based enterprise creation. They found that the majority of the homes lacked investments required to run the businesses successfully. Homes lacked bathrooms, electricity, and running water. At one point, the leader of one of the communities described how grateful they were to receive tanks and piping for water, but how useless those items were without electricity that would enable a water system to function (Plates 9.X to 9.X below).

What was being entirely overlooked was that most tour operators operating on the island generally used mainstream hotels and had their visitors busy trekking volcanoes each day and eating at restaurants in the evening along one busy strip on Lake Nicaragua, leaving no time or interest for additional activities. The communities had not been given the essential module on evaluating their own marketplace and their funders had clearly failed to help them account for what brought visitors to the destination and what their schedules would include once they arrived.

New approaches that allow communities to assess their own market, develop their own business plans, work with potential buyers in advance and mutually determine how to meet business objectives are still rare, but a certain path to success. Megan Epler Wood developed the blueprint for a new type of project for The Multilateral Investment Fund (MIF) of the Inter-American Development Bank (FOMIN, 2013-2016) to develop community enterprises in rural, biodiverse buffer areas of protected areas in Peru, Guatemala and Nicaragua for implementation by G Adventures, the largest adventure travel company in the world and their NGO, the Planeterra Foundation. The basis of the programme was to intentionally link real market demand to supply as a basis for local business development, while providing community development expertise via the foundation.

In this programme, the international tour operator (in this case, G Adventures) would purchase enough of the local community products to ensure profitable business for the villagers within the first year of operations. This idea, called a Future Sales Model, encourages investments to be made in community-based businesses only when there are pre-existing sales contracts for services. In the past, this concept has been very successful in coffee markets, but it has almost never been utilised in small village-based tourism development. The unique focus of the process is to encourage the local donors and their NGO partners to identify the potential demand for community products and services, quantify it, and review the costs of developing the required services to attract the necessary demand from the marketplace—before financing the enterprises on the ground. Viable community enterprises are ultimately essential if poverty alleviation and conservation outcomes are to be achieved. To develop viable local businesses, it is important to understand the type of tourism coming to a region and link that directly to business concepts that would be owned and managed by local people. Strategy formulation for local businesses should link product and service strengths in relation to tourism industry buyers.

For example, on Ometepe Island in Nicaragua, every tourist was coming to trek volcanoes and celebrate in

their off time. It would have been much more productive to tap into the demand for trekking or local food and drink rather than homestays, which remain largely unattractive to most visitors. To support a more productive approach, Planeterra found a struggling local bakery that was only serving local people within 20 feet of the popular restaurant strip without any roadside signs to guide travellers to their entrance. The foundation plans to give a micro grant to the bakery to help this unprofitable woman owned enterprise to scale up, promote itself properly, and refocus their product offerings on travellers right along the beach.

Start-up considerations are the same for community-based tourism enterprises as they are for any other business. Revenue and cost projections have to be derived from market-based data related to actual demand and realistic operating margins that take into account everything from sourcing to advertising. Communities can perform these tasks with guidance and capacity building. Involving even one private sector tourism buyer that plans to grow in a region can help link local community businesses to growing market demand and be very helpful with providing experienced guidance in any training programme. Once markets and enterprises have been established, ongoing training can be tailored to the needs of the local community businesses according to the operational needs of their business.

9.6 Capacity Building through Partnership

Capacity building requires time, money and the required skills and knowledge, things which protected area managers do not always have in abundance. The importance of partnerships in this regard can add considerably to the success of capacity building, and offers opportunities and growth that would not otherwise be possible. Capacity building can be individual, organisational or societal and can involve training and institution-building.

Forming partnerships for capacity building allows PA staff to focus on their core business (conservation) and to optimise the use of resources, including time and materials. Making use of NGO, government, academic and private sector experience, skills and knowledge to build capacity can be beneficial for PAs, through promoting diversity of skills, training and education. There are two major areas for capacity building: i) capacity building for PA staff and ii) capacity building for communities living adjacent to protected areas. According to Hough (2010, p. 164), *“Developing capacity is about facilitating and encouraging a process of transformation or change by which individuals, organisations and societies develop their abilities, both individually and collectively, to perform functions, solve problems and set and achieve their own goals.”* Where local communities have ownership and/or use of natural resources from PAs, it is important that they receive capacity building in the sustainable management of these resources. This capacity building should also include education around general environmental issues and overall biodiversity conservation. For communities, it is important to build capacity in four main areas: a) increasing their knowledge of tourism; b) to assist them in participating in tourism planning and development; c) to assist them in taking up positions in tourism businesses and other opportunities, for example as suppliers of goods and services; and d) assisting them in managing the impacts of tourism on their communities.



Capacity building and awareness raising meetings. © Wilderness Safaris

Capacity building partnerships need to take the form of empowering PA staff to deal with community and other stakeholder issues, and of communities to deal with their business and conservation responsibilities, as well as new local support institutions.

There are a numerous potential partners to engage in capacity building for protected area staff, as well as for communities living around protected areas. These partners include, but are not limited to the general public, government representatives, NGOs, private sector, academia, local communities, and protected area representatives. Descriptions of their roles in capacity building are outlined in Table 9.5 below.

Table 9.5. The roles of different partners in capacity building

Potential partner	Role in capacity-building
<i>General public</i>	Funding capacity building and volunteer programmes
<i>Government, national, local and international</i>	Provision of infrastructure, institutions, etc. for capacity building. For example, offering subsidies or tax breaks to companies who engage in community or PA staff capacity building.
<i>NGOs</i>	Can provide: i) management support; supporting research; logistics and administration; ii) facilitating communication and co-operation between stakeholders; iii) disseminating information and exchange of skills and knowledge; iv) funding or raising funds for capacity building programmes; v) offering education and/or skills training programmes
<i>Private sector</i>	Professionally qualified experts in fields such as finance, human resources, tourism and conservation. Private tourism operators can offer on-site experiential learning, apprenticeships/internships and training for communities and PA staff. Through partnerships, such as joint ventures, the private sector can also assist in building community capacity.
<i>Universities/ Research organisations</i>	Build capacity by training local people to conduct surveys or act as translators. Offering scholarships or practical training to community members and PA staff.
<i>Local communities</i>	Can engage in capacity building in terms of educating tourism operators regarding local cultural and community traditions.
<i>Protected area agencies</i>	Provide internships or apprenticeships, skills training and capacity building relating to environmental and conservation training. PAs can give permits to researchers and encourage communities to take up their own research.
<i>Protected area staff</i>	Staff with particular skills and knowledge base can mentor and guide PA staff and selected community individuals.

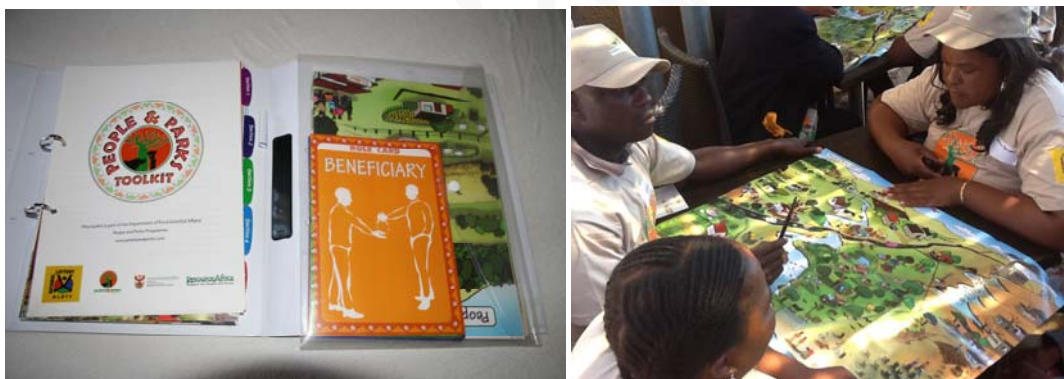
<i>Political leaders, decision-makers and high-level policy makers</i>	Can promote capacity building for PA staff and communities through fund-raising and awareness-raising initiatives, and ensuring that the appropriate institutions are in place, to support capacity building (e.g. supportive legislation, subsidies, tax breaks, and permits).
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Source: Snyman, 2013

Partnerships may form at a global, regional, provincial or local level and may involve any number of different stakeholders. They provide the opportunity to pool resources (e.g., monetary, material and human). They allow for a focus on the specific skills and strengths of each partner and therefore a maximisation of benefits to be obtained from each partner for capacity building.

Partnerships to build capacity can assist in ensuring that tourists have a quality experience and that natural resources in the area are properly managed and protected. Wegner et al. (2010: 1643) emphasise that collaborative partnerships have the potential to enhance PA agencies' capacity to deal with problems by addressing issues through a holistic and encompassing approach. An example of how an NGO has improved capacity through partnerships in South Africa is provided in Box 9.2.

Box 9.2. Resource Africa's capacity building through partnerships



The People and Parks Toolkit (Left). The Toolkit being applied by community members (Right). © Sue Snyman

An excellent example of capacity building through partnerships is provided by Resource Africa (RA), a South African based NGO. Resource Africa's programme emerged as a result of the Department of Environmental Affairs (DEA) Community Based Natural Resource Management (CBNRM) programme in South Africa, which was supported and funded by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) on behalf of the Federal German Ministry of Economic Cooperation and Development (BMZ). At the conclusion of the support programme, they developed a toolkit of best practice guidelines for CBNRM. Resource Africa (RA) was asked to test and pilot the efficacy of the toolkit. A partnership was thus forged between the DEA, GIZ, on behalf of BMZ, and RA to capacitate stakeholders at the local level (where resource use actually happens). RA's approach was to focus on desired learning outcomes and to then use the various guidelines and tools in the CBNRM toolkit to achieve those learning outcomes.

The partnership with DEA and GIZ, on behalf of BMZ, subsequently led to a further partnership with the Limpopo Department of Agriculture (LDA). LDA felt that their staff needed to be capacitated on using CBNRM approaches for improved Land Use practice in Agriculture. RA was able to capacitate over 600 people through these partnerships.

It was during this period that the South African National Parks' People and Parks Programme emerged as a result of the IUCN World Parks Congress in 2003. The theme for the conference was 'Benefits beyond boundaries'. DEA committed to encouraging and supporting improved community participation in Protected Area natural resource management. Again, it emerged strongly that capacity building was required to create an enabling environment for the People and Parks Programme to succeed.

DEA and RA sourced funding from the National Lotteries Distribution Trust Board (NLDTF). This partnership allowed RA to adopt a three-pronged approach to Capacity Building, i.e. 1) the development of a new, tailor made 'People and Parks Toolkit', 2) a Theatre Outreach Programme using performing arts to teach CBNRM, 3) to conduct an intensive skills audit identifying learning gaps preventing local businesses from participating in the Protected Area economy. This has been a three year project working with 30 parks across the country. Over 1400 people have benefited from this intensive capacity building process.

The natural progression from this was to try institutionalise these unique teaching approaches and is where RA's partnership with Southern African Wildlife College (SAWC) emerged. The SAWC has been running National Qualifications Framework (NQF)-accredited CBNRM courses for Southern African learners over the past 4-5 years. RA is currently (2013) engaged in the process of embedding various components of the toolkit training approach into the accredited courses run by the college. This will serve to greatly enhance the learning experience of the students thus reinforcing the learning outcomes.

In summary, RA has had a strong partnership approach to capacity building efforts over the past decade. This has included the partnership between a Government-driven programme which determines the country's resource management imperatives, supported by a willing donor that shares the same vision and implemented by an NGO that specialises in providing the relevant capacitation at the local level.

More information: <http://www.resourceafrica.org/directory/background.html>

A national protected area programme has little chance of succeeding if the people on the ground do not have the capacity to action the programme. At the same time, Government departments are still hugely dependent on external funding support to drive their national objectives, the private sector benefits from building capacity in communities and PA staff, and ultimately NGOs thrive through these strong and committed partnerships. The case study in Box 9.3 illustrates how business skills can be improved through partnerships.

Box 9.3. Building business skills through partnerships



Business skills for tourism include safe transportation of visitors. © Giulia Carbonne

Many conservation organisations consider tourism as one of the sectors with the greatest potential for linking conservation to economic development. However, as many have limited "business" experience, their tourism products and services can fail the market test and consequently have a negative effect on conservation efforts. On the other side, a wealth of knowledge and experience exists in the tourism industry that can support conservation organisations in designing economically viable ecotourism products that also contribute to conservation of nature. The transfer of skills between the industry and such organisations can be achieved through a number of mechanisms including learning sessions and partnerships.

To support the transfer of business skills from professional tourism operators to conservation organisations using ecotourism businesses as a conservation tools the IUCN's Business and Biodiversity Programme and the IUCN Netherlands Committee joined forces in 2008 and organised a pilot training session during the IUCN World Conservation Congress in Barcelona. Given the success of this session and participant feedback about the relevance of creating ecotourism training opportunities at the regional level, four more sessions were organised: in 2010 in Cambodia, in 2011 in Kenya, and in 2012 in Laos, and in South Korea.

The target audiences for these training sessions were conservation organisations, community organisations and protected area managers. The events aimed to provide participants with a strong foundation in business skills that would enable them to design and run these businesses successfully. In targeting protected area managers, a secondary objective was to ensure that tourism and recreation in protected areas are developed and managed in an economically viable way. The training sessions focused on delivering skills in key areas of business development and management such as understanding the market context, business planning, health & safety, sustainable operations, marketing, sales and customer care.

Since 2011, IUCN Business and Biodiversity Programme organised the trainings in partnership with Kuoni, a leading European tour operator. Kuoni has provided support in the design of the trainings but more instrumentally in providing the technical resources to deliver the training sessions. Kuoni's health and safety, marketing and product development experts, among others, have joined the trainings and shared their professional experiences with the participants, bringing to the sessions real life examples and a real

professional look. As a concrete follow up to the trainings, Kuoni's local partner offers the possibility to participants of making a formal "pitch" to present their tourism product for inclusion in Kuoni's future packages. Kuoni's aim is to include in their packages as many products developed by the conservation organisations as possible, as long as these are run professionally and respect Kuoni's requirements for quality and health and safety.

To support the training sessions, Kuoni and IUCN have published a number of tools:

- "Integrating business skills in ecotourism operations" (2012). <http://www.iucn.org/dbtw-wpd/edocs/2012-032.pdf>
- Integrating Business Skills into Ecotourism Operations: A "How to" Guide for the design and implementation of a training workshop (2009). https://cmsdata.iucn.org/downloads/how_to_training_workshop_final.pdf
- Lessons learned from building biodiversity business for conservation (2009). https://cmsdata.iucn.org/downloads/lessons_learned_en.pdf
- Enterprise development Guide (2008). https://cmsdata.iucn.org/downloads/bbf_small_enterprise_training_en.ppt

The overview of this partnership and the summary of the various training workshop see www.iucn.org/ecotourism

Another model of partnership for building community capacity is illustrated in Box 9.4. In this example from southern Taiwan, local community organisation partners with academic institution and government agencies in developing ecotourism products and offering training of ecotourism guides.

Box 9.4. Linkage among biodiversity and livelihood: The partnership between Kenting National Park and Shirding Community in Taiwan ROC



The administration of Kenting National Park cooperates with local people to protect forests and develop ecotourism in Shirding (Left). The trained and authenticated local volunteer wears uniform to guide an ecotourist group in Shirding (Right). © Chih-Liang Chao

Kenting National Park (KNP) was established in 1982 as the first National Park located in the southern tip of Taiwan Island... It is one of the most famous and popular tourism sites in Taiwan, receiving millions of tourists coming to enjoy the park's shorelines, coral reefs, wetlands and hills. As many coastal zones in the world, KNP is threatened by extensive tourism-driven coastal development by increasing demands of tourism, housing, and transportation. In order to protect valuable marine and terrestrial natural resources, maintain the quality of visitor experience and promote local community development, the Administration Office of KNP (AOKNP) initiated the ecotourism programme to promote green and community-based tourism.

Shirding community, located in the geographic centre of KNP, is one of the settlements of Paiwan indigenous people. The Shirding community has a permanent population of approximately 400 persons in 60 households. In the past, they maintained a subsistence living through hunting, fishing, and slash-and-burn agriculture. Gradually, the community has turned to souvenir selling and catering for visitors' dining needs before 1980. Nowadays, about 70 per cent of the villagers are engaged in seasonally paid work in the forest and agricultural sectors, or in retail business in tourism. Some of the continuing traditional activities such as farming, logging, hunting or construction have created tension between KNP and the local communities.

In order to promote tourism quality and to eliminate tensions and conflicts with local communities, the National Park Agency invited local communities to initiate ecotourism in and around all national parks in the early 2000s, including KNP (Huang 2011). In this context, Shirding community was chosen by the AOKNP in 2004 as a demonstration site for ecotourism development (Shih, 2011). A key partner of the ecotourism project was the community organisation, Shirding Cultural Development Association (SCDA), which organised ecotourism activities with local volunteers.

From 2005-2008, the AOKNP partnered with academics and professionals to conduct a general survey and identify tourism resources. In the meantime, members of the local community were trained to be interpreters. Ecotourism courses were also developed with assistance from the academics and the AOKNP. The programme was pilot tested with a limited number of visitors and was modified based on initial feedback. The partnership team also worked together to develop patrolling and monitoring activities to protect the resources base.

In 2008, the SCDA formally initiated the ecotourism training courses. In the same year, the Shirding ecotourism project was awarded as the model of sustainability by the Taiwanese Government. Since 2009, the AOKNP started to promote and expand the Shirding model to the whole park and to build up a network of ecotourism. Some of the first trainees were invited by the AOKNP to share their experiences and communicate with other communities. In 2010, there are about 4,000 visitors participating Shirding ecotourism activities. There were 7,000 in 2011, and over 10,000 in 2012 (Liu, 2013).

Several points which may contribute to the success of ecotourism in Shirding:

- Organising the local community on ecotourism development by the community organisation (SCDA).
- Support of the AOKNP from management level to actively include the local community.
- Long-term engagement of the academic team establishing local consensus on ecotourism development to cooperate with the AOKNP, and conducting capacity building for the locals and officers.
- Conservation linked to the ecotourism, including ecological monitoring data, and work on anti-poaching. .
- Comprehensive capacity building for the locals, which includes surveying, patrolling, monitoring, interpretation, organising, communication and marketing.
- Establishment of mutual trust between the community and the park authority.

The experiences of building community capacity in Shirding illustrated that for community-based action to thrive there is also the need for a supportive and enabling environment. This can be facilitated by government policy and regulations that promote locally managed ecotourism. Alternatively, governments can provide supports through access to funding sources that promote community development. Though the Shirding possesses some advantages in developing ecotourism, it is facing several difficult problems, including: the aging problem of eco-tour guides in the community, and the lack of concrete power in policy decision making for resource management and tourists behaviour management. Hence, we assume that in spite of adopting ecotourism as an effective method to pursue sustainable development at the local level, national parks and local communities (tribes) should still engage in self-examination to ensure that they are on the right path to reach their goals, and should also think about themselves holistically in order to carry out true sustainable development.

The above examples illustrated some of the successful partnership programmes at the local to the international level. Building capacity for tourism through partnerships is not without challenges. Box 9.5 presents a recent self-assessment example from the U.S. Forest Service, which is a major government agency managing for protected areas and nature-based recreation and tourism in the U.S. Identifying and developing a strategy to overcome these challenges will go a long way to building capacity for the agency to partner with communities and other actors in supporting tourism that yield conservation, community and visitor experience benefits.

Box 9.5. Partnerships for tourism management: A case study of the US Forest Service



Friends of Marble Creek Campground is a volunteer organisation that formed to maintain a campground on the Mark Twain National Forest that was set to be decommissioned in 2006. © Erin Seekamp

The US Forest Service (USFS) manages the United States' largest supply of public lands that generate a variety of public benefits (155 national forests and 20 grasslands) including outdoor recreation and scenery that are vital for promotion of tourism. Specifically, the USFS has a multiple use mission that includes timber production, minerals management, range management, forest health and watershed protection, fire management, provision of clean air and water, and opportunities for outdoor recreation, among other functions. In recent years, the national forests and grasslands host an average of 166 million annual visits and—according to an agency news release on March 13, 2013—contribute \$13 billion annually to the U.S. economy. The news release also cited national forest visitor spending is responsible for sustaining 200,000 jobs in local communities.

Housed within the US Department of Agriculture, the USFS is both a hierarchical and decentralised organisation. The National Forest Systems division, which administers national forests, is structured into nine regions and each national forest is typically comprised of two or more ranger districts. In terms of the staffing hierarchy, there is a national-level office (chief forester and staff), regional offices (regional foresters and staff), national forest offices (a forest supervisor and programme staff), and district offices (a district ranger and technical staff). National forests have a certain degree of discretion in decision-making and there is some regional variation based on local conditions. In recent years, budget and staffing constraints along with a desire to expand public engagement in forest management has resulted in greater reliance on partners to manage public lands.

Providing recreational opportunities and services for the visiting public is a key facet of the USFS's mission and partners have been a vital part of the agency's recreation programmes and services. Historically, organisations, such as the Appalachian Trail Conservancy, have partnered with the agency to ensure visitor access to recreational resources by providing voluntary labour to build and maintain trails. In recent years, however, the use of partners has expanded from supplementary or complementary activities to more mission-critical tasks. This change has resulted in an expanded role for private contractors, concessionaires, guides and outfitters, consultants, individual volunteers, education groups, and local non-profit groups in providing and maintaining visitor services. Thus, the USFS has become more creative and strategic in its use partnerships. For example, the USFS has hired partnership coordinators and volunteer coordinators at every level of the agency from the region to the forest to the ranger district. Partnering has become a normal part of doing business for the agency and has become part of every employee's programme of work. The agency also developed the National Partnership Office in 2003 to disseminate partnership guidelines, tools and techniques, and policy information to agency personnel.

Despite this institutional commitment to enhance the agency's partnership culture, a recent studyⁱ highlighted that the level of administrative support for conducting partnerships varied among forests and districts. Not all employees can formally account for their partnership work and few incentives for partnership work exist. As such, individual employees' initiative often drives the extent of partnership work to a greater extent than management direction. Motivations to work with partners were intrapersonal (intrinsic), interpersonal (social), and institutional (agency-driven). Commonly reported motivations cited by personnel for working with partners include: promoting stewardship; building agency trust; considering it is a duty of a public land management agency; feelings of personal accomplishment; enhancing outreach with local communities; facilitating natural resource conservation; enabling innovative management ideas; taking advantage of opportunities as they arise; bringing new energy and enthusiasm to the work environment; and creating social connections and experiences. This suggests that strategically hiring individuals with prior partnership experience and self-initiative to develop and maintain these relationships will be advantageous if the increasing trend of partnership reliance continues.

The study also highlighted that the population size and partnering ethic (citizen engagement) of adjacent communities led agency staff to utilise different partnership approaches and resulted in different sets of

challenges. For example, some ranger districts proximate to places with a high proportion of active volunteers (both engaged urban areas and amenity destination areas with high tourism and second home ownership) have creatively partnered with an “umbrella” organisation that trains and matches interested volunteers with specific projects and that coordinates groups of partners in order to circumvent an overwhelming volume of partnership requests. This approach has helped these districts overcome several obstacles, such as not always having projects when partners are ready to work and partners lacking the required trainings (e.g., safety). Other districts, often in rural areas with low tourism and second-home ownership rates, have strategically elected to partner primarily with highly organised groups to streamline agency effort and partnership impact.

Regardless of the partnership approach, the study documented that agency employees most often faced the following challenges in their work with partners: administering grants and agreement paperwork; a lack of agency resources to bring to the partnership; and not having the time to recruit partners or maintain active partnerships. The hurdles faced with bureaucratic paperwork are a challenge and no easy remedy exists. However, a key take-home message for tourism managers considering leveraging constrained resources through partnership development is to ensure that partnership work—including not only the training of and time spent working with partners but also partner recruitment and relationship maintenance—is actively accounted for, represented in job details and duties, and rewarded through incentives and recognition, as partnership work is costly in terms of employee time and effort.

This multi-phased study included 3 phases: (a) key informant interviews of agency personnel and partners, (b) a multiple case study of 6 national forests, and (c) a survey of 611 employees on 13 national forests.

Sources: McCreary et al., 2012 and Seekamp et al. 2010, 2011 and 2013

9.7 Guidelines for Capacity Building

The following are *Guidelines* for capacity building and financing in protected areas and with communities who live around them, and for financing protected areas.

For all stakeholders:

- *Assess skills and knowledge* to determine the required level of capacity building. For example, during 2004 and 2005 Namibia’s Ministry of Environment and Tourism (MET) conducted a comprehensive capacity assessment and review of Protected Areas. It examined staffing structures, roles, responsibilities, decision-making capabilities and at individual levels it examined skills, learning, experience and training (Hough, 2010, p. 172). Such an assessment ensures that the required, appropriate capacity building is conducted.



© Wilderness Safaris (Left and Right)

- *Undertake an assessment of potential partners* available in an area. This will facilitate effective capacity building and reduce duplication of functions, skills or resources: why reinvent the wheel?
- *Develop clear and transparent selection criteria* for capacity building in order to avoid conflict within and between communities and PA staff (Borini-Feyerabend et al, 2004). Nepotism and favouritism in any form should be avoided to ensure equitable, empowering capacity building.
- To ensure sustainability it is important to *reduce the complexity* of capacity building partnership arrangements. This will also serve to reduce the potential for conflict that may arise if there are numerous stakeholders with varying expectations.
- Capacity building needs to be accompanied by *strengthened roles, responsibilities and concrete opportunities* (Borini-Feyerabend et al, 2004) and should be transparent. Detailed growth paths for PA staff or community members provide them with goals and will avoid frustration of trained employees with no growth opportunities. Three South American community lodges (Stronza, 2008, p.110) with varying partnerships with an NGO, a private company, and a federation agreed that capacity building should be clearly defined at the start of any tourism partnership, covering first technical skills, activities and services and gradually moving to more skilled or professional roles, such as guiding, marketing and administration. They also agreed that a time frame for each step in the process should be clearly defined by all partners and that there should be transparency in capacity building (Stronza, 2008).
- *Establish goals for building capacity* and the measurement of results in order to ensure progress and growth. For example the Tripartite agreement between South African National Parks, the Makuleke Community and Wilderness Safaris for Pafuri Camp in the Kruger National Park, South Africa set goals for building community capacity in biodiversity conservation management and tourism business skills. The intention being to provide the community with skills to manage the tourism operation and related conservation themselves in the future (Snyman, 2013).
- *Manage expectations* of all stakeholders to promote the long-term success of any partnership, including capacity building partnerships. Capacity-building in terms of conflict management is also important for long-term success.
- *Provide on-going communication* between all stakeholders and partners. This ties in with managing expectations as regular communication assists in ensuring that all parties are updated and informed.
- Develop a *Memorandum of Understanding (MOU)* between parties to clarify roles and responsibilities and reduce conflict in the future. For example the partnership between

Rainforest Expeditions and the Infierno community in Peru (Stronza, 2008, pp. 106-109) saw a private company partnering with a local company, with capacity building being a priority for both partners with the division of roles between the company and community being smooth and gradual.

- Use the *strengths of all partners* to maximise positive impacts. Wilderness Safaris, a southern African ecotourism company, has partnered with another private company called Lobster Ink to build capacity and enhance skills in their operations. Lobster Ink is a hospitality education system that trains staff and management in areas of Service, Bar, Wine, Spirits, Housekeeping, Guiding and International Standards. This is done through high-definition multimedia lessons, a personal learner management and assessment system, tailored practical assessments, and focused, needs-specific live training in pursuit of international accreditations in their field of study. The partnership works well for Wilderness Safaris as many of their ecotourism camps are in remote, rural areas and access for trainers is restricted. The Lobster Ink system provides more staff with access to training, in their own time and at their own pace. This illustrates a partnership which uses modern technology to build capacity in remote areas (Snyman, 2013).



© Wilderness Safaris (Left and Right)

- Partnerships can engage in *short-term staff exchanges* (transferring knowledge) between PAs, or community members participating in internships in PAs and the associated tourism operations, allowing learning of new skills and a greater understanding of PAs and tourism.
- Allow for PA and tourism staff to make *formal study visits* to different PAs to build capacity and empower individuals. The new knowledge and experience gained from this can assist in enhancing performance, instilling pride, establishing new partnerships and friendships and promoting a transfer of skills.
- Promote *academic publications and sharing of research among* PAs and academic researchers and universities to build capacity and provide areas for future research.
- *Organisational capacity building* is needed to raise the awareness of staff of the benefits of increased capacity, ensuring ownership of the change process, allocating resources to the change process (Hough, 2006, p. 179)
- Capacity building partnerships can *increase social acceptance* of PAs and tourism as local communities realise both tangible and intangible benefits from the PA and tourism operation.

For protected area managers:

- *Identify capacity building needs* of protected area managers in relation to strategic, planning and operational competencies.
- *Tailor training programmes* to the priorities, the context and the level of managerial development.
- *Consider institutions that can build capacity in protected areas*, including government departments, NGOs, the private sector, academia and research institutions, and peer protected area agencies.

For community members:

- Build capacity in 4 main areas for communities: a) to increase their knowledge of tourism; b) to assist them in participating in tourism planning and development; c) to assist them in taking up positions in tourism businesses and other opportunities, for example as suppliers of goods and services; and d) to assist them in managing the impacts of tourism on their communities.
- *Support the institutional strengthening and business expertise of local community based organisations and enterprises* working on tourism. Build their capacity to engage in commercial tourism activities with the private sector and tourists.
- *Ensure sufficient time and ongoing support for capacity building initiatives*: it can take years where initial capacity levels are low.
- *Be aware that communities are not homogeneous entities* and shift focus from the collective to the individual.
- *Identify interested and affected individuals and groups, gatekeepers and leaders*, with their diverse perceptions on tourism development, using an appropriate stakeholder analysis technique. Produce a stakeholder map.
- *Develop a suitable process to engage with community members*, including a planning committee. Ensure this relates to local decision-making processes and includes joint learning, reflection and result sharing.
- *When conflicts arise and are being addressed*, understand local customs and ways of managing conflict. Start with small issues that are easy to settle, promote personal relationships, provide opportunities to vent frustrations, offer transparency, and present examples where similar conflicts have been resolved.
- Where community tourism products are being developed, *ensure they address market demand and diversify the offerings to tourists. Ensure and encourage a strategic link between local enterprises and the broader tourism industry.*

Acknowledgements

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10. Tools for sustainable financing of protected areas through tourism

10.1 Introduction

There are a number of opportunities that protected areas can use to generate revenue for conservation, domestic government budgets, international assistance, multilateral funds, bilateral donors, private and community funds. This is an increasingly important topic for protected areas across different governance types (Chapter 3), many of which have witnessed declining support from traditional financial streams. A typology of different financing options for protected areas is illustrated below (Figure 10.1), which includes tourism charges but also non-tourism related revenues (Emerton et al., 2006). This chapter focuses on the use of different types of tourism user fees to support the sustainable financing of protected areas.

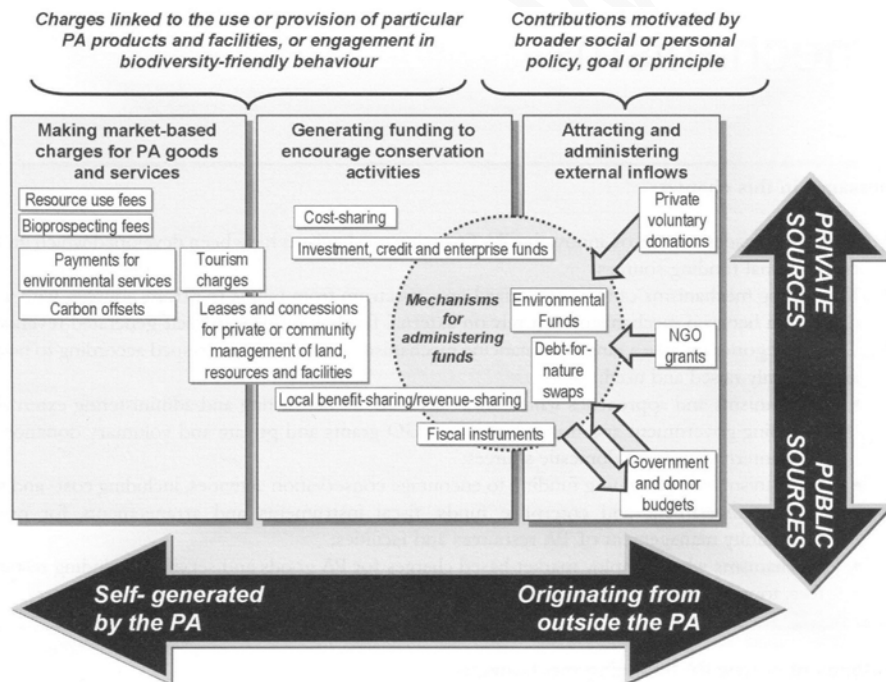


Figure 10.1. **Typology of options for financing protected areas.** (Emerton et al., 2006, p. 28)

Self-financing market based mechanisms like tourism charges can provide the means that can give the management of protected areas far greater efficiency, equity and environmentally sustainable management.

There are a number of different types of tourism charges that can be used by protected areas (PAs) to generate revenue. Often tourism is the most important source of self-generated revenues for PAs, which can also create employment and other commercial opportunities for local community members. Although some PAs have low or no user fees, tourism revenues are often an essential component of both developing and developed country PA's agency budgets. The choice of introduction of fees and charges is determined by several factors, such as cultural behaviours and legal framework, administrative costs and human imagination. It also depends on other factors such as the scale of tourism on the site, the 'PA tourism development stage', where the tourism takes place within the site, access points, and the way in which tourism business interacts with the PA. In other words, it depends on the location and the PA popularity. User fees come from various sources such as entrance fees, permits and concession fees (see table 10.1 below). Revenue from user fees, on the other hand, is utilised for such activities as the operation and maintenance of the protected area, and the improvement of park facilities. Resource use fees and tourism charges are used both to generate revenues, and to regulate or manage PA use levels. They are some of the most popular revenue generating mechanisms, and have long been used to provide funds for PA. Over recent years, increasing attention has been paid to rationalizing the level of fees charged – very often prices have been set so low that they neither fully reflect market prices, nor capture consumers 'willingness to pay'.

Globally, the trend is for governments to demand that parks earn an increasing proportion of their budget from tourism sources rather than from state subsidies. An efficient funding strategy and activity is one of the tools which can drive the management of protected areas to be more efficient (also see Chapter 4). Tourism based self-financing mechanism are key element of the PA funding and financial strategy, so should be fully integrated into the PA management and (responsible) marketing strategy.

Table 4.2 (Chapter 4) illustrated the various types of fees usually implemented in protected areas worldwide. User fees are charged by, and accrue to different agencies, including the protected area agency (e.g. entrance fees, user fees), private operators (e.g. accommodation, food sales), government authorities (e.g. taxes), and local communities (e.g. donations).

An example of the level of revenue that can be generated from different tourism user fees is provided from national parks in South Africa (Table 10.1). The table shows that accommodation, game drives, trails generate just over half the income from tourism, followed by entrance fees (24%), retail activities (16%), and tourism concessions (7%).

Table 10.1. Types and values of different tourism user fees, South Africa

Source of Revenue	Local currency amount (ZAR) (YE March 2012)	USD equivalent (000s)	% of total tourism revenue
Retail activities by SANParks	147,600	\$19,021	16.4%
- Shops and restaurant	27,190	\$3,504	3.0%
- Petrol station	120,411	\$15,517	13.4%
Tourism	452,930	\$58,369	50.5%
- Accommodation	381,771	\$49,199	42.5%
- Game drives	30,277	\$3,902	3.4%
- Guided hiking trails	24,550	\$3,164	2.7%

- Other tourism related activities	16,332	\$2,105	1.8%
Tourism concessions	66,636	\$8,587	7.4%
- Facilities rental on retail and restaurants	25,758	\$3,319	2.9%
- Accommodation concession fees	40,878	\$5,268	4.6%
Conservation levy and entrance fees	214,044	\$27,584	23.9%
- Wild card income (annual entrance fee)	25,356	\$3,268	2.8%
- Conservation levy	184,696	\$23,802	20.6%
- Entrance fees	3,992	\$514	0.4%
Other	16,198	\$2,087	1.8%
- rent received	10,915	\$1,407	1.2%
- Services rendered (e.g. technical services)	5,283	\$681	0.6%
TOTAL	897,408	\$115,649	

Source: Adapted from SANParks, 2012

Two examples from other world regions with drastically different political and protected area systems are provided to illustrate the levels and sources of tourism-related incomes in protected areas (Box 10.1 and Box 10.2).

Box 10.1. Tourism revenues in China



Changbai Mountain National Nature Reserve, Jilin Province, China. © Yu-Fai Leung

China has about 6000 protected areas, in various categories and at different levels of government. Detailed data on conservation and visitor management have been compiled for a representative sample of 1110 parks by Professor Zhong Linsheng of the Chinese Academy of Sciences, and colleagues internationally (Zhong, et al., in rev.). Just over a quarter of these parks receive total income >\$800,000 annually; just over a third receive \$80,000 - \$800,000; and the remainder operate on <\$80,000 per year, with 11% operating on less than \$8000. Parks designated as scenic areas, and those managed at national rather than provincial or local scale, have higher mean revenues. Those designated as nature

reserves have relatively lower incomes. Entry fees are charged by almost three quarters of these protected areas. Some also sell food, souvenirs, local cultural goods and multimedia products.

Box 10.2. Tourism revenues from registration and camping fees in Australia



Wildlife watching at Lamington National Park, Queensland, Australia. © Yu-Fai Leung

All save a few national parks in Australia are managed by State Governments. The structure and quantum of entry fees and camping fees in national parks in each State and Territory were examined a decade ago by Buckley et al. (2003), and are summarised below. The amounts change year by year but the 2003 study shows the variation between agencies.

Summary of maximum vehicle entrance fees in Australian national parks.*

Length	WA	NT	SA	Qld	NSW	ACT	Vic	Tas	PA
Day	9	0	36	0	15	9	13	10	n/a
Month	23	0	18	40	n/a	n/a	n/a	17	33
Year	51	0	170	150	80	11	63	46	65

*Key: Length= period of permit validity. WA, Western Australia. NT, Northern Territory. SA, South Australia. Qld, Queensland. NSW, New South Wales. ACT, Australian Capital Territory. Vic, Victoria. TAS, Tasmania. PA, Parks Australia (federal).

Summary of camping fees structures in Australian national parks.**

Unit	WA	NT	SA	Qld	NSW	ACT	Vic	Tas	PA
Structure	S+A	P	V	P	V+P	P	S+A	P	P or S
Person	9(A)	7	-	4	5(P)	-	4(A)	6	5
Car	-	-	18	-	6	-	-	-	-

Site	13	-	-	-	-	11	18	-	16
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** Key: Structures: S, per site. V, per vehicle. P, per person. A, per person additional to predefined site or vehicle quotas. States and Territories as per the preceding table.

The revenues generated by tourism can be combined with money from other sources to finance activities including:

- Maintenance and infrastructure development (e.g. roads, trails, jetties, ablutions, signage, etc.)
- Community benefit sharing (e.g. for social infrastructure, health, education and water)
- Conservation management (e.g. in general, or in areas particularly where tourism takes place, and habitat maintenance is required);
- Destination marketing and promotion.

A good example of how tourism fees can be used for conservation management in Mongolia is provided in Box 10.3. Box 10.4 illustrates another example from Namibia where an efficient benefit-sharing mechanism is established to support community development initiatives through funding generated from a tourism accommodation facility.

Box 10.3. Using tourism to help finance protected area management: Hustai National Park, Mongolia



Przewalski horses in Hustai National Park (Left). A tourist camp with solar-powered supporting facilities © Dashpurev Tserendeleg

Located 95 km from the Mongolian capital Ulaanbaatar, Hustai National Park (HNP) is one of 99 protected areas in the country and part of the UNESCO Man and Biosphere Reserve Programme. The park was designated as a Specially Protected Area by the Mongolian government in 1993, shortly after an attempt to reintroduce the Przewalski horse (*Equus przewalskii*), also known as takhi, to the area. The Przewalski horse is the only living ancestor of the domestic horse and was considered extinct in the wild by the 1960s. HNP now supports a herd of over 300, which roam freely in the park.

In 2003, the Hustai National Park Trust (HNPT), a NGO dedicated to environmental conservation, entered into an agreement with the Mongolian government to assume management responsibilities for park. HNP is the only national park in Mongolia managed by an NGO. HNPT, which became a member of the IUCN in 2007, focuses on the conservation of resources within the park, including several archaeological sites dating between 1000BC and the seventh century AD, as well as the reintroduction of the Przewalski horse,

research, training, ecotourism development, and buffer zone development.

The park has never been financed without state government funds. Instead, over 80% of the total income to the park is the result of tourist activity. In 2012, 15,805 tourists visited HNP, 9,350 of which were international arrivals. Sources of tourist revenue include entrance and lodging fees, horse riding, and souvenirs. The other 20% of revenue is generated from research activities, including eco-volunteering and student internships, as well as donations and soft loan interest. Soft loans are distributed to individuals living in the buffer zone. The goal of the soft loans is to encourage local herders to start income-earning enterprises other than traditional animal husbandry. Example enterprises include community-based tourism operations, vegetable gardening, and felt making. For the past several years, this model has also resulted in a net profit for the park which has indirectly helped support the success of core activities of HNPT. For example, sustained wildlife monitoring indicates increasing numbers of key species in the park, demonstrating success in anti-poaching and Przewalski horse reintroduction programmes. Increasing numbers of wildlife species can also contribute to overall tourist experience. Tourism infrastructure also contributes to cost savings by employing alternative technologies like solar panels to heat shower facilities. The HNP administration and research centre building is also heated by solar energy.

Large investments were initially needed to build the park and tourism facilities, which were obtained from the Netherlands' government, a Dutch NGO FRPH, and the Foundation Reserves for Przewalski Horse. However, a stable and successful financing model has allowed for future considerations of improving tourist infrastructure using environmentally materials, considering tourism capacity and quality, and increasing accessibility. The case of HNP demonstrates how an NGO can successfully manage a protected area, generating income from tourism and other activities to achieve necessary budget goals.

Box 10.4. Community benefit sharing: Damaraland Camp and the Torra Conservancy, Namibia



Images from Damaraland Camp, Namibia. © Wilderness Safaris

In order for protected areas to survive they will need the support of local communities. What is clear from past research is that incentives matter and the sharing of PA benefits with communities can therefore serve to garner community support. Wilderness Safaris (WS), a private sector ecotourism operator in Africa, has a number of different community benefit sharing partnerships across southern Africa. An example is that of the joint venture (JV) partnership between the Torra Conservancy and Damaraland Camp (Wilderness Safaris) in Namibia.

The Torra Conservancy is located in the southern part of the Kunene region of Namibia. It covers an area of 3493 km², with approximately 1200 people living in the conservancy (NACSO, 2010) from various different ethnic groups. Between years 10 to 15 of the partnership, the conservancy was given 20% equity in

Damaraland Camp per year until they owned 100% (Snyman, 2012). At this stage, they chose to sell a portion back to WS in order to form a joint venture equity partnership. Wilderness Safaris purchased 60% of the Camp back from the Torra Conservancy, and now they are operating as equity partners with the JV leasing the land from the conservancy for a fee based on a percentage of the revenue (NACSO, 2010). The lodge has since been upgraded, with both WS and the conservancy investing capital for the upgrade. The reinvestment of 'community capital' into the project is one of the first instances in Namibia that did not involve donor funding or loans (NACSO, 2010). In 2010, WS assisted the Conservancy to raise a bank loan of N\$500 000 (approx. US\$63 000) based on the collateral of their shareholding in Damaraland Camp. This money was used to build the Damaraland Adventurer Camp and is the first instance of a community raising their own funds for building purposes and helped to empower the community and give them experience in financial management and business skills (Snyman, 2012).

Payments made by WS directly to the Torra Conservancy in terms of the JV, as well as through other channels, have been substantial. A total, for community levies only, of over NAD 2.6 million (approx. US\$320 000) had been paid by Damaraland Camp to the Torra Conservancy during the six years between 1st March 2005 and 28th February 2011. Damaraland Camp's guests visit nearby villages and the Camp makes use of laundry services, wood purchases, and road maintenance from local community members, further injecting an amount of NAD189 364 (approx. US\$24 000) into the local economy over a six year period (Snyman, 2012).

The importance of these local multiplier effects cannot be overstated. Staff spending their salaries in the community, as well as their contributions to dependents, results in a very important additional injection of cash into the local economy. Staff costs, in terms of wages, meals, housing, uniform and training totalled more than NAD 3.7 million (approx. US\$465 000) over the six year period. A total injection of more than NAD 6.58 million (approx. US\$830 000) is a substantial contribution to the local economy, particularly in a remote, rural area of Namibia, where there are few alternative, sustainable land use options available to community members (Snyman, 2012). This amount does not include that spent on suppliers of other goods and services. Critical to the long-term success of all tourism in remote, rural areas is, however, an increase in the local multipliers in order to ensure that more community members receive benefits from ecotourism as a land use, than only those who are employed (Snyman, 2013).

In terms of employment, Damaraland Camp employs 30 individuals, of which 77% come from the Torra Conservancy (Snyman, 2012). The building of the Camp required 20–30 unskilled, casual labourers (Salole, 2003), some of whom went on to find permanent employment in the Camp and in other WS camps in Namibia. The Conservancy itself employs approximately nine local people in administration and management and the trophy hunting concessionaire employs temporary staff in the hunting season (Kemp et al., 2009).

Some important factors that need to be taken into consideration in terms of community benefit sharing include (adapted from Snyman, 2012; Spenceley, 2008):

- the volatile tourism industry and its impact on occupancies and therefore profitability of the camp (this influences payments to communities);
- the ability of the conservancy/community to equitably distribute benefits to all members; the establishment of a connection between benefits received and conservation and ecotourism;
- the promotion of the use of local suppliers of goods and services (to increase local multipliers);
- the empowerment of local community members; improving education(formal and environmental) and access to it for the whole community;
- skills development and upliftment of local community members;
- employing people from different families in order to spread the benefits of tourism to different households;
- encouraging ecotourism staff to spend their salaries locally to spread benefits more extensively;

- a government system that promotes and supports tourism and creates an enabling environment in which the private sector can operate efficiently and effectively and which can stimulate economic growth
- the sustainable management of human–wildlife conflict due to increasing wildlife numbers;
- the maintenance of an equitable partnership agreement between the private sector and community, where both parties benefit from the partnership;
- and the maintenance of a relatively stable community structure that does not get affected by inter- or intra-community conflict, whether along racial or equity lines.

Source: Snyman, 2012

The level to which protected areas can use the money that they generate depends on whether regulations allow them to retain funds, or whether they have to send them to a national treasury (from where it is allocated to a number of protected areas). Some illustrations of different tourism user fees are provided below.

10.2 Entrance Fees, User Fees and Recreation fees

A comparison of different levels of user fees for certain protected areas internationally can be found in Table 10.2. Not surprisingly, the entrance fees vary in price, but also in the way that they are charged: including a flat fee for all, to different rates depending on where the visitor is domiciled, to a fee that depends on the means of travel. Protected areas may be able to set their own entrance fees, or there may be fees that are set by national government regulations (e.g. in Mozambique). Box 10.5 illustrates an example of sustained revenue generation by charging a housekeeping fee in Corbett National Park in India. Another notable example of revenue generation from multiple sources, including an annual pledge from tourist resorts and visitor activity permit fees at Baa Atoll Biosphere Reserve, is summarised in Box 10.6.

Table 10.2. Comparison of protected area entrance fees

Country	Protected Area	Entrance Fee (adult)
<i>Botswana</i>	Chobe National Park	Non-resident: BWP 130 (USD15) Resident: BWP 30 (USD3) Citizen: BWP 10 (USD1)
<i>Indonesia</i>	Komodo National Park	Rp20,000 (USD2)
<i>South Africa</i>	Kruger National Park	International: ZAR248 per day (USD24) Domestic: ZAR62 per day (USD6)
<i>United Kingdom</i>	Lake District National park	Free
<i>USA</i>	Everglades National Park	Private vehicle: USD10 (for 7 days) Pedestrian/cyclist: USD5 (for 7 days)
<i>Zimbabwe</i>	Victoria Falls World Heritage Site	International: USD30 Regional (SADC): USD20 Local resident: USD7

Sources: Botswana: http://www.mewt.gov.bw/DWNP/article.php?id_mnu=214; Indonesia: <http://www.komodo.travel/komodo-national-park/komodo-national-park-entrance-fee/>; South Africa: <http://www.krugerpark.com/conservation-fees/?gclid=COaokaW2kr4CFSbMtAodET4AoQ>, USA: <http://www.nps.gov/ever/planyourvisit/feesandreservations.htm>; UK: <http://www.lakedistrict.gov.uk>; Zimbabwe: <http://victoriafalls24.com/blog/2013/01/30/the-zimbabwes-parks-and-wildlife-authority-has-issued-its-charges-for-wildlife-based-tourism-operations-in-2013/>.

Box 10.5. Sustainable financing for management in Corbett National Park



Tiger observed at the Corbett National Park. © Rajiv Bhartari

Corbett National Park was established in 1936 and is the oldest national park in South Asia. When India's flagship species conservation programme *Project Tiger* was launched in 1973, Corbett became one of India's first Tiger Reserves. Set in the foothills of Himalayas, Corbett National Park is renowned for its remarkable landscape beauty, high tiger density and amazing avifaunal diversity (Corbett NP, 2014).

Within Corbett National Park situated on the banks of River Ramganga there is a renowned 33-room forest lodge in Dhikala and several smaller lodges in other locations such as Gairal and Sarpduli. In the absence of dedicated funding for tourism management, it was becoming impossible to maintain these lodges. In 2001 the park management instituted a housekeeping fee of approx. US\$ 2 per room, which generated US\$ 20,000 in one year. However, this sum was too small to enable proper management of the lodges. In 2005, the rates for housekeeping fees were doubled and extended to dormitories and additional beds, leading to generation of approx. US\$ 75,000 annually. The use of these funds was regulated and earmarked for specific tourism related activities, such as consumables, furnishings, lighting, fuel, salaries and emergencies.

The judicious use of the funds generated from housekeeping fees led to a qualitative improvement in maintenance and upkeep of the lodges. Nearly 50 local youth found work as lodge managers, room attendants and receptionists. The tourist arrival in the national park doubled in a short span of 3 years and annual tourism revenues of the park registered a threefold increase reaching 1.5 million dollars (GUDF, 2014). In 2009, Corbett National Park received "India's Best Maintained Tourist Friendly National Park Award" from Indian Ministry of Tourism.

As per the amended Wildlife Protection Act of India 1972 and the Ecotourism Guidelines issued by the National Tiger Conservation Authority (NTCA, 2012), Corbett National Park has recently set up Corbett Tiger Foundation as an institution to aid in tiger conservation. The Government has authorised recycling of tourism revenues generated from the national park to the newly established Corbett Tiger Foundation and the Foundation is expected to annually receive nearly half million dollars. These funds are being used for financing of protection, habitat management, tourism management, staff welfare and community development activities. Similar Tiger Foundations have been set up in 44 other Tiger

Reserves in India. In sum, progressive sustainable financing through tourism revenues in Corbett Tiger Reserve has led to improvement in tourism management, greater community benefits through additional jobs and release of scarce funds for more critical management activities. And the recently established Corbett Tiger Foundation holds promise for providing sustained source of funds for tiger conservation.

Box 10.6. Atoll Ecosystem Conservation Project: Baa Atoll Maldives

In 2003, the Government of Maldives established the Atoll Ecosystem Conservation (AEC) Project with support from the UNDP and the Global Environment Facility. The project sought to design and demonstrate an effective, collaborative management system for atoll ecosystem conservation and sustainable development. Baa Atoll was chosen as a demonstration site for the project due to its globally significant biodiversity, commitment to local communities, potential to address threats to biodiversity, and ability to demonstrate sustainable uses. In 2011, the AEC Project was successful in the promotion and declaration of the entire 1,200 square km Baa Atoll as the country's first UNESCO Biosphere Reserve. Such sustained best practices are of great importance in lessening pressures on the natural resources as the 2013 Intergovernmental Panel on Climate Change (IPCC) lists the Maldives as one of the countries most affected by climate change.

The AEC project established the Baa Atoll Conservation Fund to sustainably finance the management of the Biosphere Reserve. A majority of the tourist resorts in Baa Atoll have pledged an annual contribution to help support projects promoting environmental conservation and sustainable livelihood opportunities through hiring practices. Additionally, a portion of revenue generated by ecosystem-dependent activities like dive tourism, visitor access permits and souvenir sales, is also funnelled back into conservation efforts within the atoll.

Source: MMPRC, 2014; EPA-RoM, 2010; Feretti, 2012

10.2.1 Where tourism user fees are high

Where protected areas boast unique natural or cultural attractions, they may be in a position to charge very high user fees. For example, in Rwanda visitors pay USD750 to enter the Virunga Volcanos National Park, in order to track the critically endangered Mountain Gorilla. Visitors are willing to pay this considerable sum to spend 1 hour with the gorillas, partially because of the knowledge that there are only around 700 animals left in the wild, and because only 20,000 permits are available a year (Spenceley, 2014). In such instances, the revenue from tourism:

- Can bring in important foreign exchange to developing countries;
- can provide important funds to maintain the conservation efforts of protected area authorities (e.g. tourism generated USD105 million in the 2012 for South African National Parks (SANParks, 2012); and

- Can provide incentives for local people to value, rather than exploit, natural resources (e.g. poachers who become tour guides, in the Virunga Volcanos region of Rwanda (Nielsen & Spenceley, 2011).

For some destinations, the proportion of their overall trip expenditure allocated to PAs is considerable. For example, of the average USD1376 spent on a mountain climbing holiday to Mount Kilimanjaro in Tanzania, 47% is spent on park fees (Mitchell et al., 2009) (Figure 10.1).

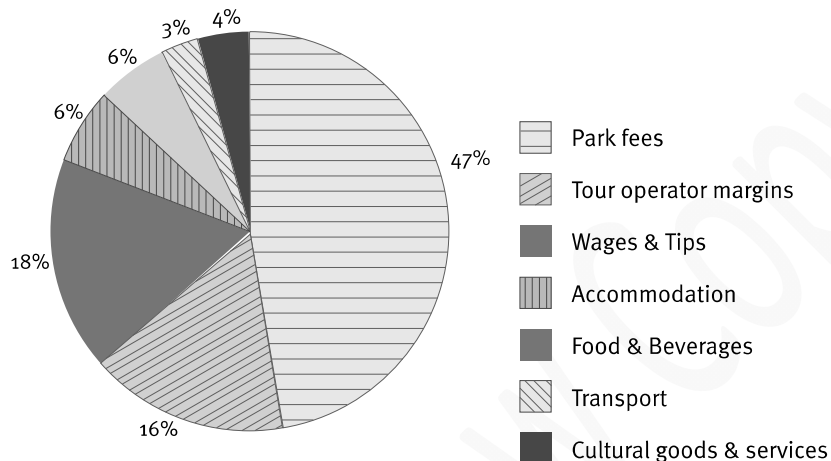


Figure 10.2. **Allocation of tourist expenditure on mountain climbing on Mount Kilimanjaro, Tanzania.** (Mitchell et al., 2009)

10.2.2 Where tourism user fees are low

Over recent years, increasing attention has been paid in some countries to rationalizing the level of fees charged. In some instances, prices have been set so low that they neither fully reflect market prices, nor capture consumers “willingness to pay”. An example is provided in Box 10.7, from Montenegro.

Box 10.7. Protected areas funding in Montenegro

The annual public income from Protected Areas in Montenegro is about €1 million, or roughly 15% of the funding needs. The majority of PA goods and services are provided at a low or zero price to users, and many consumer demands are unmet. Even though in 2010 the PA generated some 2.2% of GDP or €106 per capita, tourists and recreational visitors are willing to contribute up to €19 million more a year than they are currently being charged for entry fees. In addition, the potential market for PA authorities to provide hiking and other guided tours is worth up to €3 million a year in public earnings. This potential benefit is all the more larger considering that Montenegro is a part of the Dinaric Alps- the last remaining brand in Europe and a mountain chain that will be protected under an international convention in the coming years.

10.3 Tourism Concession Fees

A tourism concession “provides public service and may require some capital investment by a concessionaire for buildings, equipment and operating costs. A concession could provide accommodation, food and beverage, recreation, education, retail, and interpretive services (Eagles, et al, 2009).

There are a number of reasons that it can be useful for protected area authorities to grant concessions to the private sector. These include that the private sector (Adapted from Eagles, et al., 2009; Buckley, 2010a):

- is more easily able to adapt to changing markets needs and conditions;
- has commercial tourism operations as its core business;
- often has more flexibility in labour contracts;
- is often freer to innovate and respond quickly;
- can more easily raise capital and other funds, which diversifies funding sources from reliance on government sources;
- can be transferred the risk and responsibility for commercial tourism;
- has more freedom in setting price levels; and
- is (often) not constrained by as much bureaucracy as within government.

In some instances, the level of revenue they can generate can be considerable. Table 10.3 illustrates the value of tourism concessions and rentals of facilities in national parks of South Africa.

Table 10.3. The value of tourism concessions in South Africa

Type of Concession in South African National Parks	Income (2002-2012)
Tourism concessions (accommodation, canoe trails, houseboats)	R273,195,720
Facilities rentals (e.g. shops, restaurants)	R219,401,936
Total	R492,597,655 (equivalent to USD 58 million)

Source: SANParks, 2012

There are a series of financial fees that can be charged to a concessionaire, including:

- Performance bonds
- Concessionaire user fees
- Income requirements
- Maintenance and repairs

- Fines for breaches

Concessionaire user fees: A fixed or flat rate for renting a concession service is a commonly used tool and in many ways it may provide an easier way to charge a concessionaire because tracking and calculating profits, income and number of tourists can sometimes be difficult. In other situations a fixed rate is established at the beginning of a contract. The risk with this type of fee, however, is that it must be paid by the concessionaire whether a profit is made or not (Ise, 1961). On the other hand, the concession may be steadily increasing its business while the annual fee remains the same. It is not unusual for concessionaires to make huge profits while site administrations receive very little in fees. Concessionaires can also pay a portion of their net revenues rather than a flat rate to decrease some of the risk involved for both parties (Wyman, et al., 2011).

Performance bonds: Performance bonds are used to cover any costs incurred by the government in carrying out work that the concessionaire has failed to carry out and that was required by the concession document, or to mitigate any adverse effects arising from, but not authorised by, the concession or not reasonably foreseen at the time the concession was granted (Wyman, et al., 2011).

Income requirements: Income requirements make sure the tourism concession is successful, which in turn ensures that money is coming into the protected area. Sometimes concessions need to demonstrate their financial success, and in other situations, fees are required up front that are reimbursed to the concessionaire once target incomes are met (Wyman et al., 2011).

Maintenance and repair services: Many times concession operators find themselves without the necessary funds for repair and maintenance costs. This type of maintenance/repair reserve, also known as a “reserve for replacement”, represents cash paid by the operator into an account that can only be used for the ongoing capital maintenance. Considering the government or community holds title to the property, this ensures a burden of deterred maintenance is not left when the contract ends (Wyman et al., 2011).

Fines: Various fines can be applied to concessionaires in the event of a breach or non-fulfillment of the contract. Additionally, graduated fines based on severity are applied. These legal elements are important to protect the visiting public from receiving poor or no services and that the long-term sustainability of the protected area is not threatened (Wyman et al., 2011).

In addition to core commercial issues, the impacts on the local economy can be considered in relation to revenue sharing, local business involvement, and employment. These are outlined below.

- **Community revenue sharing:** Management plans and concession agreements can specify any revenue sharing options between local communities and private concessionaires. (Spenceley, 2014)
- **Local business involvement:** Concession processes can provide ‘preferred bidder’ status on local companies. Also, concessionaires can be encouraged to use support local businesses, and strengthen local supply and value chains (Spenceley, 2014)

- **Local community employment:** Protected area authorities can require concessionaires to employ local communities or even hire local communities to run the concession. Through its policies and concessions processes, governments can encourage local communities to participate in concession management and employment (Wyman et al., 2011).

The amount of money that can be generated by tourism concessions varies considerably across the world. Some of the values achieved for tourism concessions are compared and illustrated in Table 10.4 (SEMIA, 2013).

Table 10.4. Revenue generated by tourism concessions internationally

Protected Area	Number of Tourist Concessions in National Parks in the Country	Number of Tourist Concessions in the Specific National Park	Total Concessions Revenue of the National Park System Per Year	Total Concessions Revenue of the Specific National Park Per Year
<i>Bonaire Marine Park (Netherlands Antilles)</i>	0	0	\$1,002,116	\$1,002,116
<i>Tayrona National Park (Columbia)</i>	5	1	\$1,171,000	\$820
<i>Torres del Paine National Park (Chile)</i>	38	9	\$1,274,700	\$713.83
<i>Nahuel Huapi National Park (Argentina)</i>	50	16	\$3,241,000	\$470
<i>Kruger National Park (South Africa)</i>	31	7	\$7,838,534	\$4,578,533
<i>Grand Teton National Park (USA)</i>	520	27	\$1,000,000,000	\$10,000,000

Source: SEMIA, 2013

10.4 Licence fees

Many PAs have recognised that there is the potential to charge for a far greater range of goods and service than those that have traditionally been priced. There are opportunities to introduce charges or license fees for the use of park facilities such as trails and shelters, or to market non-traditional activities. An example of how licence fees are used in New Zealand is provided in Box 10.8.

Box 10.8. User fees in New Zealand's protected areas

Although New Zealand's Department of Conservation is not permitted to charge for entry into protected areas, it raises substantial revenues from imposing fees for the provision of facilities and services. Concessions are issued for businesses to conduct commercial activities such as tourism, agriculture and filming, all set at market prices. In addition, charges are levied for the use of huts, trails and campsites, at levels which ensure full cost-recovery. These sources of income represent about 15% of the Department's annual budget, most of which is used to maintain high quality facilities and to fund the costs of park management.

Source: Emerton et al., 2006

10.5 Guidelines on Financing Protected Areas from Tourism Revenues

Tourism can be used to generate revenue for protected areas that can be used for conservation management and also for the benefit of local people. The following guidelines may be used to strengthen the positive financial benefits from tourism (adapted from Eagles, et al., 2002, pp. 132):

- Undertake a systematic financial assessment. Analyse current conditions, revenues and costs; explore different self-financing options, test and adopt the most viable options.
- Consider the range of user fees that can generate revenue, such as entrance fees, accommodation, catering, vehicle permits, branded merchandise and activity permits.
- Use fee revenues for quality improvements to trails, toilets, maps, and other facilities;
- Test the willingness to pay for fees among tourists and tour operators;
- Make small fee increases rather than making them in large jumps, which relate to the market's willingness to pay;
- Give tour operators a reasonable amount of notice for large fee changes (e.g., at least 12 months in order to include it into the price catalogue for the next tourism season);
- Ensure your entrance fees are competitive in comparison to similar destinations;
- Use moneys for operational costs rather than as a control mechanism for visitor entry;
- Retain and use money for specific, known, protected area purposes, rather than for general revenues; and
- Provide abundant information to the public about the income earned and the actions funded through it, particularly when they relate to conservation and local social infrastructure improvements.

In many countries Park agencies have limited capacity to optimise potential benefits from tourism, and to manage visitation adequately. Some activities could be undertaken in order to address this weakness (Eagles & Hillel, 2008):

- Building the capacity of park managers and staff in tourism and business planning and financials mechanisms (through field training, workshops, seminars, etc.)
- Developing new and more flexible institutional arrangements and management models for park agencies, supported by adequate legislative and policy tools that allow them to capture an increasing part of tourism revenue flows and manage visitation impacts accordingly.

- Disseminating these new technologies, expertise and tools through a programme (documents, training, consulting) to park agencies, governments, civil society and NGOs, to facilitate greater contributions from tourism fees and charges to park budgets and enable a much more cost efficient and effective approach to park tourism finance.

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11. Conclusions and Future Outlooks

11.1 Introduction

Why is tourism such a critical issue for protected area managers and planners? Tourism provides visitor experiences that are fundamental to the purpose of most protected areas. Tourism provides opportunities to promote other protected area values, such as nature preservation and historical landmarks. On the other hand, tourism can negatively impact those same values. Moreover, tourism developments are often targeted to provide additional economic and social benefits to local communities – sometimes these developments are integrated into park planning efforts, and sometime they are not.

The purpose of this volume has been to increase our understanding of protected areas tourism in theoretical and practical ways, with a goal of ensuring that tourism contributes to, but does not undermine, the purposes of protected areas. The authors and editors have sought to provide current and relevant examples of tourism-related issues that offer ideas for improved management practices around the world. This chapter intends to summarise current tourism management practices in protected areas, reflect on best practices and general themes in sustainably managing tourism, speculate on critical future trends for which managers should prepare, and to offer suggestions as to how protected area stakeholders can interpret or implement the recommendations contained in this volume.

11.2 Current Practices

The principal purpose of protected areas worldwide is to conserve biological diversity and provide ecosystem services, and these are by far the greatest contribution which conservation makes to the human economy. Subject to these contributions, parks agencies in many countries are required under legislation to manage at least some of their parks with access and infrastructure for recreation. However, this does not apply to all parks, and the ease of access, degree of infrastructure investment, and intensity of management differs greatly between individual parks.

Most visitors to public protected areas are independent visitors with (their own transport). Depending on their origins, travel distance and length of stay, some of these visitors are considered as tourists and others as local residents, in the calculation of tourism economic statistics. Similarly, some may purchase products from commercial tourism suppliers, ranging from small snacks to upmarket accommodation, whereas others may not. From a parks agency perspective, however, such visitors are all engaged in independent recreation inside the park itself.

Many park agencies also permit commercial tourism enterprises to operate small-scale low-impact outdoor-activity tours inside at least some of their individual parks. Such operations must generally meet specific criteria to qualify for permits, must apply and register under specific conditions, and are subject to controls related to season and geographic area of operations, overall client numbers and maximum group sizes, activities undertaken and equipment used, time

of day for entry and exit, safety procedures and equipment, staff qualifications in outdoor activities and first aid, and monitoring and reporting.

Many parks charge entry and/or activity fees, which may be either the same or different for independent visitors and commercial tour clients. Such fees make up significant proportions of total parks budgets in some countries, principally smaller developed nations; but much smaller proportions in other countries, typically larger developed nations. Many parks in many countries do not charge any fees, and in some countries fees are a relatively recent introduction.

A few parks in some countries also contain fixed-site tourism accommodation or other infrastructure that is at least partially owned by private corporations. Many of these are there for historical reasons associated with changes in land tenure, and others are icons of cultural built heritage where the parks agency wishes to outsource maintenance costs. A few, however, are due to deliberate policy decisions by particular national or subnational governments, or parks agencies. Parks agencies that permit such developments face additional social, financial and environmental costs and risks as well as benefits for visitors.

In some countries, individual parks agencies contract out the day-to-day operational management of particular publicly-owned tourist facilities to private individuals or corporations, or non-profit entities. A few large parks in the USA, but not currently in other countries, contract out the management of all visitor facilities in an entire park to a single corporation. Currently this applies only to a small number of heavily-visited parks in the USA. Parks in other countries, including some much more heavily visited, do not use this approach. Parks agencies in a number of less wealthy nations subcontract the entire operation of some parks, including conservation as well as recreation management, to a non-government organisation. Currently the only example of this is African Parks.

11.3 Best Practices

Given the current state of tourism in protected areas, different sets of practices are required for independent visitors, small mobile tours, large fixed-site developments, and multi-component subcontracting. There is a well-established and well-tested toolkit of monitoring and management measures for independent visitors, including zoning, regulation, fees, education, hardening, and marketing approaches. These differ in cost, effectiveness and intrusiveness. Different combinations of measures work better under different circumstances.

Small mobile tours and their clients are typically subject to the same management measures as individual visitors, except that they may be permitted to undertake activities not available to the general public, either because of access, impacts or safety. The key management measures are the degree to which restrictions may be relaxed or tightened for tour operators, and the additional controls or requirements required to ensure that on-site management by tour operators substitute adequately for any relaxation in park regulations.

Practices adopted by tour operators in private conservation reserves provide a benchmark for low-impact nature-based tourism by leading enterprises. Only a few tour operators, however, achieve such standards of their own volition in public protected areas, so parks agencies need systems to

select operators and control their activities. The most reliable criterion to select tour operators is through previous track record, but a number of alternative tests are available for new operators that have not yet established such a record.

For fixed-site tourist infrastructure, there is a basic distinction between facilities owned by the parks agency and operated by a contractor, or facilities built and owned by a private enterprise with only the land leased from the parks agency. The former are widespread, the latter unusual and largely ad hoc. For concession systems where all visitor facilities for an entire park are contracted to a single concessionaire, the only model currently operational is that of the US National Parks Service. The original concessions operator, Xanterra, was established by former USNPS staff, and may have been intended as a mechanism to reduce salary costs (USNPS, 2013b). Currently, there are two additional concessionaires. It is too soon to determine whether this model has proved valuable for the USNPS, and whether or not it will be retained once current concessions expire. This model depends heavily on legal systems that enable very close enforcement of very detailed concessions contracts, so it is unlikely to be transferrable to developing nations.

The model used successfully in a number of African nations involves a lease of land plus access and operating rights, typically for periods of around a decade, with strict conditions for minimal-footprint construction, and the requirement for complete removal and site rehabilitation if the lease is not renewed. This model has proved very successful with some operators, but less so with others, who have abandoned sites with derelict buildings and open rubbish pits. The model in which the entire operation of a park, including conservation as well as recreation, is contracted to a third-party organisation, is used in only a few instances. The approach is similar to that involved in operating a private conservation reserve, but at a larger scale and with less flexibility, a shorter time span, and increased opportunities for adverse political interference. This mechanism does, however, provide a reliable and reputable mechanism for donors in more wealthy nations to channel funding directly to park management, avoiding some of the shortcomings of bilateral and multilateral aid programmes.

11.4 Themes

In terms of recommended best practices for sustainable tourism, the first theme of this book is that, for effective management and planning, protected area stakeholders need to identify and evaluate the variety of environmental, social, and economic impacts of tourism in protected areas. These impacts can be positive, negative, or neutral (and often perceived differently by various stakeholders) toward the environment, local and regional economies, and local cultures and social systems. Many of these impacts have complex interrelationships, some impacts may be unknown, and the evaluation of some impacts will depend on the judgment and perspective of particular stakeholders.

A second theme relates to the variety of factors that have influenced the development of tourism in protected areas. These include historical decisions, societal pressures, types of governance, legislation, enforcement, attractions, and many more. A clear understanding of visitor expectations, tourism impacts, management options, and future planning requires an appreciation of the forces in play and the level of influence provided to relevant stakeholders.

Overall, more information about these impacts is helpful, but managers and planners will likely need to make decisions in the absence of complete information. A variety of approaches, methodologies, and technologies are available to help derive information, determine trends, and evaluate impacts. Once known, these impacts should be addressed in an integrated fashion, with thorough documentation, within the protected area operations (unit and system) to improve efficiencies and to create synergies.

Many principles allow protected area stakeholders to place tourism in planning framework to optimise protected area values. Similarly, many tourism management and monitoring strategies are available to address visitor capacity issues. These strategies should be considered in light of past success, unique local conditions, future goals, and capacities.

A final theme examines stakeholder capabilities to implement a tourism management strategy. Protected area units and systems have a wide variety of stakeholders with different competencies, training backgrounds, and financial support systems.

11.5 Future Trends

Looking to the future, what are the most critical future trends for which stakeholders should prepare as they identify, evaluate, and management tourism opportunities for and in their protected areas? We can make several predictions, based on societal trends and experience around the world.

Global population will continue to increase and perhaps stabilise at some future point in time. This should lead to increased demand for tourism in protected areas, assuming those new people have similar preferences and access possibilities as in the past. While attendance in protected areas has declined or become stagnant in some parts of the world (e.g., USA, Canada, and Japan), it has increased in many other countries (Pergams & Zaradic, 2006; Shultis & More, 2011). Much of the global population growth will occur in urban areas – there will be pressure to increase tourism access opportunities near these urban areas (Trzyna, 2014). However, establishing new protected areas near urban zones will be difficult, as will achieving the Aichi Target of 17% of terrestrial land in protected areas (CBD, 2012), since much of the land has already been allocated to other uses.

Projected climate change will affect tourism demand and tourism attractions (Buckley & Foushee, 2012). As the climate changes, the timing of attendance in protected areas will shift as tourism attractions as change in timing, nature, and quality (e.g., shorter seasons for snow-based activities and altered ecosystems for wildlife viewing). The tourism industry also contributes significantly to annual greenhouse gas emissions and should be a key target in any climate change mitigation strategies (Hall et al., 2013). Impact assessment efforts should consider the broad range of impacts (from both long-haul international and short-haul domestic travel). Any mitigation strategies that involve reductions in travel possibilities will affect tourism in protected areas (Box 11.1).

**Box 11.1. Tourism and climate change in Peru's protected natural areas:
Assessment of potential impacts and guidelines for adaptation**

Located in western South America, Peru is known for a rich natural and cultural history that draws tourists from around the world. Over 2.8 million tourists arrived in 2012, generating over 3.2 million dollars and 1 million jobs. Climate is a key factor in determining tourism demand, opportunities, and seasonality and Peru contains 80% of the 35 world climates and 84 of the 114 life zones within its three geographic regions. Any change in climate can positively or negatively affect demand patterns and tourist flows based on the resulting opportunities or challenges. Negative impacts can reduce tourism expenditures, change the competitiveness of an area to attract tourists, and affect the local economy. Climate model projections created by the Intergovernmental Panel on Climate Change (IPCC) indicate changes in mean temperature and precipitation, and increased atmospheric variability in the decades ahead. The Andean Community estimates for Peru potential economic impacts from climate change to be 10 billion dollars.

Funded by the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB), the Public Investment and Climate Change Adaptation Project (IPACC) began in 2011 to provide resources for political decision makers, assess the potential costs and benefits of climate change impacts in priority sectors, and guide public investment criteria for climate change adaptation and risk reduction in Peru. One of the priority sectors included tourism, specifically tourism associated with Peru's protected areas. Peru has 77 protected areas, and due to its diverse and rugged terrain, these natural and cultural resources are highly vulnerable to changing climate conditions. Risks identified in interviews with experts for Peru's protected areas include impacts to flora and fauna (the main reason for tourism), due to changes in temperature and precipitation, increases in tropical disease vectors that impact human health, deglaciation in high mountain tourist corridors, sea level variations, damages to the infrastructure of support centres and shortages in food supply.

In response to the protected area assessments, the IPACC generated guidelines for public investment projects (PIP) in coastal and marine protected areas aimed to develop climate change adaptation measures that reduce the sensitivity or increase the adaptive capacity of resources and support centres. The guidelines highlight developing PIP that generates greater social benefits than the costs. For example, new tourist facilities that may be subject to heavy rains should be built in locations away from possible landslides or well beyond high tide line, thereby reducing threats to tourist safety and costly repairs. In addition to protecting infrastructure and planning for resilient development, the guidelines also provide visitor and resource management strategies that focus on both the visitor as well as the resource, as tourism affects resources already vulnerable to climate change. Possible strategies could include ordinances to control specific tourist activities or reducing the number of tourists allowed at certain locations. By identifying possible environmental, social, and economic costs of climate change in Peru's protected areas, climate-relevant criteria can be incorporated in public investment project planning and implementation. Such consideration reduces climate change-related damage, promotes biodiversity conservation, and protects local economies dependent on protected area tourism. More information can be found on the project website (in Spanish):

<http://www.ipacc.pe/qsomos.html>.

Sources: BMUB, 2014 and IPACC, 2014

New and revised recreation activities will ultimately affect tourism in protected areas. There will be new technologies that we simply cannot predict at present; these may affect any aspect of the tourism experience, including information gathering, communication, travel, recollection, safety,

New technologies will allow tourists to access information novel ways to plan their trips, access various parts of the parks, ensure appropriate timing to coincide with target natural history events (e.g., variable caribou migration or nesting of birds), digitally connect with friends and family about their experience (before, during, and after), and ensure safety.

Recreation preferences in protected areas will undoubtedly change over time. These preferences will be affected by a wide range of factors, including an aging population, immigration trends, opportunity to travel (i.e., due to cost or shortage of travel options), access to near-urban or remote protected areas, affluence levels, and access to information. Tourism stakeholders should anticipate these changes and be ready to manage their impacts.

In many cases, the livelihoods of local communities have become reliant on tourism in nearby protected areas. These communities depend on tourism for revenue, employment, taxes, and infrastructure. Other communities have been negatively impacted in many ways (see chapter xx). Thus, protected area managers are no longer able to manage tourism (e.g., restrict or expand) within the protected areas for which they are responsible without considering these broader impacts. This will require consideration of the many interconnections that tourism and protected areas have.

11.6 External Drivers

The degree to which particular parks agencies or individual protected areas can and should rely on tourism as a source of conservation finance, differs greatly between individual countries and parks, because of market factors and policy considerations. Since the principal contributions of protected areas to humans worldwide is through conservation of biodiversity and provision of ecosystem services, which are public goods, it is both equitable and economically efficient that as a base case, the costs of conservation management should be met from public funds (i.e., the general tax revenue). This applies particularly in wealthier developed nations which generate net negative impacts on the global natural environment, and where most park visitors are domestic tourists from the nations concerned. It also applies to individual protected areas with limited access, low visitation and minimal infrastructure, where attempts to raise funding through tourism would simply prove ineffectual. Note that whilst these parameters also apply to a number of private conservation reserves worldwide which are indeed funded entirely or largely through tourism, the circumstances are commonly very different: these private reserves are managed to provide desirable wildlife watching experiences for small numbers of wealthier tourists.

There are two main sets of circumstances that provide exceptions to the general rule as above. The first is for protected areas and parks agencies in less wealthy developing nations, where most visitors are tourists from wealthier nations, and where straightforward practical mechanisms are available for charging park entry or activity fees. In such cases, it may well be both equitable and efficient for the costs of conservation management to be met largely through visitor entry fees. And indeed, it is in relatively impoverished developing nations that parks agencies currently rely most heavily on tourism revenues. This places them at risk from downturns in inbound international tourism, and there are a number of examples where this has indeed happened. If government funding for conservation management is inadequate, however, relying on tourism revenue may be one of the only realistic options available.

The other exceptional case occurs for particular parks whose principal attractions are scenic, and which receive very high visitation and in consequence must invest heavily in visitor infrastructure and management. There are parks of this type in both developed and developing nations. Some individual parks receive over 10 million visitors annually. In such cases, the aggregate individual benefits accruing to visitors who enter these parks in person, may be comparable to broader global benefits from the parks concerned, associated with conservation of biodiversity and ecosystem services. If so, it may be inequitable and inefficient for the limited budgets of parks agencies to be diverted to funding high-cost visitor infrastructure for such heavily-visited scenic parks, lessening the funds available for conservation management in other parks. Therefore, in parks of this type it is both equitable and efficient that the costs of visitor management and infrastructure should be met by charging visitors directly; and in practice, this is indeed commonly the case.

The arguments outlined above apply to individual park visitors, whether escorted by commercial guides, or unescorted. They do not provide any argument or justification for permitting private sector tourism developers to construct tourism accommodation or infrastructure inside public protected areas. As noted earlier, such cases do exist, but they are few in number and currently contribute little to parks agency funding at a global scale, though they may be important locally.

Whilst by far the largest contributions of public protected areas to human health are through conservation of biodiversity and ecosystem services, there are also individual health benefits to park visitors, and these contribute to public health and thus help to reduce public health costs (Thomsen et al., 2013). For parks visited principally by tourists from other nations, of course, these benefits accrue largely in those tourists' countries of origin. Individual health benefits fall into three principal categories. The first is exercise, through outdoor recreation. The second is psychological, through reduced stress by way of time spent in natural surroundings, without dense crowds or urban machinery and noise. The third benefit results from better air quality in national parks than in urban environments; park visitors breathe generally unpolluted air during the length of their visit. They may also drink unpolluted water. These benefits have been widely recognised by health insurance corporations and public health agencies throughout the developed world, and some parks agencies have adopted slogans that reflect the health benefits of visiting parks. At least in the Western world, these health benefits have only recently become subject to detailed study. In Eastern nations, these benefits have long been recognised, both in tradition and in modern science. This is a field where further research is well merited.

11.7 Conclusions

In conclusion, tourism in protected areas generates impacts that require identification, evaluation, and management in order to achieve protected area goals. By encouraging visitors in our parks, however, we generate greater advocacy and support for conservation. In many cases, protected area tourism is critical for the establishment and management of those protected areas. The guidelines in this volume provide conceptual backgrounds for understanding park tourism and practical advice to planners and managers.

Much research is needed to further document, analyse, and contextualise the impacts of tourism in protected. Eagles (2013), for example, highlights ten research priorities that will inform future management of protected area tourism. In no particular order, these include visitor use monitoring; park tourism economic impact monitoring; park finance; professional competencies for tourism management; building public support; visitor satisfaction; licenses, permits, leases, and concessions for tourism; pricing policy; management capacity; and park tourism governance. Outcomes of this research effort would affect the viability of tourism activities and the protected areas themselves (Eagles, 2013).

How should these recommendations be interpreted or implemented? Protected area stakeholders should implement these recommendations only as they are appropriate to local and current conditions. Stakeholders should undertake holistic assessments before making decisions to ensure all influential factors are considered. These recommendations have achieved some generalizability, based on experiences from around the world, but every protected area has some unique aspects. Protected area stakeholders should anticipate changing conditions, and implement recommendations accordingly. Finally, planners and managers should document changes, evaluate progress, make adjustments, and remain adaptive to new conditions.

Working toward sustainable tourism practices within protected areas is a long-term commitment. Protected area stakeholders should not expect to generate benefits immediately. Nevertheless, planners and managers should also set realistic short and mid-term goals to determine progress. Progress should be measured against the goals of a protected area unit or system, usually the conservation of biological diversity and high quality visitor experiences. Incentive measures can help society make decisions that help achieve these broader goals.

Effective communication among all protected area stakeholders is essential to generate discussion, debate, and broad support and action toward protected area goals. We hope that these recommendations will help serve as catalysts in this regard.

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APPENDICES

- I. Detailed Information of Contributions**
- II. References**
- III. Sustainable Tourism and Protected Areas: An Online Resource Directory**

APPENDIX I – Detailed Information of Contributions

This table is sorted by contributors' family name. Specific contribution(s) are indicated in the right 3 columns.

Family Name	Given Name	Country of Residence	Chapter(s)	Sections (S)	Case Boxes (B)
<i>Barborak</i>	James	USA	8	S8.2.11-S8.2.12	B8.12
<i>Bhartari</i>	Rajiv	India	3, 10		B3.2, B10.5
<i>Borges</i>	Maria Ana	Switzerland	9		B9.3
<i>Bricker</i>	Kelly	USA	3		B3.1
<i>Bride</i>	Ian	UK	8	S8.2.9	
<i>Buckley</i>	Ralf	Australia	1, 5, 10	S7.4.2, S11.2-11.3, S11.6	B5.1, B10.1-10.2
<i>Bushell</i>	Robyn	Australia	4	S4.3	B4.5
<i>Carbonne</i>	Giulia	Switzerland	8, 9		B8.2, B9.3
<i>Cervený</i>	Lee	USA	9		B9.5
<i>Chao</i>	Chih-Liang	Taiwan ROC	9		B9.4
<i>Chavez</i>	Jorge	Peru	8		B8.9, B8.16
<i>Chen</i>	Mei-Hui	Taiwan ROC	9		B9.4
<i>Damnjanović</i>	Ivan	Serbia	8		B8.14
<i>de Urioste-Stone</i>	Sandra	USA	9	S9.4	
<i>Eagles</i>	Paul F. J.	Canada	2, 8	S2.1-2.6, S8.2.11-S8.2.12	
<i>Halpenny</i>	Elizabeth	Canada	8	S8.1, S8.2.2-S8.2.8, S8.2.10, S8.4	B8.5
<i>Hawkins</i>	Donald	USA	8		B8.13
<i>Holle</i>	Kurt	Peru	8		B8.16
<i>Hüebner</i>	Anna	Germany	6		B6.4
<i>Hvenegaard</i>	Glen	Canada	1, 4, 5, 11	S4.4, S5.1, S5.4, S11.1, S11.4-11.5, S11.7	
<i>King</i>	Delphine M.	Kenya	3		B3.1
<i>King</i>	Lisa M.	Malaysia	8		B8.6
<i>Larson</i>	Lincoln	USA	5, 6		B5.2, B6.3
<i>Leung</i>	Yu-Fai	USA	1, 6, 7, 10, 11	S1.1-1.4, S6.1, S6.3, S6.5-6.6, S6.8, S7.1, S7.3-7.4.1, S7.4.3-7.5, S9.3	B7.3
<i>Lu</i>	Dau-Jye	Taiwan ROC	9		B9.4
<i>Manning</i>	Robert	USA	6, 7, 8	S6.4, S7.2, S8.2.1, S8.3	B6.2, B8.1
<i>Massyn</i>	Peter J.	South Africa	8	S8.2.11-S8.2.12	B8.12
<i>McCool</i>	Steve	USA	2	S2.1-2.6, S9.3	
<i>Medhi</i>	Kamal	India	3		B3.2
<i>Miller</i>	Anna	USA	7		B7.1, B7.3
<i>Milstein</i>	Mark	USA	9		B9.1
<i>Monteiro</i>	Luis	Czech Republic	7		B7.5

<i>Moreira</i>	Jasmine C.	Brazil	2		B2.1
<i>Mucha</i>	Debbie	Canada	7		B7.4
<i>Ndebele</i>	Dani	South Africa	9, 10		B9.2, B10.4
<i>Newsome</i>	David	Australia	2		B2.1
<i>Ng</i>	Young	Hong Kong SAR, China	2		B2.1
<i>Notarianni</i>	Marcello	Italy	10	S10.1	B10.7-10.8
<i>Paleczny</i>	Dan	Canada	8		B8.3, B8.15
<i>Paleczny</i>	Jake	Canada	8		B8.10
<i>Paxton</i>	Midori	Thailand	8	S8.2.11-S8.2.12	B8.12
<i>Rafiq</i>	Mohammad	UK	3		B3.1
<i>Ran</i>	Jianghua	China	8		B8.8
<i>Riedmiller</i>	Sibylle	Tanzania	3		B3.2
<i>Salenieks</i>	Therese	Canada	8	S8.1, S8.2.2-8.2.8, S8.2.10, S8.4	B8.4, B8.7, B8.17
<i>Seekamp</i>	Erin	USA	9		B9.5
<i>Snyman</i>	Sue	South Africa	9	S9.5	B9.2, B10.4
<i>Spenceley</i>	Anna	South Africa	1, 4, 5, 6, 9, 10, 11	S1.1-1.4, S4.1-4.3, S4.5, S5.2-5.4, S6.7, S9.1-9.3, S10.1-10.2-10.5	B4.1-4.4, B6.2
<i>Tapper</i>	Richard	UK	3, 6, 8	S3.1-3.5, S6.2	B6.1, B8.11
<i>Thompson</i>	Andy	New Zealand	8	S8.2.11-S8.2.12	B8.12
<i>Tserendeleg</i>	Dashpurev	Mongolia	10		B10.3
<i>Val</i>	Erik	Canada	8		B8.15
<i>Vishnevskaya</i>	Alexandra	Kazakhstan	6		B6.6
<i>Walden-Schreiner</i>	Chelsey	USA	3, 6, 7, 10, 11		B3.1-3.2, B6.4-6.5, B7.2-7.3, B7.6, B10.3, B10.6, B11.1
<i>Wood</i>	Megan Elper	USA	9		B9.1
<i>Woodward</i>	Dilya	Kazakhstan	6		B6.6
<i>Wu</i>	Chengzhao	China	8		B8.8
<i>Zhang</i>	Xiaoping	China	8		B8.8

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APPENDIX III – Sustainable Tourism and Protected Areas: An Online Resource Directory

Website URL
<http://iucn.oscar.ncsu.edu> *

QR Code



* This is a temporary location during project development. The permanent site will be located in the IUCN server.

PURPOSES

- 1) To support the publication of the 2015 Sustainable Tourism Best Practice Guidelines (ST-BPG) with project information and accessible project outputs, and
- 2) To develop an online directory of 'best practices' literature on tourism and visitor management in protected areas, including case studies, guidance, research, tools, handbooks and best practices.

FEATURES

I. General Information

- Background and overview of the ST-BPG Project
- Lists of editors and contributors for the 2015 ST-BPG

II. The Guidelines

- Detailed table of contents of the ST-BPG Book
- A list of cited references for each chapter, with links to website or documents available online
- Full-text download of the 2015 ST-BPG Book (English, German, French and Spanish versions)

III. Searchable Online Resource Directory

- Full-text download of online references cited in the 2015 ST-BPG Book
- Full-text download of other relevant resources (e.g., guidelines, handbooks, manuals, reports, key journal articles, and more)
- Full-text search engine for all contents of the website

IV. Live Database

- Submission link is provided for colleagues to suggest new resources for inclusion in the Online Resource Directory. Each submission is routed to the ST-BPG Editors and the TAPAS Executive Committee for review and approval.

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Biography of Editors

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Dr. Anna Spenceley is a tourism consultant focusing on sustainable tourism based in South Africa. In particular, she works in areas of high biodiversity in developing countries. Anna is Chair of the IUCN's World Commission on Protected Areas (WCPA) Tourism and Protected Areas Specialist Group, a Senior Research Fellow with the University of Johannesburg, and sits on the editorial teams of several journals. She is also the editor of the book "Responsible Tourism: Critical issues for Conservation and Development" and also co-editor of "Evolution and Innovation in Wildlife Conservation". See [www.anna.spenceley.co.uk](http://annaspenceley.wordpress.com), <http://annaspenceley.wordpress.com> and www.slideshare.net/AnnaSpenceley.



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