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PARKS: THE INTERNATIONAL JOURNAL OF PROTECTED AREAS AND CONSERVATION

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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), summarized 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 organsations (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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Cover photo: Lonesome George the last known individual of his subspecies, *Geochelone abingdoni*, who was a major attraction at the Charles Darwin Research Station on Santa Cruz Island in the Galápagos National Park until his death in June 2012 © Nigel Dudley

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PARKS is published to strengthen international collaboration in protected area development and management by:

- exchanging information on practical management issues, especially learning from case studies of applied ideas;
- serving as a global forum for discussing new and emerging issues that relate to protected areas;
- promoting understanding of the values and benefits derived from protected areas to communities, visitors, business etc;
- ensuring that protected areas fulfill their primary role in nature conservation while addressing critical issues such as ecologically sustainable development, social justice and climate change adaptation and mitigation;
- changing and improving protected area support and behaviour through use of information provided in the journal; and
- promoting IUCN's work on protected areas.

EDITORIAL: PROTECTED AREA TOURISM AND THE AICHI TARGETS

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ABSTRACT

In 2010, the Convention on Biological Diversity developed a new strategic plan to enhance international efforts at stopping degradation and promoting sustainable use of the world's biological heritage. These twenty 'Aichi Targets' are to be attained by 2020. Domestic and international tourism and visitation to protected areas is significant, growing, and can generate both positive and negative environmental impacts. This issue of *PARKS* is focused on the potential contributions to achieving the Aichi Targets from tourism and visitation. Tourism is highly relevant to biodiversity conservation and protected area management and planning, and can contribute to several of the Aichi targets. Authors in this issue explore how, for example, tourism can help achieve public awareness of biodiversity values and opportunities for conservation, keep impacts within safe ecological limits, increase global coverage of protected areas, and promote fair and equitable sharing of benefits from tourism and biodiversity.

The conference of the parties to the Convention on Biological Diversity (CBD) met in Nagoya City, Aichi Prefecture, Japan in October 2010 in part to develop a new strategic plan to enhance international efforts at stopping degradation of the world's biological heritage. This new plan, termed the 'Aichi Targets' identified a series of goals to be attained by 2020 (CBD, 2011). These targets are designed to motivate parties to the Convention to accelerate their efforts to protect the world's remaining biological diversity. The targets are organized into five strategic goals that seek to: 1) address underlying causes of biodiversity loss by mainstreaming biodiversity across government and society; 2) reduce the direct pressures on biodiversity and promote sustainable use; 3) improve the status of biodiversity by safeguarding ecosystems, species, and genetic diversity; 4) enhance the benefits to all from biodiversity and ecosystem services; and 5) enhance implementation through participatory planning, knowledge management and capacity building. Each strategic goal has a series of 3-6 Targets, for a total of 20 Targets.

It is difficult to estimate the global volume of tourism and visitation in protected areas, but guidelines are available for estimating this with increased accuracy and consistency (Hornback & Eagles, 1999). International travel for tourism has reached one billion arrivals, an increase of 4 per cent from last year (UNWTO, 2012) and is projected to increase at an annual rate of 3.3 per cent per year out to 2030 (UNWTO, 2011). A significant, but yet unknown proportion of this travel involves visits to protected areas of all kinds, presenting not only well known opportunities for funding, education and employment, but also well documented challenges to protection and management. While a small proportion of protected areas receive the bulk of visits, even the most remote and undeveloped protected areas receive visitors or are influenced by visitation.

Tourism and visitation in protected areas can generate both positive and negative environmental impacts (McCool, 2006). This issue of *PARKS* is focused on the potential contributions to achieving the Aichi Targets from tourism and visitation. However, it is important to recognize that tourism and visitation in protected areas can generate negative outcomes, such as changing behaviour and physiology of wildlife and promoting development that alters natural habitats (Newsome et al., 2005; Green &

Giese, 2004). Considerable research, monitoring, management, and planning efforts have emerged in recent years to minimize those negative impacts on natural systems (Roe et al., 1997; Epler & Wood, 2000; Hall & McArthur, 2000; Hvenegaard, 2012).

As papers in this issue argue, tourism is highly relevant to biodiversity conservation, and can contribute to several of the Aichi Targets (CBD, 2011), and in doing so, help protected area management and planning. One Target in particular (11) sets an objective of 17 per cent of the terrestrial surface of the globe to be located within formally designated protected areas by 2020, an increase of six million km² from the 12.7 per cent figure of 2010 (Woodley et al., 2012). Much of this increase will likely come from places that are already inhabited by people, and thus require new strategies, innovative programmes, and creative approaches to integrating people and protected areas in order to achieve the necessary social acceptability and political support needed for designation. It is likely that public use and tourism will be a significant component of these policies. Target 11 also calls for an increase in effective and equitable management (Woodley et al., 2012), requiring many more managers equipped with conceptual and practical skills needed to meet 21st century challenges.

Other potential contributions to the Aichi Targets can be phrased as questions for protected area stakeholders. For example, with respect to Target 16 ('fair and equitable sharing of benefits'), what financial benefits flow from tourism in protected areas and how are those benefits distributed to local, regional and national constituencies? What is meant by fair and equitable under the provisions of the Nagoya Protocol also negotiated during the CBD Conference of the Parties in 2010? Similarly, what is the tourism and economic development potential of additional lands protected to help meet Target 11? Given that those lands may be already occupied, inhabited or used, what is the role of tourism in convincing local residents to support protection? Aichi Target 1 speaks to the need to increase public awareness of biodiversity values and opportunities for conservation or sustainable use. To what extent can park interpretation and environmental education contribute to environmentally-friendly behaviour within and beyond protected areas?

Target 8 seeks to bring pollution emissions down to levels that are not detrimental to ecosystem function and biodiversity. How might tourism, particularly its greenhouse gas emissions from transportation and solid and liquid waste, be better managed to reduce impacts on biodiversity? With respect to Target 6 (sustainable management and harvest of biodiversity), recreational hunting and fishing are often significant activities in many protected areas. How might these activities be better managed to reduce impacts on biodiversity? Referring to Target 5 (sustainable consumption and keeping impacts within safe ecological limits), and given increased demand for tourism, how can we better manage tourism and visitation to reduce impacts? What tourism experience opportunities, activities, and uses are most appropriate in protected areas? Which analytical frameworks might be useful in strategic thinking, critical analysis, and more effective and equitable decisions? Given that many protected areas exist within a highly competitive tourism marketing environment, how can we enhance opportunities for high quality visitor experiences? How can visitor opportunities be better marketed (using and expanding the traditional components of marketing: price, product, promotion, and place; Constantinides, 2006; Wearing et al., 2007)?

This issue brings together a diverse set of authors from different global regions, ecosystems, protected area systems, and governance sectors. These authors were asked to discuss the implications, opportunities, and challenges that the Aichi Targets present to conservationists, planners, managers, activists, and scientists. This issue specifically explores the role of visitor use and tourism in helping achieve the targets, probes barriers foreseen in implementation of various targets, raises questions about how tourism can be effectively managed, and explores which conceptual and practical competencies managers will need in addressing accelerating tourism and visitation. The context for each paper is unique as efforts produce different biodiversity conservation outcomes.

The first theme of this issue explores ways that tourism can support biodiversity conservation, especially when they involve local communities and management authorities. Buckley provides an overview paper on tourism and the Aichi targets and argues that, since tourism has become a significant component of conservation efforts (e.g., funding from tourism contributes significantly to protected area budgets), it requires more attention from the conservation community. Building on this theme, Snyman examines how tourism in protected areas can offer an option for sustainable land use that promotes biodiversity conservation, helps reduce poverty, and stimulates local socio-economic development. In examining six African

Kaziranga National Park, India © Nigel Dudley

countries, she found that ecotourism employment resulted in more positive attitudes towards tourism and conservation, and that education played a key role. Similarly, Hussain and others assessed the contribution of tourism to local livelihoods in the region of Kaziranga National Park, a World Heritage site in India. Many nearby residents benefited from park tourism, and these benefits could increase if the leakages could be reduced through logistic support, proper marketing of local products, and strengthening of local institutions. Last, Salizzoni examines biodiversity conservation and tourism along the Euro-Mediterranean coast. Planning and management policies are needed to address the negative impacts of seaside tourism and to promote low impact tourism in the interior of this region.

The second theme focuses on stewardship by enhancing activities and increasing opportunities for engagement. First, King and others address the need for increased stewardship of protected areas by engaging constituencies beyond the realm of protected area managers. Branding can help connect people to protected areas by engaging emotions and promoting preferred behaviour. King and others urge more focused attention on brands – building brand awareness, teaching brand meaning, and growing positive brand equity over time – to support the work of protected area managers. Second, Waithaka and others describe efforts to increase capacity for biodiversity conservation through conservation volunteers, the bulk of whom, also visit protected areas. These conservation volunteer programmes engage people in conservation, broaden understanding and appreciation of biodiversity, and create a shared vision for conservation. Last, Jager and Halpenny document Parks Canada's efforts to ensure that protected areas remain relevant to Canadians by fostering visitation and greater appreciation and connection with Canada's parks. The paper discusses the Agency's work to improve visitor experience in protected areas and highlights how outcomes arising from this initiative are assessed.

Interpretation programming at Dinosaur Provincial Park, Canada © Elizabeth Halpenny

The third theme outlines competencies required for future managers of protected areas who seek to develop a tourism-conservation synergy. McCool and others stress the need to develop and nurture competent managers and leaders. They identified several needed competencies for leadership, in the domains of strategic thinking, planning, and operations. Fish and Walton also stress the need for capacity development for biodiversity conservation and tourism management in marine protected areas. They document examples of training programmes from around the world that can help sustainable tourism aid biodiversity protection, while promoting economic benefits and collaboration with local communities.

The last theme of this issue focuses on practical ideas for, and case studies of, integrating biodiversity conservation and tourism. Miller and others focus on community-based monitoring as a way measuring success in achieving the Aichi Targets, solving problems about costs and longevity of monitoring programmes, and creating a venue for civic engagement and capacity building. In their examination, these authors highlight infrastructure-based approaches (focusing on tourism facilities) and ecosystem-based approaches (focusing on natural resources that support the tourism experience). Balandina and others provide a practical tool for integrated development of biodiversity and nature tourism through the European Charter for Sustainable Tourism, as offered by the EUROPARC Federation. Finally, Otuokon and others use Blue and John Crow Mountains National Park, Jamaica, a case study to illustrate a sustainable tourism programme designed to support local communities and enhance conservation. This programme emphasizes governance, tourism coordination and marketing, product development, and environmental management.

A key cross-cutting issue is the need for integrated and coordinated efforts to link tourism and biodiversity conservation in protected areas. For example, visitor experience policies that are not based on sound research, or marketing that is not based on management capacity, are not likely to succeed and may do more harm than good. Management policies, community outreach and engagement, research and monitoring, legislation, industry linkages, and training and capacity building should be closely aligned to improve the potential for enhancing conservation through tourism. Current limitations include a lack of baseline information about visitors and protected area ecosystems and a dearth of partnerships (with local communities, the tourism industry, and environmental nongovernmental organizations). Nevertheless, there is opportunity to further tap the potential of tourism for biodiversity conservation, and to strengthen the ability of protected areas to fulfil their mandates.

In conclusion, the science of managing tourism and visitation is young relative to the other sciences involved in protected area stewardship and much remains to be learned. This issue is designed to raise awareness and stimulate dialogue about a challenge that impacts every one of the seven billion people living on this small planet. How can we better integrate tourism and visitation (including its potential to improve the quality of life of many people) with the protection and good stewardship of our natural heritage? This question drives much of our focus over the next few decades.

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RESUMEN

En 2010, el Convenio sobre la Diversidad Biológica desarrolló un nuevo plan estratégico para mejorar los esfuerzos internacionales para detener la degradación y promover el uso sostenible del patrimonio biológico del mundo. Estas veinte Metas de Aichi han de lograrse para el año 2020. El nivel del turismo nacional e internacional y las visitas a las áreas protegidas es significativo, va en aumento, y puede generar impactos ambientales tanto positivos como negativos. Este número de *PARKS* se centra en las posibles contribuciones del turismo y las visitas al logro de las Metas de Aichi. El turismo es de gran relevancia para la conservación de la biodiversidad y la gestión y planificación de las áreas protegidas, y puede contribuir al logro de varias Metas de Aichi. Los autores presentados en este número estudian, por ejemplo, cómo podría el turismo contribuir a crear conciencia con respecto a los valores y las oportunidades de la biodiversidad para la conservación, así como a mantener sus repercusiones dentro de límites ecológicos aceptables, aumentar la cobertura mundial de áreas protegidas, y promover la distribución justa y equitativa de los beneficios derivados del turismo y la biodiversidad.

RÉSUMÉ

En 2010, la Convention sur la diversité biologique a mis au point un nouveau plan stratégique destiné à accroître les efforts internationaux pour lutter contre la dégradation du patrimoine biologique mondial, et encourager par ailleurs son utilisation durable. Ces vingt 'Objectifs d'Aichi' devront être atteints en 2020. Le tourisme et la fréquentation des aires protégées au niveau domestique et international ont une importance significative et croissante, et peuvent avoir des effets positifs et négatifs sur l'environnement. Ce numéro de PARKS est axé sur les contributions potentielles du tourisme et de la fréquentation des parcs pour atteindre les Objectifs d'Aichi. Le tourisme joue en effet un rôle très important dans la conservation de la diversité biologique et la gestion et la planification des aires protégées, et peut participer à la réalisation de plusieurs Objectifs d'Aichi. Les divers auteurs participant à ce numéro étudieront comment, par exemple, le tourisme peut sensibiliser le public sur les valeurs de la diversité biologique et les possibilités de conservation ; comment garder les impacts du tourisme dans des limites écologiques raisonnables; comment accroître la couverture mondiale des aires protégées; et enfin comment encourager un partage juste et équitables des avantages issus du tourisme et de la diversité biologique.

TOURISM, CONSERVATION AND THE AICHI TARGETS

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ABSTRACT

Tourism has a critical role in the portfolio of economic and political measures required to approach the Aichi Targets for the expansion of protected areas. Tourism receives remarkably little attention in high-level conservation debates, but in fact it already funds >50 per cent of some national parks agency budgets and contributes >50 per cent of conservation funding for some IUCN-red listed species. In addition, managing both revenue and threats from tourism is one of the major practical preoccupations of protected area managers on the ground. The ways in which tourism can support or threaten conservation depend strongly on local social, political and legal frameworks and hence differ markedly between countries, and between different land tenures within countries. In addition, the ways in which tourism can be mobilized as a conservation tool, or avoided as a conservation threat, differ between political and socioeconomic groups within each country. This paper argues that for good or bad, tourism has become an unavoidable component of conservation efforts worldwide, and deserves far greater attention from the conservation community.

INTRODUCTION

Protected areas worldwide are under pressure from threats such as encroachment, poaching, invasive species, pollution, modified fire regimes, and tourism and recreation. Some are under pressure from larger-scale political threats: reallocated or abandoned to extractive industries, subsistence settlement, or unsanctioned uses. Wilderness areas outside parks systems are shrinking, as human populations and resource consumption expand (Barnosky et al., 2012; Butchart et al., 2012; Cardinale et al., 2012). The Aichi Targets aim to address these threats by expanding protection to 10 per cent of marine and 17 per cent of terrestrial and freshwater ecosystems. Achieving this Target will require new funds (Morse-Jones, et al., 2012). This contribution summarises practices, opportunities and restrictions in using tourism as a source of conservation finance, drawing on a recent review (Buckley, 2011) and case-study compilation (Buckley, 2010).

Few countries can simply buy more land for parks. Instead, they aim to change primary production to conservation on public, communal and private land tenures. This is slow, incomplete and expensive, and may lead to further proliferation of paper parks. Funds are needed to buy out leases and other legal rights, compensate politically powerful corporations and regional electorates, persuade landowners to modify land-use, and cover costs of conservation management. Government budgets for parks agencies, however, are inadequate and falling, especially in biodiverse developing nations.

Parks agencies are therefore forced to find new conservation finance to meet the Aichi Targets. Options differ between nations and places. Carbon offsets and international aid are large but unfocussed. Environmental stewardship schemes, where governments pay landowners for conservation practices, are more focussed but smaller and less widespread. Many options suffer from political and commercial manipulation, which render them ineffective for conservation. Different programmes operate at different levels of government, are available to different landowners, use different incentive systems, and provide different legal protection. Some use competitive

Entry fee tickets at Taman Laut Malaysia Marine Park © Elizabeth Halpenny

applications, tendering, or intermediaries such as NGOs. Incentives can include single or repeated payments, rate rebates and land-tax exemptions, or capital-loss deductions, sometimes saleable to third parties.

In some countries, conservation is financed by selling ecosystem services, especially water. This works best upstream from major cities, where conserving catchment ecosystems reduces costs of water supply and treatment, and flood prevention and damage. So-called sustainable harvesting programmes aim to gain support for conservation by allowing low-volume and selective collection of particular species, either for traditional subsistence use, or for commercial bioprospecting. These carry the risk that large-scale harvesting for commercial sale may be disguised as small-scale harvesting for individual use.

Tourism can also contribute significantly to conservation finance, especially where government budgets are low, but only where there are icon attractions, effective infrastructure, safe and easy access, and sufficient economic scale. Outdoor tourism has a global scale around a trillion US dollars annually (Buckley, 2009a, b), but this is very unevenly distributed, and geographic patterns change slowly. It takes time to build airports, roads and accommodation, and to establish reputation, visitation rates, and competitive international air access. In addition, tourism only contributes to conservation finance if there is a reliable local mechanism for conservation to capture a component of tourism revenue. Centralised taxation mechanisms are ineffective, since governments treat parks as a low priority.

PARKS BUDGETS AND VISITOR FEES

Some parks agencies believe that increasing recreational use of parks will lead to larger government budget allocations for conservation. This may or may not be correct, but there is little actual evidence. Budget deliberations are inaccessible and difficult to deconstruct. Unless visiting parks leads voters in marginal electorates to change preferences, political links between park visitation and parks agency budgets will be weak. Constituencies with concerns over conservation are much larger than those engaged in park-based recreation; and conservation constituencies may not favour high visitation. They may see certain types of recreation as imposing conservation costs and large-scale commercial tourism as private profit-making at the expense of the tax-paying public and the natural environment. Increasing visitor numbers also increases recreation management costs; so unless it increases revenue more than costs, it reduces net funds for conservation. Even if a government does increase a parks agency budget in line with visitation, that allocation may be short-lived. Once visitation increases, it may be replaced by individual entry fees.

Hiker at Banff National Park, Canada © Elizabeth Halpenny

In practice, many parks do charge fees: entry fees, daily fees, camping fees, fees to undertake particular activities, and fees to visit particular sites. Fees may be differentiated by season, group size, mode of transport, nationality, age, and for individual visitors and commercial tour clients. Public acceptance of fees varies with their local history, structure, purposes, collection mechanisms and other relevant information, such as signage and loyalty programs. Visitors are more willing to contribute funds for use locally rather than centrally. Since parks agencies reallocate visitor revenues internally, however, and government treasuries offset fee revenue by reducing other allocations, this is a moot issue. In recent decades, parks agencies in some countries have increased reliance on tourist fees to over half of total revenue (Mansourian & Dudley, 2008; Bovarnick et al., 2010). Most of these are in developing nations where government allocations to parks are low. Other countries, however, including many developing nations, fund park management entirely from central budgets, with no direct charges to tourists.

Parks agencies in different countries also have different permit systems for commercial tourism operators. For small-scale mobile tour operators which offer the same activities as those permissible for individual visitors, agencies typically use routine permit systems with: an initial application fee; an annual renewal fee; and a per-client fee which may be either higher, lower or the same as for individual visitors. Some agencies charge the per-client fee on the full quota of clients specified on the operator's permit, irrespective of the actual number on any given trip, to address the issue of latent quota.

In some protected areas, commercial tour operators request special privileges not available to independent visitors. These include: using areas otherwise off limits; vehicle access on management trails closed to the public; activities prohibited to independent visitors because of impacts or safety risks; semi-permanent camps where occupancy is otherwise restricted; and photography and recording for commercial advertising. Parks agencies control such privileges closely, and negotiate special rights and fees on a one-off or ad-hoc basis.

FIXED-SITE TOURISM DEVELOPMENTS IN PARKS

One of the most contentious aspects of tourism in parks is construction of private fixed-site tourist accommodation or infrastructure inside public protected areas (Buckley, 2010a, b). Globally, this is quite uncommon. Some parks agencies construct their own facilities, from simple campsites to heritage lodges, and lease these to private concessionaires to manage day-to-day operations (Buckley, 2010b). The US National Parks Service, for example, has developed detailed and comprehensive concession contracts, regulations, fee structures, capital transfer provisions, and auditing procedures, over many decades. This system is not generally transferrable to other countries which do not have this tradition, or the legal framework to operate it successfully.

In some countries there are historic huts, lodges and even hotels which were established by trekking and mountaineering clubs, railway corporations and other private entrepreneurs, in the early days of the parks services (Buckley, 2010a,b). This occurred when access was slow and difficult, and governments were keen to encourage their citizens to experience the grandeur of their nations' national heritage. Some of these are still operated by the original organisations, whereas others have been sold or consolidated. Precise legal arrangements vary, but typically involve privately-owned buildings on publicly-owned land.

For some heavily-visited and highly scenic national parks in the USA, the entire visitor services operations are contracted out to concessionaires. One such concessionaire is a private corporation set up by former parks service staff, perhaps to control salary costs for visitor management. In recent years, however, private hotel development corporations have tendered successfully for some of these concessions, perhaps taking advantage of equity provisions in US government tendering arrangements. How well this works remains to be seen. Many government agencies alternate between outsourcing services and operating them in-house; when current concessions come up for renewal, the parks service may decide instead to operate these facilities themselves. This whole-of-park concession approach is apparently not used in any other countries at present; parks services which offer commercial concessions do so, on a much smaller-scale and piecemeal basis. Even in the USA, piecemeal concessions are much more commonplace than whole-of-park arrangements; most of the >600 concessions currently in place are small-scale and specific.

Worldwide, even including these examples in the USA, there are <250 identifiable cases of privately-owned tourist accommodation and infrastructure inside public national parks, and nearly all of these are there for historical political reasons (Buckley, 2010b). Some are on enclaves of private land, which predate the establishment of the park itself. Some were set up when the parks were established (e.g. as part of arrangements to bring transport links to the parks concerned). Some are old buildings and structures on parks lands, which cannot be demolished because of cultural heritage laws. Agencies may sell such buildings, or the rights to operate them as tourist attractions, in order to avoid ongoing maintenance costs.

In some cases there have been changes in land tenure (Buckley, 2010b). For example, private individuals have donated land of high conservation value to a parks agency, but retained the right to operate tourist accommodation or activities. In other cases, public land has been transferred from production to protection, but with tourist rights granted to private entrepreneurs as part of a political package. In some countries, there were former hunting leases over areas now allocated to conservation, and these included rights to operate tourist accommodation. If declaration of a protected area halts hunting, lessees may sell their leases to non-hunting tourism operators, which

Fundraising programme at Point Pelee National Park, Canada © Elizabeth Halpenny

can continue to offer accommodation inside the park. There are cases where land rights claims by Indigenous peoples have seen title to protected areas transferred to Indigenous organisations, under leaseback arrangements so that these areas are still conserved, but with Indigenous organisations operating tourist activities. There are also a few cases where individual entrepreneurs with particular political connections to powerful government officials have been granted an extraordinary right to construct tourist facilities inside a public protected area, essentially through abuse of political power.

It seems to be very uncommon for protected area management agencies to adopt a deliberate and proactive policy to grant tourist development rights inside their parks to private entrepreneurs. Kruger National Park, from the South African National (SAN) Parks agency, has operated its own tourist rest camps for many decades. In 2000, it offered previously inaccessible parts of Kruger for exclusive use by private tour operators, on 20-year leases (Varghese, 2008). These leases grant exclusive traversing rights over the areas concerned, and rights to build tourist lodges and roads, under strict conditions. It appears that SANParks originally intended to emulate the financial success of the private game lodges in the Sabi Sands area adjacent to Kruger National Park, as a means to raise revenue. The new Kruger concessions have apparently not met the financial expectations of either SANParks or the lessees. They have, however, provided employment for local communities, which is politically valuable for SANParks because of South Africa's Black Economic Empowerment laws. These lodges were originally marketed to wealthy international clients in the same way as those in Sabi Sands. It now appears, however, that the Kruger lodges might be more successful if they were marketed more strongly to South African domestic tourists, who have a strong place attachment to the Kruger National Park (Coghlan & Castley, 2012).

PRIVATE AND COMMUNAL CONSERVANCIES

Outside public protected area systems, a number of private and communal landowners receive funding through tourism which allows them to manage their land at least partly for conservation. This may range from protection of individual species from hunting, to complete protection as a private conservation reserve, including reintroductions of rare or threatened species. Different strategies and approaches are in use. There is a basic distinction between those where the landowner determines the conservation practices and also run the tourism operations and those where a landowner leases tourism operating rights to a different organisation, with conservation conditions for both lessor and lessee. Options available, and their degree of success, depend on the precise bundle of rights associated with various forms of land tenure and also on the rights of different public, private and communal stakeholders with regard to wildlife in general, and individual species in particular.

Currently, it appears that conservation tourism operations on private and communal lands are indeed significant for conservation, for several reasons. Often they include ecosystems which are poorly represented in public protected areas, because, for example, their soils and terrain are productive for agriculture, or because they include areas which would otherwise be subject to urban residential encroachment. In many cases the only potential corridors of native vegetation between existing public protected areas are through private or communally owned lands, so the latter are critical for landscape-scale connectivity conservation. Some threatened species are conserved within private and communal reserves, as well as public protected areas. Where tourism contributes to funding or political capital, it also contributes to conservation (Buckley, 2010a; Buckley, et al., 2012a; Morrison, et al., 2012).

DIFFERENCES BETWEEN NATIONS

In many developed nations, the costs of recreation management are significantly greater than the direct revenues raised from recreational fees and charges, but since parks agencies in these countries are expected to provide for public recreation as well as conservation, the two are closely linked in government budget appropriation processes. In many developing nations, especially where few of the countries' own citizens yet engage in park-based outdoor recreation, direct revenues from international tourism may be a critical factor in keeping parks operational, and that in turn is critical to preventing the extinction of threatened species.

In countries such as Brazil, Russia, India, China and South Africa, there is both a longstanding but relatively small inbound international tourism market, and a recent, rapidly growing and very much larger domestic tourism sector, which is generating very large increases in protected area visitation. Some of the better-known national parks in China, for example, now receive over 20 million visitors

Private sector operator guiding tours to Jasper National Park's Columbia Icefields, Canada © Elizabeth Halpenny

every year. These domestic visitors share international interests in seeing native wildlife and engaging in various forms of outdoor recreation and commercial adventure tourism.

Cultural contexts, motivations, expectations and behaviour of tourists, tour operators and land management agencies differ between countries, and do not necessarily match models which are most familiar to the Anglophone Western world. In addition, when domestic tourists from these nations travel internationally, their expectations and behaviour in national parks elsewhere will be shaped by their previous experiences in their own countries, creating additional complexities for protected area managers worldwide. This is a very rapidly evolving component of parks-tourism linkages, but one which is potentially very influential, and which therefore deserves particular research attention.

COMMERCIAL VIABILITY AND CONSERVATION RISK

Rather few species, mostly large mammals, act as major attractions in mainstream tourism, even though many more species attract specialised wildlife tourists, birdwatchers, botanists and divers (Smith, et al., 2012). Even for those species which tourists would indeed like to see, and places they would indeed like to visit, tourism can only contribute to conservation if the parks and wildlife are a sufficiently strong attraction, for a sufficient number of people, that they can support a commercially viable tourism industry. This depends very strongly on access and infrastructure. Protected areas which are time-consuming, arduous, expensive or unsafe to reach will attract few visitors. Each of these barriers can disappear quite rapidly, however, in the event of sudden political changes. Countries with little or no tourism can become popular destinations at quite short notice. This is helped by the fashion aspects of the international tourism industry, where travel magazines and other mass media are constantly searching for new destinations to promote.

Tourism can also collapse, however, with even greater rapidity, if countries are perceived as unsafe. Even relatively localised incidents, such as a kidnapping or border incursion in areas not commonly visited by tourists, can create an almost complete and instantaneous collapse in inbound international visitor numbers if it receives major coverage in international mass media. The same applies for natural disasters, even if they are localised and short-lived. For any country to plan its protected area budgets with strong reliance on tourism revenues is thus a very risky strategy. There are also numerous examples of countries where internal political disputes have caused major downturns in tourism, and major increases in wildlife poaching.

Even in countries which do remain stable politically, and maintain a fully functional and large-scale tourism sector with well-maintained infrastructure and a regular supply of international inbound visitors, the continuing survival of individual conservation tourism enterprises also depends on local market factors. Even long-established and successful tourism operators, which run large portfolios of commercially viable conservation tourism enterprises, find that some products are unprofitable and are ultimately abandoned or mothballed for extended periods. There are also many conservation and community tourism enterprises which were started with assistance from NGOs and bilateral aid donors, and have still been unable to achieve commercial independence.

The viability of conservation tourism enterprises also depends on overall patterns in global tourism, which are strongly influenced by large-scale economic trends. Long-haul short-break holiday travel, for example, is reduced during recessions, and this includes visits by tourists from

wealthier developed nations to protected areas in developing nations. Visits to protected areas in countries of origin, however, may increase during such periods (Buckley 2009b). Long-haul travel is also likely to be affected by future fuel prices, which are expected to rise because of increasing scarcity and the costs of climate change mitigation measures. Whilst such increases are small, tourists continue to travel simply by substituting against other types of discretionary expenditure. If they become large, however, there will be a gradual mode change whereby people substitute other forms of travel, leading to major changes in the structure of the global tourism industry (Buckley 2012b). Such trends would also affect the ability of parks agencies to rely on tourism revenues.

CONCLUSIONS

Tourism is now a significant part of the funding portfolio and political context, as well as the management costs, for many parks agencies; however, tourism still receives very little attention from the professional protected area and conservation community, as demonstrated by the programme for the 2012 World Conservation Congress.

This paper endeavours to demonstrate firstly, that tourism is far more widespread and significant in conservation finance than generally appreciated; and secondly, that it is by no means a panacea, but is available only in limited circumstances. In addition, nature-based tourism only yields a net contribution to nature conservation if it is appropriately harnessed through legal, political and financial mechanisms and institutions.

An appreciation of the tourism sector is now an essential component in the training and operational knowledge of conservation managers and policymakers worldwide. Equally, it is the responsibility of the research community to identify what does or does not work under various different circumstances, and why; and to identify and implement ways to track and measure outcomes, for conservation as well as for tourism.

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RESUMEN

El turismo desempeña un papel fundamental en el abanico de medidas económicas y políticas necesarias para acometer las Metas de Aichi para la expansión de las áreas protegidas. El turismo es objeto de muy poca atención en los debates de alto nivel relacionados con la conservación, pero de hecho ya financia el >50 por ciento de los presupuestos de algunas dependencias nacionales responsables de los parques y contribuye el >50 por ciento de los fondos para la conservación de algunas especies incluidas en la Lista Roja de la UICN. Por otra parte, tanto la gestión de los ingresos como las amenazas relacionadas con el turismo son algunas de las principales preocupaciones prácticas de los administradores de las áreas protegidas. Las formas en que el turismo puede ser de apoyo o amenaza para la conservación dependen en gran medida de los marcos sociales, políticos y jurídicos locales y, por consiguiente, difieren notablemente entre los países y sus diferentes formas de tenencia de la tierra. Además, las maneras en que el turismo puede ser incentivado como una herramienta para la conservación, o evitado como una amenaza para esta, varían según los grupos políticos y socioeconómicos de cada país. De ahí que sostenemos que –para bien o para mal– el turismo se ha convertido en un componente inevitable de los esfuerzos de conservación a nivel mundial, y amerita mucha más atención por parte de la comunidad conservacionista.

RÉSUMÉ

Le tourisme joue un rôle essentiel dans l'éventail de mesures économiques et politiques nécessaires pour atteindre les Objectifs d'Aichi liés au développement des aires protégées. Cependant, il est surprenant de constater le peu d'attention accordé au tourisme dans les débats de haut-niveau sur la conservation alors que cette activité finance plus de 50 pour cent du budget de certains organismes en charge des parcs nationaux, et contribue pour plus de 50 pour cent au financement de la conservation de certaines espèces figurant sur la Liste rouge de l'UICN. En outre, la gestion des revenus et des menaces issus du tourisme est l'une des principales préoccupations pratiques des gestionnaires d'aires protégées sur le terrain. Dans quelle mesure le tourisme soutient ou menace la conservation dépend fortement des cadres locaux sociaux, politiques et juridiques, et des différences marquées existent donc entre les pays et entre les différents types de régimes fonciers au sein d'un même pays. Enfin, dans quelle mesure le tourisme peut être utilisé comme outil en faveur de la conservation, ou évité en tant que menace pour la conservation, diffère selon les groupes politiques et socio-économiques de chaque pays. Pour le meilleur ou pour le pire, le tourisme est devenu une composante incontournable des efforts en faveur de la conservation dans le monde, et mérite pour cela un plus grand intérêt de la part de la communauté de la conservation.

THE IMPACT OF LAND MANAGEMENT SYSTEMS ON COMMUNITY ATTITUDES TOWARDS TOURISM AND CONSERVATION IN SIX SOUTH AFRICAN COUNTRIES

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ABSTRACT

Many rural areas of Africa are characterised by high levels of unemployment, poverty and increasing population densities. Arid climates and erratic rainfall also make many of these areas marginal for agriculture and offer few alternative employment opportunities. Ecotourism in these areas can offer a sustainable land use option that promotes biodiversity conservation, can assist in poverty reduction and promote local socio-economic development. Receipt of benefits from ecotourism is also claimed to improve community attitudes towards conservation. Through extensive questionnaire surveys, this study analysed the impact of land management systems on community attitudes towards tourism and conservation in six southern African countries: Botswana, Malawi, Namibia, South Africa, Zambia and Zimbabwe. The study found that diverse land management systems such as government-owned land and communal land had differing effects on attitudes. Overall, some level of community ownership or participation, such as in joint ventures, resulted in more positive community attitudes. The results highlight the importance of empowerment and ownership in order to promote biodiversity conservation and ensure the long-term sustainability of ecotourism operations.

INTRODUCTION

In southern Africa, many early conservation efforts from the late 1800s and early 1900s either displaced local communities or restricted their access to natural resources (Barrow & Fabricius, 2002; Borrini-Feyerabend, Kothari & Oviedo, 2004; Kepe et al., 2005; Kideghesho et al., 2007; Scanlon & Kull, 2009; Gurung, 1995; Grung, 2003). This negatively affected community attitudes towards conservation and in the last few decades of the 20th century, efforts to rectify growing tensions and gain community support led to conservation and ecotourism models that increasingly included communities in the decision-making and benefit sharing process.

The community approach to conservation sought to ensure that local communities would reap benefits from conservation that were over and above the costs. These costs include: problems resulting from human-animal conflict such as loss of crops, livestock, and sometimes human life (Woodroffe, Thirgood & Rabinowitz, 2005); the opportunity cost associated with land being used for conservation and not being available for other uses (Alexander, 2000; de Boer & Baquete, 1998; Sibanda & Omwega, 1996; Sifuna, 2010); and loss of access to natural resources.

Social exchange theory assumes that potential beneficial outcomes will create positive attitudes towards tourism (Andereck et al., 2005; Teye et al., 2002). Local communities seek benefits of ecotourism in exchange for something that they estimate to equal the benefits that they offer in return, such as natural resources provided to tourists and ecotourism operations (Sirakaya et al., 2002; Teye et al., 2002). Individuals that perceive benefits from an exchange are likely to view it positively and those that perceive costs are likely to evaluate it negatively (Andereck et al., 2005). Residents who are dependent on the tourism industry for support, or who perceive a greater level of personal benefit or economic gain, tend to have more positive perceptions of tourism impact than others (Brunt

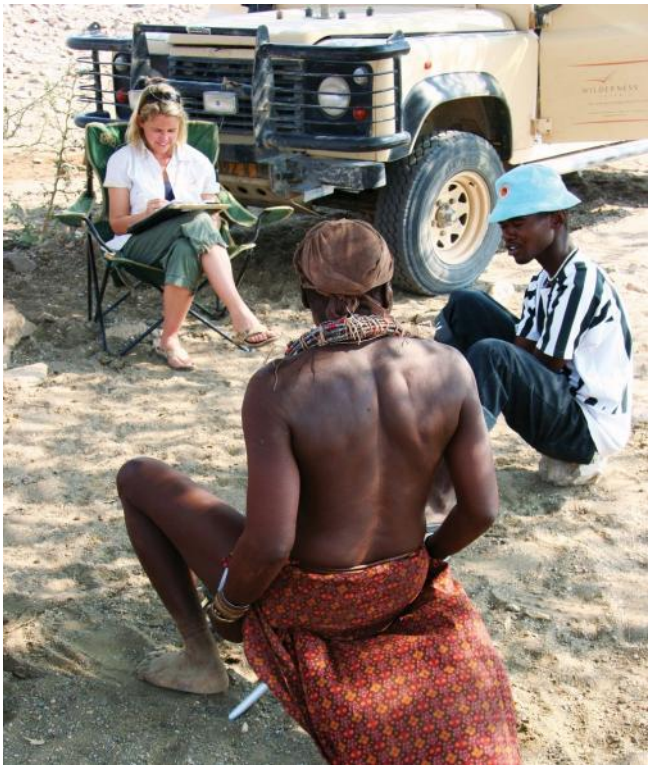
Land-use tourism, Damaraland Camp © Dana Allen

& Courtney, 1999; Child, 2000; Child & Harris, 2008; Haralambopoulos & Pizam, 1996; Jurowski et al., 1997; Lankford & Howard, 1994; McGehee & Andereck, 2004; Sirakaya et al., 2002 in Andereck et al., 2005; Shibia, 2010; Walpole & Goodwin, 2001; Wang & Pfister, 2008).

The benefits of ecotourism, and community attitudes towards it, are strongly influenced by the level of community dependence on ecotourism for livelihood support (Sirakaya et al., 2002), and differs, within and between communities (Jurowski & Gursoy, 2004). Benefits are essentially value domains and the perception of the importance of benefits will differ between individuals as they attach different values to them. In tourism, economic and non-economic value domains may influence attitudes towards ecotourism (Wang & Pfister, 2008).

Through an appreciation of biodiversity conservation, communities may reduce direct pressures on natural resources (Aichi Biodiversity Strategic Goal B). The flow of ecotourism benefits to communities aligns with the Aichi Biodiversity Strategic Goal D of enhancing the benefits to all from biodiversity and ecosystem services (Convention of Biological Diversity Aichi 2020 Biodiversity Targets). In line with this, Langholz (1999; 2008) argued that ecotourism income can minimise or eliminate dependence on activities that exploit natural resources, such as commercial agriculture, logging and cattle farming. There is; however, evidence of increased income also leading to greater exploitation of natural resources and therefore negative impacts on biodiversity (Stronza, 2007; Stronza, 2010). Thus, formal, as well as informal, education relating to conservation is critical.

An understanding of what factors influence community members' attitudes towards ecotourism and conservation can assist in managing expectations. It can also be used in education and awareness-raising programmes to improve attitudes and garner support from communities living in and around conservation areas (Allendorf et al., 2006; Chidakel, 2011; Sifuna, 2010; Simelane et al., 2006). This understanding is important because, as pointed out by Emerton (1999), benefit distribution is a necessary, but not in itself sufficient, condition for communities to engage in wildlife conservation. Management's understanding of the perceptions and attitudes of local residents is likely to



A survey at Orupembe conservancy, Nambia © Chris Bakkes

influence the quality of their interactions. Ap (1992) described such understanding as, 'crucial' for the development of a successful and sustainable ecotourism sector, while Newmark et al. (1994) claimed it as an essential ingredient in the design and implementation of any project to promote conservation and development (in Gillingham & Lee, 2003). Depending on community attitudes towards conservation and ecotourism, local communities can influence the long-term success or failure of ecotourism operations in their area (Akyeampong, 2011). Consequently, it is critical to have an understanding of community attitudes in areas of ecotourism development.

Community attitudes towards ecotourism and conservation vary as a community develops, as well attitudes are variable in time, space and location (Emerton, 1999; Faulkner & Tideswell, 1997 in Sirakaya et al., 2002). Based on the premise that modern ecotourism is assumed to involve local communities, the introduction, implementation and sustainability of community engagement projects relies heavily on an understanding of cultural, economic, and non -economic characteristics of the communities with which one is engaging. It is therefore essential that differences in communities are understood, and taken into consideration, in all policy development and implementation (Simelane et al., 2006).

In summary, studying community attitudes towards tourism and conservation is important for a number of reasons:

- it can disclose whether or not strong attitudes exist towards a protected area which, in some cases, may help to explain behaviour (Lepp & Holland, 2006 in Anthony, 2007): these attitudes may be strongly positive, strongly negative or neutral;
- it can inform policy makers and managers which factors influence attitudes and this can assist with prioritising avenues for action (Anthony, 2007; Browne -Nuñez & Jonker, 2008; Zimmerman et al., 2005 in Groom & Harris, 2008), including ways to maximise benefits to communities and to mitigate costs;
- it can also reveal opportunities for improving relationships and outreach programmes with communities living adjacent to protected areas (Anthony, 2007); and,
- it can give an understanding of why communities behave in particular ways towards protected areas and tourism operations and their staff.

Conservation and ecotourism are inextricably inter-linked, but community attitudes towards them may differ as community members see direct benefits associated with ecotourism in terms of employment, but see costs associated with conservation in terms of human-wildlife conflict. They may therefore have contradictory attitudes towards tourism and conservation. Identification of the primary dynamics of these relations will therefore allow for more focused planning in terms of protected areas and the associated ecotourism operations and in so doing maximise positive attitudes towards conservation and ecotourism.

Critical to the long-term success of ecotourism, and consequently, conservation, is the determination of how land ownership arrangements affect attitudes towards conservation and ecotourism. For an ecotourism operation to be sustainable it needs to contribute to the conservation of biodiversity in the protected areas in which it is located, it needs to be acceptable to the communities in the area and it needs to be commercially viable. This paper provides comparative community data across six countries allowing for an analysis of the differences between various communities and countries, focusing specifically on the impact of land management systems, and provides guidance for tourism operators and policymakers based on the results.

Table 1. The camps, communities and ethnic groups surveyed in each country

Country	Camps surveyed	Land Tenure	Communities surveyed	Ethnic groups surveyed
Botswana	Duba Plains, Vumbura Plains, Little Vumbura	Kwedi Concession where camps situated is owned by the Okavango Community Trust (*Community* concession). The community owns the concession and receives annual rental from private sector operator.	Okavango Community Trust (OCT) villages – Seronga, Gunotsoga, Beetsha, Eretsha, Gudigwa	Bayei, Hambukushu, Basarwa, Bakgalagadi
Malawi	Mvuu Camp, Mvuu Wilderness Lodge	National Parks owns the land (*Government*)	Balaka District, bordering Liwonde National Park	Lomwe, Yao, Nyanja, Tumbuka, Tonga
Namibia	Skeleton Coast Camp	Ministry of Environment and Tourism (MET) runs Skeleton Coast National Park (*Government*). *Voluntary community levies* are paid to the four adjacent conservancies.	Okondjombo Conservancy; Purros Conservancy; Sanitatas Conservancy; Orupembe Conservancy	Herero, Himba, Damara,
	Palmwag Lodge	For Palmwag Lodge: Ministry of Environment and Tourism (MET) as well as the Big Three Conservancies (*government & conservancy payments)*.	Torra; Anabeb; Sesfontein Conservancies	Herero, Himba, Damara, Riemvasmaker
	Doro Nawas Lodge	For Doro Nawas Camp a *joint venture* with the Doro !Nawas Conservancy.	*N/A	Herero, Himba, Damara, Riemvasmaker
	Damaraland Camp	For Damaraland Camp: a *joint venture* with Torra Conservancy	Torra Conservancy	Herero, Himba, Damara, Riemvasmaker
South Africa	Rocktail Beach Camp	iSimangaliso Wetland Park owns the land. *Joint venture partnership* between WS & the Mpukane Community	Mpukane Community	Zulu
	Pafuri Camp	*Tripartite agreement* between the Makuleke community, Wilderness Safaris and South African National Parks (*Community, private sector & government*)	Makuleke community: Makuleke; Makahule & Mabaligwe villages	Tsonga
Zambia	Kalamu Lagoon Camp	National Parks owns the land (*Government)*	Villages in the Malama Chiefdom adjacent to South Luangwa National Park	Kaonde, Senga, Chewa, Ngoni, Bemba & Nyanja
Zimbabwe	Davison's Camp; Makalolo Plains; Little Makalolo; Linkwasha	National Parks owns the land (*Government)*	Villages in Tsholotsho District adjacent to Hwange National Park	Ndebele, Kalanga, Lozi, Shona

Due to time constraints, community surveys were not conducted specifically in Doro!Nawas Conservancy. The camp staff surveys were; however, still included in the analysis, as they are relevant to the study.

METHOD[1]

Socio-economic questionnaire surveys were conducted in camps run by Wilderness Safaris[2] in Botswana, Malawi, Namibia, South Africa, Zambia and Zimbabwe. Three hundred and eighty-five staff surveys were collected in 16 high-end ecotourism camps, constituting a majority of the staff in these camps (52 per cent to 68 per cent of camp staff). A further 1,400 community surveys were conducted in over 30 rural communities, covering more than 16 different ethnic groups and an average of approximately 25 per cent of households (10 to 84 per cent of households). Wilderness Safaris was chosen for the study as it offers a consistent set of objectives and operates according to a standard policy framework across all its operations over a broad area in southern Africa. This allows for a comparison of interactions under changing circumstances, such as varying land management arrangements, population densities and employment in high-end ecotourism. Two types of community members were differentiated in this study: those directly employed in a high-end ecotourism

operation (staff) and those not employed in the high-end ecotourism operation (community). For each camp, both groups of respondents were from the same community, living either in or around the protected area where the ecotourism operation was situated. This allowed for the comparison of attitudes towards conservation and ecotourism between the two groups. Table 1 summarises the camps, and communities/ethnic groups surveyed in each country.

Both male and female interviewers conducted the surveys, and local translators were used in circumstances where the respondent could not speak or understand English. The surveys contained questions relating to demographics, social welfare and living standards, education, employment patterns, income and expenses, health and safety, and attitudes toward tourism and conservation. Each survey was conducted verbally, with the interviewer completing the questionnaire survey during the interview. Each survey took approximately 20-30 minutes when conducted in English, and approximately 25-45 minutes when translated, depending on the respondent's educational level.

They consisted of a structured set of questions; the majority were close-ended, some provided the option for further explanation. Interviewers introduced themselves to respondents and explained the purpose of the research: A study on the socio-economic impact of conservation and tourism on surrounding communities. The interviewers likely would have been associated with Wilderness Safaris because of their vehicles in some areas and through the introduction process; this may have biased responses. It is impossible to predict the direction of the bias; however, as some respondents may have been negative in order to ensure changes or positive in order to win favour with the private sector operator in the area (Allendorf et al., 2006). Respondents were told that the surveys were confidential and their participation in answering all questions in the survey was voluntary. This resulted in some questions not being answered. Non-response to questions did not cluster on particular questions, as no particular question had a greater non-response rate than any other question. All data collected were analysed using SPSS, v. 12, and a combination of descriptive statistics, Chi-square tests and independent samples t-tests.

RESULTS

This research paper forms part of a larger Doctoral study looking at the socio-economic impacts of high-end ecotourism on rural communities and attitudes towards tourism and conservation (Snyman, forthcoming). Overall, staff employed in ecotourism held more positive attitudes than those not employed in ecotourism. Wilderness Safaris' policy is to employ as many staff as possible from the local community. The size of a community relative to the number of its members who are employed in tourism, as well as the number of alternative employment options available in the area, can have a significant impact on attitudes and behaviours related to the protected area. This was observed by the author in the Zambian surveys around South Luangwa, the Zimbabwe surveys around Hwange National Park and the South African surveys in KwaZulu-Natal, where the majority of the community were very positive about tourism and conservation, as it was one of very few livelihood options in the area (Snyman, forthcoming).

Survey at Maninji Village adjacent to Liwonde National Parks, Malawi © Susan Snyman

Survey at Ngamo Village adjacent to Hwange National Park © Susan Snyman

Table 2. Impact of land management system on community attitudes towards tourism and conservation: Breakdown of staff and community respondents

Attitude	% who felt that there had been a positive change in the villages due to tourism	% who felt that tourism creates jobs for local people	% who felt that tourism reduces poverty in the area	% who have family employed in tourism/ conservation	% who collect natural resources from the conservation area	% who felt that conservation was important	% who had problems with wild animals	% who would like to visit the conservation area
Conservancy Staff	84	96	72	72	12	96	20	Missing*
Conservancy Community	33	63	26	60	93	96	47	Missing
Community Trust Staff	83	93	83	43	2	99	58	Missing
Community Trust Community	44	75	57	37	1.2	87	75	44
Government Land** Staff	79	83	73	31	3	99	74	96
Government Land Community	54	63	56	43	7	84	95	78
Government Land with comm. levy*** Staff	94	100	100	47	6	100	18	Missing
Government Land with comm. levy*** Community	42	64	42	39	99	91	64	Missing
Joint Venture Staff	69	86	72	42	55	100	52	41
Joint Venture Community	68	82	73	71	64	88	64	54

*Missing: indicates that the question was not included in those surveys
**Government land in this study was all National Parks
*** The community levy found in these cases was a voluntary levy paid by Wilderness Safaris to the communities in the area

Statistical analysis showed that formal education (i.e. number of years educated) had the greatest impact on overall attitudes, with those possessing more formal education, in general, having more positive attitudes. There was a statistically significant difference between the mean number of years of formal education of staff (M=9.12) and of community respondents (M=5.78, t(826.738)= 17.197), with a large effect size, r=0.51. Other variables that affected attitudes included: gender, number of children, number living in the household; human-wildlife conflict; total monthly household income; and having a family member employed in tourism and/or conservation. This is discussed in more detail in Snyman (forthcoming); however, the focus of this paper is on the affect of land management systems. This is detailed next.

Table 2 gives an average of total respondents for each of the land management systems studied. A breakdown between staff and community respondents for each land management system is given in Table 2. The land management systems discussed in this study include:

- *Conservancy:* community-owned land that is managed by a representative management committee and has a registered membership, legal constitution, outline of a benefit distribution plan and defined boundaries
- *Community Trust:* a legal entity, commonly formed in

Table 3. Impact of a joint venture engagement versus no community ownership on community attitudes towards tourism and conservation

Attitude	Land tenure arrangement	Statistical significance
Per cent of respondents who felt that tourism creates jobs for local people	Joint venture (Community & Private Sector)	χ^2 (1) = 36.091, p<.001
	Government Land (National Park)	
Per cent of respondents who felt that tourism reduces poverty in the area	Joint venture (Community & Private Sector)	χ^2 (1) = 31.876, p<0.001
	Government Land (National Park)	
Per cent of respondents who felt that conservation was important	Joint venture (Community & Private Sector)	χ^2 (1) = 9.984, p<0.05
	Government Land (National Park)	
Per cent respondents who felt that there had been a positive change in the villages due to tourism	Joint venture (Community & Private Sector)	χ^2 (2) = 13.615, p<0.05
	Government Land (National Park)	

a community-based natural resource management programme (CBNRM), to represent the community, specifically in all agreements with the private sector

- *Government Land: w*here the government owns the protected area/conservation land. In this study, all such areas were National Parks
- *Government land with community levy:* in this study the tourism camp was situated in a National Park (owned by the government), but the tourism operator paid voluntary community levies to the communities bordering the area
- *Joint venture*: a contractual partnership between a community or local institution and the private sector, to work together in establishing and operating a tourism enterprise.

Overall, respondents in the joint venture system (a partnership between a community and the private sector) were the most positive about tourism, with Conservancy members having the highest percentage of family employed in tourism or conservation. Where the land management fell under government (all National Parks in this study) respondents had the highest percentage of problems with wild animals and the greatest desire to visit the conservation area. Where there was some level of community empowerment or receipt of benefits, attitudes were more positive towards tourism and conservation. In an analysis of the whole sample, in all cases, except for the Conservancy approach, more than 50 per cent of respondents felt that tourism reduces poverty in the area. In all land management approaches, more than 50 per cent of respondents felt that tourism creates jobs for local people and that there has been a positive change in their village as a result of tourism in the area. The joint venture and community trust systems; however, showed the most positive attitudes.

Table 2 shows that both staff and community respondents who had the highest percentage of problems with wild animals and greatest interest in visiting the protected areas being studied were from those areas where the government owned the land (National Parks in this study). This points to a need for National Parks to invest time and/or money in human-wildlife mitigation efforts if they are to ensure the long-term support of communities in the area. The historical exclusion of these communities from the protected areas and the illegality of entry could possibly explain this high percentage and, therefore, desire of these communities to visit the protected area. It does; however, illustrate the possible benefit that could be derived from community outreach projects that include structured/ controlled access for the communities to the protected area. Table 2 also illustrates that where a large percentage of respondents had family employed in tourism or conservation, they also generally had more positive attitudes towards tourism and conservation (in the conservancy and joint venture systems).

Table 3 shows an analysis of the difference in attitudes between respondents living in an area where there is community involvement through a joint venture between the community and private sector, and those living in an area adjacent to a government-owned protected area with no community involvement. A Chi-square test showed that in all attitudes analysed in the table, where there was

Chimbwa Village, Zambia © Susan Snyman

community involvement, the respondents had more positive attitudes towards conservation and ecotourism. These differences were all statistically significant and highlight the importance of some level of ownership.

DISCUSSION AND IMPLICATIONS FOR MANAGEMENT

It was observed that the greater the involvement of the community in tourism operations, the more chances there are for linkages to be established between the community and the tourism operation. Partnerships between the private sector and rural communities allows for a transfer of knowledge, skills and, in some cases, capital. The direct benefits, usually from tourism, received by rural communities for conserving natural resources can often result in more positive attitudes. This study shows that land management arrangements that give communities some level of ownership or empowerment, as well as allowing them to be involved in the decision-making and benefit distribution process, may serve to improve attitudes and, consequently, long-term support.

Past studies have found similar results. For example, Weldaji et al. (2003) in North Cameroon, Infield and Namara (2001 in Weladji et al., 2003) in Uganda and Romañach et al. (2007) in Kenya all found that where communities had some level of ownership they had more positive attitudes towards conservation. Land ownership alone is; however, not sufficient to promote wildlife conservation (Romañach et al., 2007) or positive attitudes towards ecotourism operations.

Alleviating poverty in rural areas can help to reduce pressure on biodiversity (Aichi Biodiversity Strategic Goal B) by lessening the need for unsustainable use, providing opportunities for alternative livelihoods, and by placing people in a position where they can choose to conserve (Walpole & Wilder, 2008). Tourism is one of few businesses able to generate income in these impoverished rural areas with high unemployment levels and marginal opportunities for agriculture (Ashley & Roe, 2002; Boudreaux & Nelson, 2011; Lapeyre, 2011; Scherl et al., 2004; Spenceley & Goodwin, 2007) and therefore to assist in poverty reduction and overall improvements in social welfare.

In summation, some management conclusions drawn from this study include:

- Alternative livelihoods, such as ecotourism employment, may assist in steering households away from absolute reliance on natural resources for survival, which could in turn promote biodiversity conservation and long-term sustainable use, as well as positive attitudes (Aichi Biodiversity Strategic Goal B).
- The use of local suppliers of goods and services by a tourism operator serves to extend the benefits of tourism beyond employment or ownership (for example Pafuri Camp in South Africa outsources staff transport to community members, as well as selling community crafts in the shop and buying eggs from the community). Private sector support and capacity building is critical for this in order to guide local producers in terms of the quality and quantity of goods required for the tourism industry (Aichi Biodiversity Strategic Goal D).
- Land ownership arrangements do impact attitudes, but not always significantly. The importance of some level of ownership or empowerment is; however, critical to the long-term maintenance of positive attitudes and the sustainability of the ecotourism operations. An example of a successful joint venture between the private sector and a community is that of Damaraland Camp and the Torra Conservancy in Namibia (*see* Snyman, 2012b, for a detailed analysis of this relationship). The joint venture has recently been the first case of a conservancy raising their own capital funding for the expansion of an existing operation, serving to further empower the community and enhance their business skills.
- Communities need to be involved in the decision-making processes relating to ecotourism and conservation in their area. Ownership, capacity building and empowerment have been shown to lead to more positive attitudes towards conservation and ecotourism and therefore sustainability (Aichi Biodiversity Strategic Goal E).
- In areas where government owns the land and which have no community involvement there have to be benefits, both tangible and intangible, received by the community, as well as a mitigation of the negative impacts associated with conservation (human-wildlife conflict). Outreach programmes, introduced by the private sector tourism operator, in communities abutting the Park could include educational programmes as well as social welfare projects. Such programmes would serve to link conservation and tourism directly to benefits (Aichi Biodiversity Strategic Goal D).
- The inclusion of the community does not always have to be directly in the tourism business, it can be through including cultural activities and local culture in the tourism operation. This can serve to empower community members through an expression of their culture, the sale of local crafts as well as payments for various cultural activities, such as dancing and singing. It is however, important that culture is not commodified and that there is mutual respect between tourists and local people. The introduction of an Ethics Charter and Codes of Conduct for Cultural Tourism for the tourism operator can serve to ensure that cultural tourism increases knowledge, raises awareness and enriches all involved (some examples of these are the World Tourism Organisation's Global Code of Ethics for Tourism, the International Council on Monuments and Sites Cultural Tourism Charter, National Responsible Tourism Guidelines for South Africa and the Wilderness Safaris Ethics Charter for Cultural Tourism).
- Formal education is critical. This includes education in general, as well as specifically in terms of biodiversity conservation, ecotourism and sustainability.
- Overall awareness raising is important – including specifically relating to ecotourism and conservation. Government, NGOs or the private sector can do this. Ecotourism operators can play an important role in this through environmental talks and conservation and tourism awareness-raising days in communities, as well as offering environmental lessons and game drives to community school children, as many have never been into the protected area adjacent to their homes (*see* www.childreninthewilderness.com for Wilderness Safaris environmental education programme, and http://www.africafoundation.org/empowering-education/ for the & Beyond Africa Foundation) (Aichi Biodiversity Strategic Goal E);
- Business skills training is important in terms of empowering communities and ensuring a more equal partnership between communities and the private sector. Business skills required include, amongst others, budgeting, marketing, accounting, reporting and communication skills (Aichi Biodiversity Strategic Goal E).

It is not only important to maximise benefits to communities, there needs to be a concomitant process of minimising costs, as often there are more who will bear the

costs than there are those who will benefit from the conservation and ecotourism in the area. In order to encourage community support for conservation and the consequent protection of natural resources, a direct connection needs to be ascertained between conservation and ecotourism and the benefits that accrue to the community from it, whether collective or individual (Snyman, 2012), direct or indirect.

Direct and indirect ecotourism employment along with ecotourism operations with some level of community ownership, have a positive influence on community attitudes towards tourism and conservation. An overall understanding of what factors influence community members' attitudes to tourism and conservation can assist in managing expectations and can be used in awareness-raising programmes to improve attitudes and garner support from communities living in and around conservation areas (Allendorf et al., 2006; Chidakel, 2011; Sifuna, 2010; Simelane et al., 2006). Understanding and managing community expectations, as well as community perceptions, under varying socio-economic circumstances, as well as varying land management systems, will lead to more efficient, equitable and sustainable community-based conservation and tourism models.

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ENDNOTES

[1] For a more detailed outline of the methods used in the overall study see Snyman (2012) and Snyman (forthcoming)

[2] For more information on Wilderness Safaris see www.wilderness-safaris.com

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RESUMEN

Muchas zonas rurales de África se caracterizan por altos niveles de desempleo, pobreza y aumento de la densidad poblacional. Los climas áridos y las precipitaciones irregulares también hacen que muchas de estas zonas sean poco rentables para la agricultura y ofrecen pocas oportunidades de empleo alternativas. El ecoturismo en estas zonas puede ofrecer una opción viable para la utilización sostenible de la tierra basada en la conservación de la biodiversidad y ayudar a reducir la pobreza y promover el desarrollo socioeconómico a nivel local. Con la generación de beneficios del ecoturismo también se logra mejorar la actitud de las comunidades hacia la conservación. A través de cuestionarios extensos, este estudio analizó el impacto de los sistemas de gestión de la tierra en las actitudes de las comunidades hacia el turismo y la conservación en seis países de África meridional: Botsuana, Malawi, Namibia, Sudáfrica, Zambia y Zimbabue. El estudio concluyó que los diversos sistemas de gestión de la tierra, tales como la propiedad estatal o comunal de la tierra, tenían diferentes efectos sobre las actitudes. En general, un cierto grado de propiedad o participación comunitaria, como por ejemplo, en empresas mixtas, generó actitudes más positivas por parte de la comunidad. Los resultados destacan la importancia del empoderamiento y el sentido de propiedad para promover la conservación de la biodiversidad y asegurar la sostenibilidad a largo plazo de las operaciones ecoturísticas.

RÉSUMÉ

De nombreuses zones rurales africaines sont caractérisées par de forts taux de chômage, de pauvreté et une densité démographique croissante. Le climat aride et les précipitations irrégulières rendent également beaucoup de ces zones marginales pour l'agriculture et offrent peu d'alternatives en termes d'opportunités d'emplois. Dans ces zones, l'écotourisme peut offrir une option durable d'utilisation des terres en favorisant la conservation de la diversité biologique, la réduction de la pauvreté et le développement socio-économique local. Entre autres avantages, l'écotourisme permet en outre d'améliorer l'attitude des communautés envers la conservation. Grâce à l'utilisation de questionnaires approfondis, cette étude analyse l'impact des systèmes de gestion des terres sur les attitudes des communautés envers le tourisme et la conservation dans six pays d'Afrique australe : l'Afrique du Sud, le Botswana, le Malawi, la Namibie, la Zambie et le Zimbabwe. L'étude a ainsi constaté que des différences dans les systèmes de gestion des terres, par exemple entre les terres possédées par l'État et les terres communales, entraînent des attitudes différentes. Globalement, un certain niveau de propriété ou de participation communautaire, comme les associations, rend l'attitude des communautés plus positive. Les résultats soulignent l'importance de l'autonomisation et de la propriété pour encourager la conservation de la diversité biologique et garantir la durabilité à long-terme des activités d'écotourisme.

AN ANALYSIS OF LIVELIHOOD LINKAGES OF TOURISM IN KAZIRANGA NATIONAL PARK, A NATURAL WORLD HERITAGE SITE IN INDIA

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ABSTRACT

We evaluated the livelihood linkages of existing tourism practices in Kaziranga National Park, a World Heritage site located in Assam, India. The main objective of the study was to assess the contribution of tourism to local livelihoods and suggest ways to strengthen these linkages. Focus group discussions and interviews of tourism service providers were carried out to identify their share of tourism income. A survey of tourists was conducted to examine the amount spent by visitors while visiting the park. The primary data was supplemented by secondary information obtained from the park office, service providers and records of village self-help groups. In 2006-2007, the total amount of money that flowed through the tourism sector in Kaziranga National Park was estimated to be US$ 5 million per annum, of which different stakeholders (excluding government) received US$ 3.27 million per annum. The balance of income flowed as leakage for purchase of supplies and logistic support outside the tourism zone. The financial benefits to local stakeholders may increase if the leakages could be prevented through planned interventions such as proper marketing of products from cottage industries and strengthening of local level institutions. In addition to wildlife viewing, promotion of nature trails and package tours may be encouraged in the buffer zones and adjoining forests areas to enhance tourist visitation to un-tapped sites that could provide additional livelihood options to local communities.

INTRODUCTION

Since the United Nations Conference on Environment and Development, held in Rio de Janeiro in 1992, several attempts have been made to link protected area management with developing sustainable livelihood options for local communities (Naughton-Treves et al., 2005). The underlying notion has been that the cost of conservation borne by local communities could be offset by the monetary benefits derived from conservation activities, thereby minimizing the potential negative attitudes of the local community towards conservation (Spiteri & Nepal, 2008; Wells & Brandon, 1992). Creation of protected areas, especially National Parks, that completely ban extractive resource use, has left few options for forest dependent communities making them hostile to conservation (Badola 1999; Brockington et al., 2006). Various community-based conservation programmes such as the Integrated Conservation and Development Programme (ICDP) or the eco-development programme, have tried to involve communities into conservation initiatives to improve their well being primarily through livelihood generation, and building partnership in protected area conservation (Wells, 1992; Larson et al., 1998; Badola, 2000; Hughes & Flintan, 2001).

Since 1992, a global commitment to protect biodiversity through establishment of protected areas and sustainable resource use has been initiated through the Convention on Biodiversity (CBD). The Convention recognizes the

Top photo: Tourist trek. Bottom photo: Elephants with staff © Dr. Pranab Pal, Wildlife Institute of India

desirability of equitable benefit sharing from sustainable use of biological diversity (CBD, 1992). The primary objective of the Strategic Plan for Biodiversity 2011-2020 is to conserve biodiversity and enhance its benefits for people. The Strategic Plan is comprised of a shared vision, a mission, strategic goals and 20 targets, known as the Aichi Biodiversity Targets. The Aichi Targets reinforce CBD's goals via increasing the coverage of protected areas and devising innovative schemes for alternative sustainable and equitable livelihoods to forest dependent communities (CBD, 2011).

Tourism can be one of the important means for achieving the Aichi Biodiversity Targets as it has potential to augment equitable livelihood opportunities for forest dependent communities, thereby eliciting local participation in biodiversity conservation around protected areas (Wunder, 2000; Karanth & Nepal, 2011; Nepal & Spiteri 2011). The concept of tourism in and around protected areas is not new; indeed the first protected areas were established because of extensive support from visitors (Eagles et al., 2002). However, studies have highlighted the relationship between tourism visitation and degradation of habitats (Geneletti & Dawa, 2009) coinciding with a growing divide between the rich and the poor (Kideghesho et al., 2006). In most cases, the marginalized communities living adjacent to the wilderness areas and who depend most on biodiversity for survival have few linkages with tourism activities (MacLellan et al., 2000). It is the rich and the influential from within as well as outside the region who stand to gain most from protected area tourism. Moreover, revenues generated through poorly developed market chains for local goods and services, in most cases, are prone to leakages due to few linkages with the local economy (Walpole & Goodwin, 2000; Torres 2003; Lacher & Nepal, 2010; Sandbrook, 2010). This prevents local people from deriving substantial benefits from tourism activities, often marginalizing them due to minimal financial benefits (Spiteri & Nepal, 2008), miniscule employment (Karanth & DeFries, 2011), and/or increased cost of living (Karanth & Nepal, 2011). Encouraging local ownership in tourism activities through capacity building at the village or community level has been suggested as a means to minimize tourism revenue leakages and increase benefits from tourism-related conservation (Walpole & Goodwin, 2000; Eagles et al, 2002; Lacher & Nepal, 2010).

Given the global concerns for biodiversity conservation and equitable livelihoods, this paper explores the livelihood linkages associated with tourism in one of the most favoured tourist destinations in northeast India, the Kaziranga National Park. It looks at the distribution of tourism revenue among the stakeholders. It also explores the leakages of tourism revenue at and nearby the park and suggests ways and measures to minimize these for betterment of conservation and achievement of the Aichi Biodiversity Targets, especially Target 14: "*By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of…the poor and vulnerable*" (CBD, 2011). Addressing the leakages would safeguard the livelihood of vulnerable sections of the society.

THE STUDY AREA

The Kaziranga National Park encompasses an area of 428.71 km², located in the state of Assam in the north-eastern part of India. It lies between latitudes 26°33'N to 26°50'N and longitudes 93°05' E to 93°41' E (Fig. 1). The

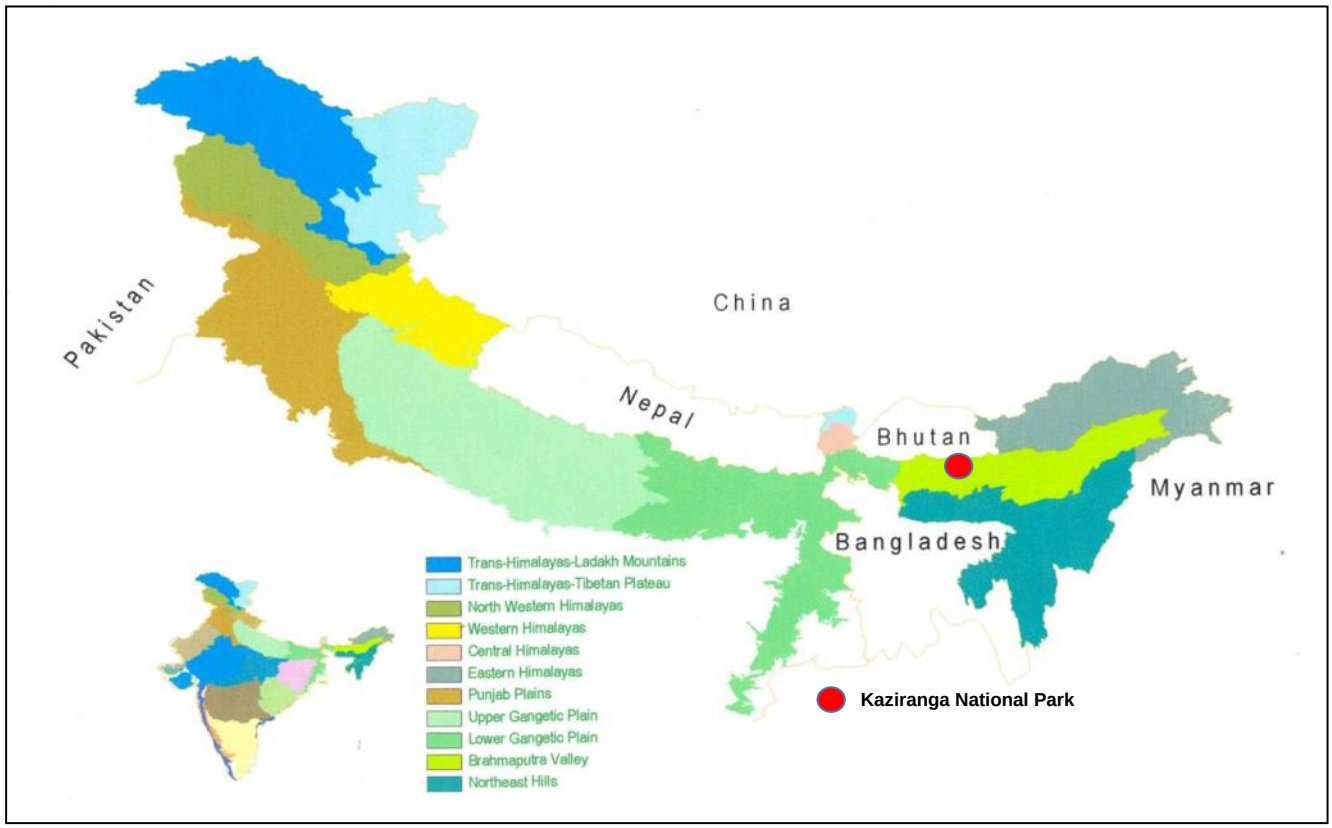

Figure 1. Location map of Kaziranga National Park, India

area has received formal protection since 1905, when it was designated as a Reserve Forest. The area was upgraded to National Park status in 1974, under the Indian Wildlife (Protection) Act, 1972. In 1985, the area was inscribed as natural World Heritage site (Mathur et al., 2005) and in 2007, the Kaziranga National Park was given the status of 'Tiger Reserve' (Hoang, 2011) and a buffer zone of approximately 550 km^2 has been added to it (Government of Assam, n.d.). Tiger Reserve is a management category in India given to representative bio-geographical regions with an aim to maintain a viable tiger population, through a core-buffer strategy. The core areas of the tiger reserves are generally free from human population while the buffer zones are subjected to, *"conservation-oriented land use"* (Project Tiger, n.d., p.1).

The Kaziranga ecosystem consists of the remnant Brahmaputra floodplain landscape, surrounded by human habitation and development activities. This ecosystem, comprised of woodlands, grasslands and interspersed wetlands, harbours about 15 species of India's threatened mammals, including the world's largest population of one-horned rhinoceros (*Rhinoceros unicornis*), Asiatic wild water buffalo (*Bubalus arnee*), high ecological density of Bengal tigers (*Panthera tigris tigris*), Indian Elephant (*Elephas maximus*) and aquatic mammals such as Ganges river dolphin (*Platanista gangetica*) (UNEP, 2011) and smooth-coated otter (*Lutrogale perspicillata*) (Hussain et al., 2008). The National Park, due to its location at the junction of East Asia/Australia flyway and Indo-Asian flyway, represents a diverse avifaunal assemblage. It lies within an International-designated Conservation Hotspot and a WWF Global 200 Eco-region (UNEP, 2011). The Kaziranga National Park, along with the adjoining areas in Assam and Meghalaya has been identified as a priority tiger conservation habitat (Wikramanayake et al., 1998).

The uniqueness and representativeness of this ecosystem attracts about 400-500 visitors per day from November to mid-May (Government of Assam, n.d.). During last 12 years, the number of tourists visiting the National Park on an annual basis increased from 19,525 (1997/98) to 106,051 (2008/9) (Government of Assam, n.d.). Most of the people residing around the National Park practice agriculture and hence are constantly affected by the issues of crop predation, property damage and other forms of human wildlife conflict (Shrivastava & Heinen, 2007; Pal, 2009). The tourists' entry points are at the southern boundary of the Park, along the National Highway (NH) 37. The boarding and lodging facilities provided to tourists are

Table 1. Service providers associated with tourism activities around Kaziranga National Park, India

Service providers	
Direct	**Indirect**
Boarding and lodging	Producers (farmers/livestock owners)
Transport	Logistic suppliers
	Labourers
Interpretation	Waste management (recyclers)
Craftwork (for sale to tourists)	Cottage industry (for construction)

owned by non-locals (Bharali & Mazumder, 2012). Efforts have been made by the Assam Forest Department to involve the forest dependent people in conservation through engagement of local hoteliers and taxi owners association in tourism, and the formation of local level institutions such as eco-development committees (Government of Assam, n.d.).

METHODS

Both primary and secondary sources of information were used for the present study. Secondary sources, such as a Kaziranga management plan, records and documents of the Assam Tourism Department, a local taxi owner's association, nongovernmental organizations, self-help groups (SHGs) were examined following McCaston's (2005) methods for document analysis. These documents provided an overview of the existing livelihood linkages and helped us in identifying the respondents for the subsequent in-depth data collection as well as framing the questions for various stakeholders.

Through a primary reconnaissance survey conducted in 2006/7, the population of service providers (e.g., construction workers and lodging and boarding, transport and provision providers) catering to the tourism industry was identified. This population was stratified into those having direct and indirect contact with tourists. Within these two strata, random sampling was carried out and 138 respondents were chosen from the various tourist establishments for detailed survey. A questionnaire was also administered to 60 tourists selected on a random basis, representing 15 per cent of the daily visitors to the national park, to find out the expenditure incurred during their stay at Kaziranga . Group discussions with the key informants from the National Park management staff, villagers and infrastructure owners provided information on flow of resources and leakages in economic activities (Kinhill Economics, 1998).

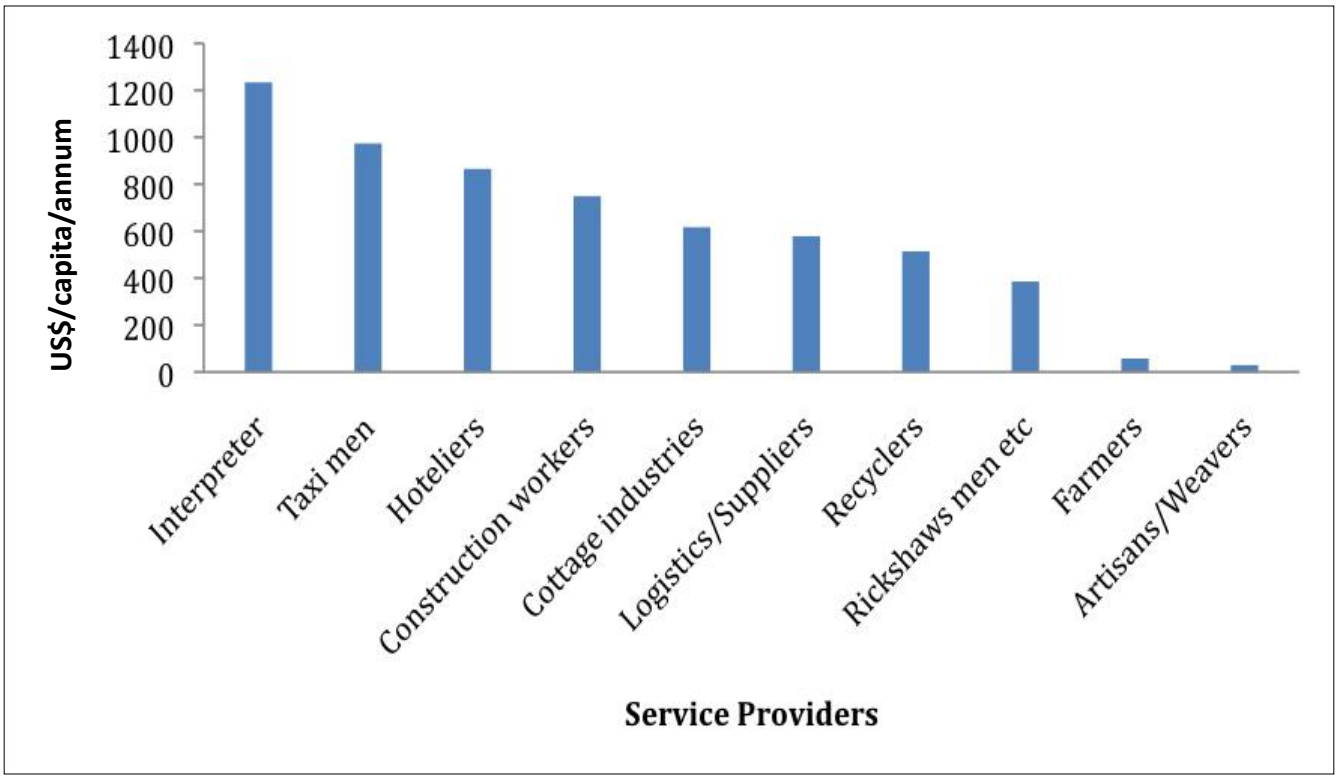

Figure 2. Comparison of income of service providers (US$/capita/annum) from tourism at the Kaziranga National Park, India.

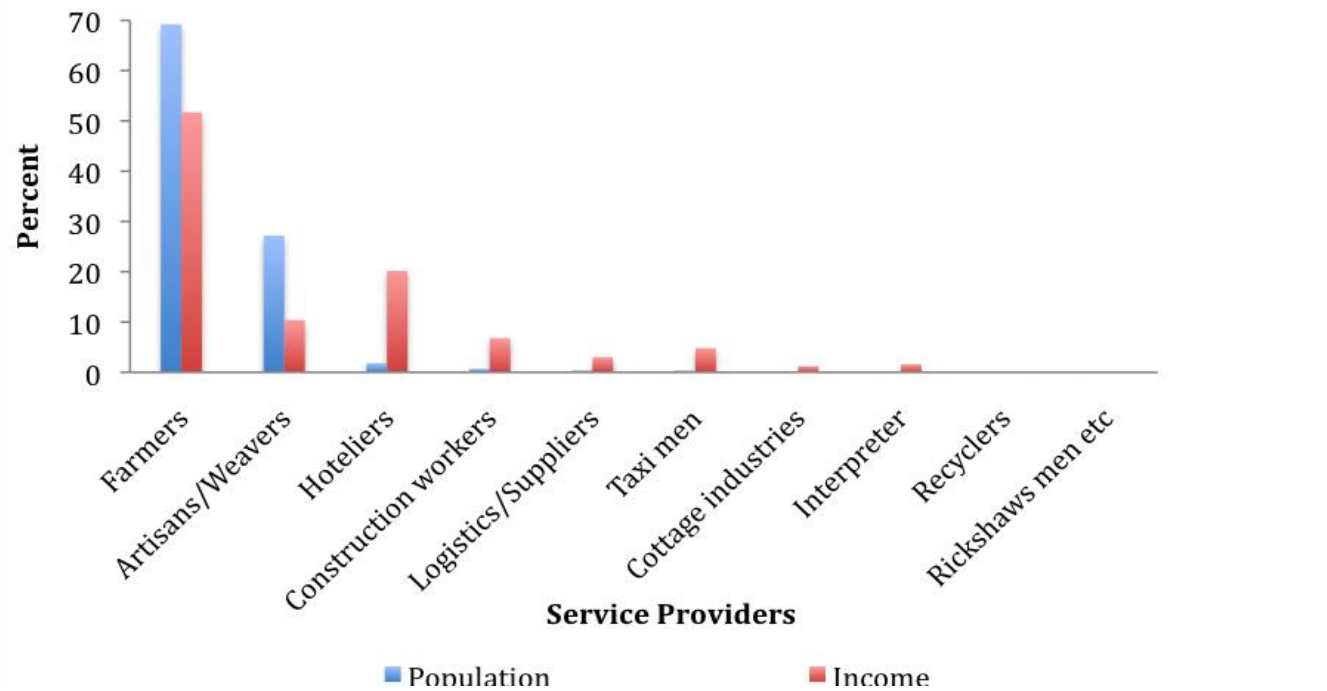

Figure 3. Share of stakeholders' earnings from tourism and total human population around Kaziranga National Park, India.

Primary data on tourism linked livelihood strategies were collected using pre-designed questionnaires and group discussions with the key informants following methods recommended by Mbaiwa (2005), Badola et al., (2010) and Rastogi et al., (2010). This was aimed at capturing the direct and indirect contribution of tourism to the income of local residents. A direct contribution of tourism to income is made when a direct economic relationship exists between the visitor and the goods/service provider, whereas the industries, which are not in direct contact with the tourists, but instead have an economic relationship with the direct service provider, get an indirect contribution from tourism (Tourism Research Australia, 2012).

RESULTS

This section first presents the results of focus group interviews and the reconnaissance survey, through which tourism-related service providers and their population were identified. The results of the questionnaire survey are presented next, along with the proportion of each category of service provider in the total population and the proportion of tourism income accruing to each category of service provider. The interviews of tourists indicate the monetary flow in the study area in terms of expenditure incurred. The tourism leakage was calculated as the difference between the tourist expenditure and the tourism revenue retained by the people involved in tourism at Kaziranga National Park (Sandbrook, 2010).

The tourism industry around the National Park is supported by two sets of service providers. First, there are those who have direct contact with the tourists having direct links to income and expenditure with tourism activities such as lodging and boarding, transport, interpretation and craftwork. Some local people work as interpreters, taxi drivers and own small lodges. The second group of service providers is those who have indirect contact with the tourists but are equally necessary (Table 1). Construction workers, logistics/suppliers, farmers, cottage industry workers and scrape dealers provide indirect services to the tourism industry based around Kaziranga (Table 1). They are the original inhabitants of the region who have traditionally been dependent on its natural resources.

Interpreters received the highest per capita tourism income (US$ 1,233 per annum). Taxi operators and hoteliers earned tourism income at a rate of US$ 974 per capita per annum and US$ 865 per capita per annum, respectively. The farmers and artisans earned the least from tourism, US$ 29 per capita per annum and US$ 57 per capita per annum, respectively (Figure 2). The tourism income was extrapolated for the entire population of the individuals working in each service category. Figure 3 shows the proportion of tourism-related income (per capita per annum) earned by each type of service provider s involved in tourism activity around Kaziranga.

Swamp deer © Dr Pranab Pal, Wildlife Institute of India

Interpreters formed the smallest proportion in total population yet their income share in total tourism income was the highest. Similarly, the proportion of the total population of taxi and boarding/ lodging facility owners was low but their share in total tourism income for the area was high (Figure 3). The lowest income to population ratio was recorded for artisans/weavers (0.4) and farmers (0.7), as they had the highest population but lowest share in total income. The segmentation of the total tourism income received by the people around the Park shows that inequity exists in the sharing of tourism revenue.

Tourist inflow to Kaziranga during the last ten years (2000-2009) rose from 37,696 Indian tourists to over 100,000 and from 1,623 to 6,000 foreign tourists (Government of Assam, n.d.). Revenue realized by the forest department from visits of these tourists also increased (though not proportionally) from US$ 49,539 per annum in 1999/2000 to US$ 249,348 per annum in 2008/9 (Table 2).

In 2006/7 the average Indian tourist spent US$ 24.4 per person per day and overseas tourists spent US$ 133.3 per person per day on various services (boarding, food, local transportation, interpretation) and additional expenses such as a park entry fee and handicraft items (Table 3). This value was extrapolated to the total number of tourists who visited the park in 2006/7 (Sandbrook, 2010). The total expenditure by tourists in Kaziranga National Park area was calculated to be US$ 5,747,640 per annum of which US$ 177,216.64 per annum was received by the

Table 2. Tourist inflow and revenue realized by the forest department at Kaziranga National Park, India. Source: Government of Assam

Year	Tourists (individuals)			Revenue (US$)
	Indian	Foreign	Total	
1997-98	17117	2408	19525	48823.73
1998-99	18157	1091	19248	40063.46
1999-00	37696	1623	39319	49539.8
2000-01	50498	1838	52336	67516.84
2001-02	44162	2144	46306	77646.31
2002-03	59811	2055	61866	119120.55
2003-04	57864	3773	61637	136414.6
2004-05	67719	5154	72873	146944.62
2005-06	72362	4711	77073	169800.42
2006-07	67926	5748	73674	177216.64
2007-08	53640	6106	59746	194093
2008-09	100284	5767	106051	249348.64

Table 3. Expenditure incurred by the tourists at Kaziranga National Park, India during 2006-07.

Service expenditures	Expense incurred (US$/person/day)	
	Indian	Foreigner
Boarding and lodging	17.8	35.6
Food	2.2	4.4
Local Transportation	2.2	4.4
Miscellaneous	2.2	4.4
Total	24.4	44.4
Number of days of stay	3.0	3.0
Total expense for three days	73.3	133.3
Annual expenditure	4,981,240	766,400

Assam Forest Department. The questionnaire survey revealed that about US$ 3 million per annum accrued to people involved in tourism activities. The balance amount of about US$ 2 million per annum was spent on non-local goods (food, handicrafts, restaurants) and services (public transport – national and international travel), which flowed as leakage to supplies and logistic support outside the protected area impact zone (Sandbrook, 2010). The

leakage was derived from the money that was spent by tourists in reaching Kaziranga as well as money spent on goods and services that were not locally owned. Thus, the financial benefits to the stakeholders may increase by providing technical and financial support to local people to own, manage and operate direct and indirect services to tourists.

DISCUSSION

The monetary flow into individual households at the local level is derived mainly from sale of agricultural produce and fish and from tea estates wages (Shrivastava & Heinen, 2007). The local people depend on the Park resources to meet their day-to-day biomass requirements often leading to confrontation between people and the park authority (Shrivastava & Heinen, 2007). Instances of human-wildlife conflicts in the region (DiFonzo, 2007) are further compromising local livelihoods as well as biodiversity. Efforts are being made by the government to involve local communities in protected area conservation by providing them with alternate sources of livelihoods and by involving them in ecotourism activities (NTCA, 2012; Government of Assam, n.d.). Tourism income has been advocated to be the best possible alternate livelihood for forest dependent communities (Sekhar, 2003; Nyaupane & Poudel, 2011; Badola et al., 2012; Chandola, 2012). Kaziranga National Park, being a popular tourist destination, receives a high volume of national and international tourists every year. The average growth rate of tourist inflow for Kaziranga was 73.6 per cent in contrast to 31.8 per cent for Mudumalai National Park, 17.4 per cent for Kanha National Park and 17 per cent for Ranthambore National Park during 2002-2008 (Karanth & DeFries, 2011). Income of people from tourist establishments in Kaziranga was found to be about 40 per cent of the total tourist expenditure. The Assam Forest Department received 10 per cent of the total tourist expenditure and the remaining 50 per cent was found to be spent on services outside the Kaziranga. Thus, this 50 per cent of tourist expenditure is the leakage for the study site. This is higher than India's leakage rate (40 per cent) related to tourism (UNEP, n.d.). In the case of Kaziranga , the powerful and wealthy service providers are reaping the benefits of tourism because the ownership of infrastructure resides with them. The basic services needed to support tourism are provided by the people who have traditionally not been dependent on the resources of the Kaziranga and who bear no direct costs of conservation. On the other hand, the poor and the vulnerable stakeholders—namely the farmers, craftsmen and cottage industry workers who are dependent on resources from the Kaziranga National Park and bear the direct costs of conservation such as crop loss to wildlife and loss of access to resources from the Park—are often involved only in indirect economic activities associated with tourism and receive few benefits. The leakages of tourism revenue occur due to imported leisure goods and services, and the costs paid for staff and capital from outside the area. The skilled staff employed in the resorts and luxury hotels are mostly outsourced. Some leakages also occur due to money spent by foreign tourists in reaching the destination.

The tourism industry around Kaziranga has not been able to adequately utilize the potential of local communities as supporters of conservation, leaving them with minimal and indirect benefits of tourism due to enclave tourism (Mbaiwa, 2005) resulting from negligible interactions between the local population and tourists. The products produced by the local people rarely enter the tourist markets, providing little scope for improved well-being of local populations from tourism. The high leakages of tourism revenue are reflected in the inability of the community to garner the benefits of tourism (Lindberg et al., 1996; Walpole & Goodwin, 2000; Mbaiwa, 2005; Lacher & Nepal, 2010) resulting from a lack of local involvement, and local communities' own lack of expertise, and infrastructure to support tourism (Lindberg, 1998; Lacher & Nepal, 2010).

Some of the measures that can be used to retain the monetary benefits within the local community and to encourage sustainable development include:

- encouraging local ownership, capital and value chain additions of local products such as 'locally grown tea-leaves', 'bamboo shoots and chilly pickles' (Walpole & Goodwin, 2000; Meyer, 2007; Lacher & Nepal, 2010; Nyaupane & Poudel, 2011);
- developing markets for local goods by identifying and strengthening supply-demand linkages (Ollenburg & Buckley, 2007);
- developing inter-sectoral linkages such as those between agriculture and artisan production for livelihood diversification (Spenceley & Meyer, 2012); access to information, inclusive participation; and,
- capacity building (McCool et al., 2012).

In addition, improvements can be made with planned interventions in logistical support such as programmes that encourage involvement of local people in tourist travel and accommodation and the production of local consumable

items. Additional initiatives could include adequate marketing of cottage industry products, capacity enhancement of local service providers, and strengthening of local level institutions. Promoting planned tourism activities like wildlife viewing, nature trails, and forest camps in the buffer zones and adjoining forests areas (Spiteri & Nepal, 2008) to attract more tourists to sites where the potential of tourism remains underutilized, could provide additional livelihood options to local communities.

CONCLUSIONS

The livelihood opportunities of the populations living in the fringes of the protected areas, pose an interesting challenge to the protected area managers. The managers need to look for alternative livelihood options, which conserve biodiversity and at the same time enhance the well-being of the people. The Convention on Biodiversity and its Aichi 2020 Targets emphasize biodiversity conservation through sustainable use and equitable benefit sharing. Tourism provides an opportunity for non-consumptive, sustainable use of biodiversity resources, and is recognized among scholars, park managers and local communities for its capacity to improve the well-being of forest dependent communities.

This case study of KNP provides an insight into the tourism dynamics of a *de facto* arrangement for protected area tourism that generates revenue but for which the revenue is neither equitably distributed among the service providers nor does it serve its primary objective of contributing to biodiversity conservation. It is also prone to direct (monetary) and indirect (biodiversity loss and workforce exploitation) leakages. For tourism to be an effective tool for improving the livelihoods of local communities living on protected area fringes as well as support conservation efforts, it is important to develop and strengthen local level institutions and build the capacity of the local communities so as to enable them to compete with external service providers. The protected area management of Hemis and Greater Himalayan National Parks has played a proactive role to include communities in the management of tourism. For example, assistance has been given to communities to modify their existing infrastructure for homestays, cafes and camping sites, with minimal construction and capital requirements. This has provided the communities with alternative livelihoods, and developed their capacity to manage and sustain their livelihoods through training, educational tours, micro-credit schemes and marketing and extension (Jackson & Wangchuk, 2004; Chandola, 2012; Mishra et al., 2009). This approach has established tourism as a viable livelihood resource, and provided the communities with a central role in tourism. As a result, the community's stake in conservation has risen—an objective regarded as highly desirable for protected area management. Changes in approaches to management from exclusive to inclusive and participatory, involving fringe area communities leading to strengthening of the Eco-development Committees at Periyar Tiger Reserve and self initiated Community Based Ecotourism Centres, in Chilika Lake (Bhatt et al., 2012) are testimony to the critical role of local institutions in equitable and sustainable benefits from protected areas tourism.

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RESUMEN

Evaluamos los vínculos entre los medios de subsistencia y las actividades turísticas emprendidas en el Parque Nacional Kaziranga, un sitio del Patrimonio Mundial ubicado en Assam, India. La finalidad primordial de este estudio consistió en evaluar la contribución del turismo a los medios de subsistencia locales y sugerir formas para reforzar dichos vínculos. Se llevaron a cabo debates de grupos de reflexión y entrevistas a los proveedores de servicios turísticos para determinar su cuota de participación en los ingresos provenientes del turismo. Se realizó un sondeo de turistas para conocer la cantidad gastada por los visitantes durante su visita al parque. Los datos primarios se complementaron con información secundaria obtenida de la oficina del parque, de los proveedores de servicios y de los registros de los grupos comunitarios de autogestión. En el período 2006—2007, los ingresos totales generados a través del sector turismo en el Parque Nacional Kaziranga se estimaron en USD5,0 millones anuales, de los cuales los diferentes interesados directos (excluyendo el Gobierno) recibieron USD3,27 millones anuales. El saldo restante se destinó a la compra de suministros y apoyo logístico fuera de la zona turística. Los beneficios financieros para las comunidades locales podrían aumentar evitando estas desviaciones mediante intervenciones planificadas, tales como la comercialización adecuada de los productos de las industrias artesanales y el fortalecimiento de las instituciones locales. Además de la observación de fauna silvestre, se podría promover caminatas por senderos naturales y viajes combinados en las zonas de amortiguamiento y los bosques adyacentes para aumentar las visitas de turistas a sitios con potencial no aprovechado que podrían proporcionar opciones adicionales de sustento para las comunidades locales.

RÉSUMÉ

Nous avons évalué les liens entre les moyens de subsistance et les pratiques touristiques existantes dans le Parc national de Kaziranga, un site du Patrimoine mondial situé à Assam, en Inde. Le principal objectif de l'étude est d'évaluer la contribution du tourisme aux moyens de subsistance locaux, et de proposer des mesures pour renforcer ces liens. Des discussions de groupes ciblées et des entretiens avec les prestataires de services touristiques ont été menés afin d'évaluer leur part du revenu touristique. Une enquête a également été réalisée auprès des touristes afin d'évaluer les sommes dépensées lors de leur visite dans le parc. Ces données primaires ont été complétées d'informations secondaires fournies par le Bureau du parc, les prestataires de services et les données des groupes d'entraide de villages. En 2006—2007, la somme totale ayant circulé dans le secteur du tourisme dans le Parc national de Kaziranga est estimée à environ 5 millions de dollars US par an, dont les différents acteurs (à l'exclusion du gouvernement) ont perçu 3,27 millions de dollars US par an. Le solde du revenu s'explique par des fuites pour l'achat d'approvisionnement et le soutien logistique en dehors de la zone touristique. Ainsi, on peut supposer que les avantages financiers augmenteront pour les acteurs locaux si les fuites sont minimisées par le biais d'interventions planifiées comme la commercialisation efficace des produits issus des industries familiales et le renforcement des institutions locales. Outre l'observation de la faune sauvage, la promotion de sentiers de randonnée nature et de voyages tout-compris peut être encouragée dans les zones tampons. Enfin, il est possible d'ajouter les zones forestières pour accroître la fréquentation dans des sites inexploités, ce qui offrirait des moyens de subsistance supplémentaires aux communautés locales.

TOURISM AND BIODIVERSITY ALONG THE EURO-MEDITERRANEAN COAST: PROSPECTS FOR OVERCOMING A DEEPLY ROOTED CONFLICT

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ABSTRACT

In Euro-Mediterranean coastal areas, particularly along the coastal zones of Spain, France and Italy, high biodiversity values - derived not only from natural, but also from human factors, such as grazing and agricultural activities - are coupled with traditionally intense tourist flows, related to mass seaside tourism. Since the 1950s, this type of tourism, and two major socio-economic processes associated with it—'litoralization' and abandonment of grazing and agricultural activities in inland areas—has been causing significant losses of biodiversity, along the coast and in the hinterland. Considering this critical situation, this paper investigates how tourism and some of its "threats" can be turned into an opportunity for reaching the Aichi Biodiversity Targets (Target 5, in particular) within the context of Euro-Mediterranean coastal areas. To this aim, some examples of policies developed within three coastal protected areas ('Protected Landscapes', IUCN Category V: the Parque Natural de la Albufera de Valencia, Spain, the Parc Naturel Régional de la Narbonnaise en Méditerranée, France, and the Parco Naturale Regionale del Conero, Italy) for overcoming the tourism-biodiversity conflicts are analysed. These parks can be regarded as experimental laboratories for policies relating to unprotected coastal areas as well.

THE EFFECTS OF SEASIDE TOURISM

Along the Euro-Mediterranean coast the relationship between tourism and biodiversity has been in conflict due to mass seaside tourism development. The 1950s to 1970s marked a shift from seaside tourism with limited environmental impacts to *mass* seaside tourism which has overrun the Mediterranean coast. This is principally due to tourist flows coming from northern European countries (Corbin, 1991; Corbin, 1996; Löfgren, 2006). During these thirty years of European economic boom ('*Les Trente Glorieuses*', Boyer, 1999), tourism became the most dominant economic sector in the coastal regions of Spain, France and Italy, the three countries composing the Latin arc.

Despite the emergence of increasingly complex and refined tourism, such as ecotourism, the attraction of the coast remains the main driving force behind the tourism sector in the Latin arc (Ferrari, 2008). In 2000, visitors to the Latin arc represented 64 per cent of total tourist flows in the Mediterranean basin (Benoit & Comeau, 2005). Since the 1950s this tourist 'invasion' (Aymard, 1992) has contributed significantly to the development of two of the main socio-economic processes along the Euro-Mediterranean coast. The first process is progressive 'litoralisation', which is the concentration of people and activities along the seashore. By the 1970s coastal population density values were already much higher than the national averages in Spain, France and Italy (Benoit & Comeau, 2005). The second process, complementary to the first and connected to the resizing of agricultural and grazing activity, was a massive rural exodus from inland areas. The joint action of these processes has lead to the current fracture between coastal and inland areas.

Until the first half of the Twentieth Century, coastal and inland areas were connected by the interaction between fishing and agricultural activities and transhumance practice. Today, there is an evident, *"spatial dichotomy between strong, heavily populated coastal areas,*

characterised by high intensity of land use and consumption, and inevitably weaker, thinly populated inland areas with lower housing density and a less dynamic economy" (UNEP, MAP, PAP/RAC, 2001, p. V). The fracture has led to a series of environmentally critical phenomena; those most related to tourism are:

- 'artificialisation' or an 'urban tsunami' (Forman, 2010), which is the uprising of manmade developments, predominantly tourist residents (Benoit & Comeau, 2005; EEA, 2006);
- an excess of human pressure in beach areas, particularly during the summer months; and,
- uncontrolled and spontaneous re-naturalisation of abandoned inland rural areas.

These phenomena are eroding the exceptional natural heritage along Euro-Mediterranean coastal areas through:

- the consumption of ecotonal land and the consequent alteration of land-sea ecosystem connectivity via 'artificilisation';
- pollution and disturbance of ecological balance in natural beach areas because of human pressure; and
- species and diversity loss in abandoned inland rural areas due to re-naturalization.

The degree of biodiversity in inland areas is strongly linked to anthropocentric activities, in particular to grazing and agricultural activities that have moulded the landscape through the centuries. It follows that, *"the main threat to biodiversity…is the gradual disappearance of open rural environments and traditional agricultural practices"* (Benoit & Comeau, 2005, p. 271). In fact, *"…just as varieties of domestic plants and animals depend on the continuation of traditional farming systems, so are many wildlife species equally reliant on such forms of land management"* (Phillips & Stolton, 2008, p. 10).

Plan Bleu and UN World Tourism Organization forecasts of visitor flows along Euro-Mediterranean coastal areas predict a constant visitor increase up to 2025, with a 25 per cent increase of visitors from 2000 to 2025 (Benoit & Comeau, 2005). Considering this, the related critical phenomena cited above, and the exceptional landscape and biodiversity values which characterize these areas now at risk (as recognized at international level, e.g., see the ICZM Protocol in the Mediterranean, Madrid, 2008, UNEP, MAP, PAP-RAC); the need to protect this extraordinary heritage is clear. Methods and means to integrate the dynamics of tourism with environmental conservation need to be identified in order to meet the Aichi Biodiversity Targets by 2020, especially Target no. 5. This target states, *"By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced"* (CBD, 2010, p. 2). This is an ambitious goal in areas such as the Euro-Mediterranean coast, where the conflict between people and nature is at its height. The, *"coastal regions cry out for solutions…we are all affected and long for the crying to cease"* (Forman, 2010, p. 250).

THREE COASTAL PROTECTED LANDSCAPES: RECONCILING TOURISM AND BIODIVERSITY CONSERVATION

The policies developed within the three protected coastal areas, Parque Natural de la Albufera de Valencia, Spain (1986), Parc Naturel Régional de la Narbonnaise en Méditerranée, France, (2003) and Parco Naturale Regionale del Conero, Italy (1987), are useful references for pursuing Aichi Biodiversity Target no. 5. These protected areas are comprised of territories which have been consolidated destinations for seaside tourism since the 1970s and thus, they share concerns arising from mass tourism. The parks have to reconcile tourism development, which constitutes the main driving force behind the local economies, with biodiversity conservation (Dudley, 2008). As category V, IUCN, 'Protected Landscapes-Seascapes,' the parks are appropriate places for experimenting with sustainable tourism strategies, because their mission specifically promotes a harmonious interaction between people and nature.

Picture 1: Parque Natural de la Albufera de Valencia. Costal urbanisation inside the park, between El Perello and Mareny Blau: A scenic and ecological barrier between the sea and the rural inland areas © Emma Salizzoni (May 2010)

A Protected Landscape/Seascape is: *"a protected area where the interaction of people and nature over time has produced an area of distinct character with significant ecological, biological, cultural and scenic value, and where safeguarding the integrity of this interaction is vital to protecting ad sustaining the area and its associated nature conservation and other values"* (Dudley, 2008, p. 21). It is: *"rich in biological diversity and other natural values not in spite of, but rather because of the presence of people"* (Brown, et al., 2005, p. 3). Protected Landscapes are often promoted as living models of sustainable use of land resources; they offer important lessons for sustainable development (Brown, Mitchell & Beresford, 2005).

Reported below are examples, developed within the three parks, of good practices aimed at finding a balance between the environmental costs and the socio-economic benefits of seaside tourism in the Euro-Mediterranean coast.

LAND CONSUMPTION

Today, the landscapes of the parks exhibit signs of several decades worth of intense seaside tourist use. The most evident sign is residential tourist urbanisation, second homes and accommodation facilities that extend over large portions of the coast. These linear settlements are mainly the result of development that took place between the 1960s and 1970s, which was often unregulated. Buildings are situated near the coastline and oriented towards the sea (Picture 1). This urban continuum is accompanied, and exacerbated, by the transport infrastructure that runs parallel to the littoral.

In addition to past development, the parks also face active urbanisation processes. The coastal area remains a coveted place for development in all three parks**.**

To combat this issue, park authorities have taken action to slow down coastal urbanisation. They are preserving the littoral from further development and preventing the formation of ecological barriers that could compromise ecosystem connectivity between the sea, the coast and inland areas. To achieve this goal the parks use regulatory instruments. For example, in applying the *Loi Littoral* (86-2/1986), the *Parc de la Narbonnaise* management makes provisions for '*coupures d'urbanisation'* in the *Plan du Parc* (2010). *'Coupures d'urbanisation'* are free, natural or rural areas where building is not allowed. They separate areas of urbanisation along the littoral, guaranteeing a solution of continuity in developed areas. Similarly, the *Parque de la Albufera* management identifies '*areas de regeración de ambientes rurales'* along the coast in the *Plan Rector de Uso y Gestión* (2004), and the Parco del Conero management '*aree a forte valenza paesistica*' in the *Piano del Parco* (2010). In these areas, building is not permitted, which interrupts the continuity of coastal urbanisation. In this way, the progressive loss of littoral habitats is stopped and any new urbanization processes are promoted in inland areas, '*en profondeur*'.

In addition, in *Parque de la Albufera*, the *Servicio Devesa* has reclaimed some urbanized littoral areas. Between the late 1990s and 2008, various restoration projects were activated along the dunal area of the *Devesa*. Tourist infrastructure such as roads, car parks and pedestrian walkways, that were built in the 1970s based on the *Plan General de Ordenacion del Monte de la Dehesa* have been removed. Introduced species, namely *Robinia pseudoacacia, Ailanthus altissima, Carpobrotus* and *Eucaliptus*, have been eliminated. As well, lagoons (*malladas*) that were filled with earth from excavations during past urbanisation, and dunes, using earth from the restored lagoons, have been reconstructed (Pictures 2-4).

Pictures 2-4: Parque Natural de la Albufera de Valencia. Work carried out in the 1990s and 2000s in Devesa. On the left, the demolition of the existing road infrastructure (El Saler); in the centre, the lagoon (malladas) restoration; on the right, the reconstruction of the dunes (La Malladeta) © Ayuntamiento de Valencia, Servicio Devesa de la Albufera (2003)



Pictures 5-7: Parque Natural de la Albufera de Valencia. The results of the work in Devesa (La Malladeta): on the left, the first dune front; in the centre the inner dunes (the buildings planned by the Plan General de Ordenacion del Monte de la Dehesa, 1963, are visible); on the right, a restored mallada © Emma Salizzoni (May 2010)

Increases in biodiversity as a result of the project are already noticeable. The restored *lagoons* are now acting as important habitats for bird-life, while reintroduced autochthonous plant species are once again growing on the dunes (Pictures 5-7).

Managers of *Parco del Conero* are currently seeking to limit land consumption in the beach area of Portonovo (Picture 8). The parks plan guides the provision of incentives to owners of the buildings along the beach, mainly tourist restaurants, who decide to move their structure back from the coastline. This initiative has yet to be tested for effectiveness, but it is nevertheless interesting. Park management abandons a purely regulatory point of view in order to promote self-managed local development by stimulating the private sector to act according to the general aims set by the plan. They are experimenting with a complex balance between environmental conservation and socio-economic development.

Picture 8: Parco Naturale Regionale del Conero, Baia di Portonovo. The buildings, mainly tourist restaurants, on the beach © Emma Salizzoni (May 2010)

HUMAN PRESSURE

The parks are affected by seasonal tourism, with human pressure highest in the summer months. French and Spanish park management have addressed the problem of tourist pressure in a very similar way. To preserve environmentally valuable beach areas park authorities have chosen not to impose a restrictive regime of conservation, such as one would find in reserves. This relatively simple solution would not be suitable for the parks, which have historically experienced a great deal of tourism. Instead, they have chosen to *filter* visitor flows by reducing beach accesses via road. An example of this type of intervention


Pictures 9-11. Parc Naturel Régional de la Narbonnaise en Méditerranée, Île des Coussoules. On the left, the parking localisation (Source: Parc Naturel Régional de la Narbonnaise en Méditerranée, 2005); in the centre, the parking; on the right, the beach nearly devoid of cars © Emma Salizzoni (May 2010)

Pictures 12-14: Parque Natural de la Albufera de Valencia, Devesa, El Saler. On the left, the parking lots; in the centre the pedestrian path that runs parallel to the litoral; on the right, the footpaths leading to the beach © Emma Salizzoni (May 2010)

can be found at the beach of *Île des Coussoules* in *Parc de la Narbonnaise*. The beach used to be covered with cars and camper vans, until, a parking area connected to the beach by pedestrian paths was built away from it (Pictures 9-11). Thanks to this simple and effective solution the beach is now completely free of vehicles.

A similar strategy was employed in the area of Devesa (El Saler) in *Parque de la Abufera*. Parking areas were relocated away from the beach with access made available through various footpaths that border the dunes (Pictures 12-14). As a result, tourist flows towards the sea slowed down, which respects the dune ecosystems.

In both parks, there are also highly developed beach areas where services and access have been strengthened so that they can act as a magnet for tourist flows. The general strategy used by the two park authorities to manage human pressure and conserve natural beach areas is to redistribute tourist flows between the more and less natural beaches. Tourists concentrate in the latter, for which requalification and enhancement have been carried out, resulting in a decongestion of the former (Forman, 2010).

BEYOND SEASIDE TOURISM

Policies have also been developed that look *beyond* seaside tourism through the promotion of tourism that has a lower impact on biodiversity and is more sensitive to environmental values. All over the world, seaside tourism is characterised by a quest for relaxation; it is defined by a demand for 'sun, sand, sea' - the three S's tourism. This demand is not sensitive to the natural or cultural values of the destination; it is about an experience centred on the body and the related cult of the suntan.

Three S's tourism may be of concern for inland areas. The key strategy behind the actions of park management is to redistribute visitor flows from the coast to inland areas and

Picture 15: Parc Naturel Régional de la Narbonnaise en Méditerranée. A representative image of the 'Plage Vivantes' project. An alternative tourist use of the beaches is promoted, in order to preserve biodiversity values (bird life) Source: www.parc-naturel narbonnaise.fr/galerie_photo/ patrimoine_naturel/carte_postale_plages_vivantes

to limit negative impacts of 'three S's tourism'. Redistributing tourist flows between more and less natural beach areas is a quantitative relocation of tourists within the same type of demand. The redistribution of flows from coastal to inland areas requires the presence of a different type of tourist demand; mainly a demand based on an interest in natural and cultural resources such as ecotourism. To that end, the three parks seek to educate visitors about the value of the local environment.

The current project, managed by *Servicio Devesa* in the *Parque de la Albufera,* is exemplary, and its name, '*Seducción Ambiental*' ('Environmental seduction'), is a clear statement of intent (Ayuntamiento de Valencia, Servicio Devesa de la Albufera, 2003). The main aim of the project is to inform visitors about the natural resources of Albufera and the impact that human presence may have on them. A similar project in *Parc de la Narbonnaise* is the '*Plages Vivantes*' ('Living Beaches') project, co-managed by

Table 1: Policies for reconciling tourism development with biodiversity conservation (Aichi Target 5)

	Regarding Coastal Land Consumption		Regarding Coastal Anthropic Pressure		Regarding Abandonment and Renaturalization of Inland Areas	
Case Studies	*Strategies*	*Actions*	*Strategies*	*Actions*	*Strategies*	*Actions*
Parque Natural de la Albufera de Valencia, 1986. **Spain**, Comunidad Valenciana, Provincia de Valencia. 21.000 ha, 30 km of coastal extension, 10.000 inhabitants.	Stopping coastal land consumption through the protection of the residual 'empty' areas.Restoring the original natural conditions along the urbanized littoral areas.	Identification of '*areas de regeración de ambientes rurales'* along the coast by means of the *Plan Rector de Uso y Gestión* (2004). Restoration projects in the dunal area of *Devesa* (removal of roads and parking areas).	Filtering the tourist flows (reducing accesses to more environmentally valuable beach areas); redistribution of the flows from the more natural to the less natural beach areas.	Restoration projects in the dunal area of *Devesa* (relocation of parking areas away from the beach, connected to pedestrian paths directed to the sea).	Diversification of tourist supply: promoting eco-tourism (redistribution of visitor flows from the coast to the inland areas).	'*Seducción Ambiental*' project (sensitization of visitors to the values of the local natural environment).
Parc Naturel Régional de la Narbonnaise en Méditerranée, 2003. **France**, Languedoc Roussillon, Départment de l'Aude. 70.000 ha, 42 km of coastal extension, 35.000 inhabitants.	Stopping coastal land consumption through the protection of the residual 'empty' areas.	Identification of '*coupures d'urbanisation'* by means of the *Plan du Parc* (2010), in applying the *Loi Littoral* (86-2/1986).	Filtering the tourist flows (weakening accesses to the environmentally more valuable beach areas); redistribution of the flows from the more natural to the less natural beach areas.	Project at the beach of *Île des Coussoules* (relocation of parking areas away from the beach, connected to pedestrian paths directed to the sea).	Diversification of tourist supply: promoting eco-tourism and rural tourism (redistribution of visitor flows from the coast to the inland areas).	'*Plages Vivantes*' and '*Nature et Patrimoine'* projects (sensitization of visitors to the valuess of the local natural environment). Definition of tourist paths in rural landscapes; applying seals of quality on agriproducts (*Marque Parc – Produit du Parc*); publicizing agriproducts.
Parco Naturale Regionale del Conero, 1987. **Italy**, Regione Marche, Provincia di Ancona. 6.000 ha, 25 km of coastal extension, 28.800 inhabitants.	Stopping coastal land consumption through the protection of the residual 'empty' areas. Restoring the original natural conditions along the urbanised littoral areas.	Identification of '*aree a forte valenza paesistica*', by means of the *Piano del Parco* (2010). Providing incentives to owners to move back structures from the coastline.			Diversification of tourist supply: promoting rural tourism (redistribution of visitor flows from the coast to the inland areas).	Definition of tourist paths in rural landscapes; applying seals of quality on agriproducts (*Marchio Agricolo*), publicizing agriproducts.

the park authority and the *Ligue de Protection des Oiseaux* (Picture 15). The main goal of the project is to introduce tourists to the biodiversity that characterises the lagoon and dune areas, with a focus on bird wildlife. This teaches visitors that the park contains more than just seaside resources. The titles of excursions organised in 2008 exemplify this, for example, '*Richesses insoupçonnées des lagunes'* and '*Tournons le dos à la mer'* ('The unexpected richness of lagoons' and 'Let us turn our backs to the sea'). Another project in *Parc de la Narbonnaise*, done in co-operation with local tourist agencies, is '*Nature et Patrimoine'* ('Nature and Cultural Heritage'), which promotes discovery of the local landscape and natural heritage as an alternative to traditional seaside tourism. As well, excursions to inland areas, via an extensive network of footpaths, are organised in the periods of maximum crowding on the beaches during August.

There is also another type of tourism that can play a crucial role in conserving biodiversity in Euro-Mediterranean landscapes, rural tourism. Rural tourism is based on the recognition of the value of agrarian landscapes and the quality of agricultural produce. It is sensitive to natural resources and to food-and-wine resources. It passively respects environmental values and *actively* contributes to maintaining and restoring biodiversity. The attractive resource is the inland rural landscape along the Euro-Mediterranean coast; this consists of abandoned fields in the Italian and Spanish parks and vineyards in the French park, which are subject to powerful processes of re-naturalisation. Promoting rural tourism in these areas through multifunctional agriculture as defined by the 'second pillar' of the Common Agricultural Policy (CAP, is a potential way to ensure the permanence of agricultural activity (Pinto-Correia & Vos, 2004). In Euro-Mediterranean coastal landscapes, where cultural and natural diversity are closely connected, this means the maintenance, and in some cases the restoration, of a high degree of biodiversity.

Rural tourism has been promoted in *Parco del Conero* with '*Rosso Conero Road'*, a tourist walk that links the main Rosso Conero wine producers in a circuit. Similarly, in the *Parc de la Narbonnaise*, paths themed as '*vignerons'*('winegrovers'*)* that connect local wine cellars have been developed. As well, park authorities directly promote local agriculture by: (a) applying seals of quality on produce (*Marchio Agricolo* in the *Parco del Conero*, and *Marque Parc – Produit du Parc* in the *Parc de la Narbonnaise*); (b) providing incentives that promote local agritourism such as with the *Piano Agricolo Aziendale* – Agricultural Plan – envisaged in the park plan; and, (c) advertising agricultural produce. For example in *Parc de la Narbonnaise,* the park authority developed the *Charte signalétique du Massif de la Clape,* a signage system made with the *Syndicat des vigneron, (*Winegrowers syndicate), to enhance local winegrowing enterprises' by improving the promotion of agriculture in the area.

USING TOURISM TO ACHIEVE AICHI TARGET 5

The park examples used in this paper illustrate the role that tourism can play in achieving the objectives of biodiversity conservation along the Euro-Mediterranean coast and in reaching Target 5 of the Aichi Biodiversity Targets.

Seaside tourism is a threat to biodiversity; it needs to be regulated by normative tools, projects and incentives and managed by the redistribution of tourist flows to avoid excessive human pressure on valuable habitats. Ecotourism and rural tourism in inland areas can play an active role in biodiversity conservation and both need to be promoted by park authorities through visitor education and support for rural activities. Developing them, and in general promoting a greater diversification of tourism, rather than just the three S's tourism, can help manage visitors along the Euro-Mediterranean coast. It is important to use ecotourism and rural tourism to redistribute tourist flows from coastal to inland areas, which decongests the coast and maintains and restores biodiversity in abandoned inland areas.

In order for this advantageous exchange between coastal and inland areas to occur, a significant change in the Euro-Mediterranean tourist system is required. This cannot be a short-term process; it will be necessary to create consolidated cultural and socio-economic models for seaside tourism that can prevail along the Euro-Mediterranean coast. Reports that forecast maturity in seaside tourism, particularly in Italy (Becheri & Becheri, 2011) and a constant growth in ecotourism at the international level (Cannas, 2011), are encouraging. In particular, an increasing attention to, and preference of visitors for, ecological-environmental holidays is rising. As a result, there is room for innovative action in the tourist trade. The management of the parks cited in this article are moving in a positive direction. They are assuming a geographically broad field of action, integrating coastal and inland areas into a single system of tourism management policy. Additionally they are once again treating coastal and hinterland areas as closely linked and profitably

complementary worlds, as they were, until the second post-war period. This large operative perspective seems to be the most efficient vision for defining policies to solve the conflict between tourism and biodiversity along the Euro-Mediterranean coast. The Integrated Coastal Zone Management approach that the parks employ (Vallega, 1999; UNEP/MAP/PAP-RAC, 2001; UNEP/MAP/PAP-RAC, 2008), is based on the integration of the management objectives conservation and development and, on the integration of spaces, land and sea, coast and hinterland. It may be an important approach to adopt in the future.

ENDNOTES

[1] The Plan (1963) partially implemented during the 1960s and 1970s was blocked in 1979 by the first democratic local government (Municipality of Valencia), under the pressure of the ecological movement "*El Saler per al Poble*". In 1982, the "*Plan Especial de protección del Monte de la Devesa de El Saler*" was approved, aimed at re-establishing the natural conditions of the area.

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RESUMEN

En las zonas costeras euromediterráneas, especialmente en las zonas costeras de España, Francia e Italia, el alto valor en biodiversidad—derivado no solo de factores naturales sino también humanos, tales como el pastoreo y las actividades agrícolas—se suman a los flujos turísticos tradicionalmente intensos relacionados con el turismo masivo de sol y playa. Desde la década de 1950, este tipo de turismo y dos importantes procesos socioeconómicos asociados a él—la "litoralización" y el abandono de las actividades pastoriles y agrícolas en las zonas del interior—ha estado provocando pérdidas significativas de biodiversidad a lo largo de la costa y en las regiones interiores. En vista de tan crítica situación, este artículo investiga cómo se puede convertir el turismo y algunas de sus "amenazas" en una oportunidad para alcanzar las metas de Aichi relativas a la diversidad biológica (Meta 5, en particular) en el contexto de las zonas costeras euromediterráneas. A este efecto, se examinan algunos ejemplos de políticas desarrolladas en tres zonas costeras protegidas ("Paisajes terrestres y marinos protegidos", Categoría V de la UICN: el Parque Natural de la Albufera de Valencia, España, el Parc Naturel Régional de la Narbonnaise en Méditerranée, Francia, y el Parco Naturale Regionale del Conero, Italia) tendientes a superar los conflictos entre la biodiversidad y el turismo. Estos parques pueden ser considerados también como laboratorios de experimentación para políticas relacionadas con zonas costeras no protegidas.

RÉSUMÉ

Dans les zones côtières euro-méditerranéennes, notamment le long des zones côtières espagnoles, françaises et italiennes, une importante diversité biologique—issue de facteurs naturels mais aussi humains, comme les activités de pâturage et agricoles—cohabite avec des flux touristiques traditionnellement intenses et liés au tourisme balnéaire de masse. Depuis les années 1950, ce type de tourisme ainsi que les deux principaux processus socio-économiques qui lui sont associés (la littoralisation et l'abandon des activités de pâturage et agricoles à l'intérieur des terres) ont entraîné une diminution significative de la diversité biologique, le long des côtes et dans les terres. Au vu de cette situation préoccupante, ce document étudie de quelle manière le tourisme et certaines de ses « menaces » peuvent être transformées en opportunités pour atteindre les Objectifs d'Aichi pour la biodiversité (notamment l'Objectif 5), dans le contexte des zones côtières euro-méditerranéennes. À cette fin, certaines politiques mises en œuvre dans trois aires protégées côtières sont analysées à titre d'exemple (« Paysages terrestres protégés », Catégorie V de l'UICN : le Parque Natural de la Albufera de Valencia, Espagne, le Parc Naturel Régional de la Narbonnaise en Méditerranée, France, et le Parco Naturale Regionale del Conero, Italie) pour permettre de dépasser les conflits entre tourisme et biodiversité. Ces parcs peuvent également être considérés comme des laboratoires expérimentaux pour les politiques liées aux zones côtières non protégées.

PROTECTED AREA BRANDING STRATEGIES TO INCREASE STEWARDSHIP AMONG PARK CONSTITUENCIES

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ABSTRACT

With the complexity and resource intensity needed to manage parks, protected area managers increasingly rely on their constituencies to assume stewardship responsibilities. To meet the intentions of the Convention on Biodiversity Target 11, thousands of new protected areas will need to be gazetted. This dramatic increase in the number of global protected areas will significantly add to the dependence of managers on their constituencies to be actively engaged in park protection and management. One underutilized management tool to connect people to parks sustainably is branding. Protected area brands can engage emotions, evoke personal beliefs and prompt the behaviours managers prefer when the brand's core values are appropriately expressed. Yet, management often does not wield these brands to their maximum potential, thus limiting the tangible and intangible benefits they could bestow if simple marketing practices were followed. This paper outlines three fundamental branding practices – building brand awareness, teaching brand meaning and growing positive brand equity over time – that are applicable to the goals of every protected area manager. Strategically deployed, branding plays an essential role in the sustainability of parks and protected areas.

INTRODUCTION

Globally, over 55,000 new protected areas will need to be designated within the next seven years to meet Aichi Target 11 of the Convention on Biological Diversity (CBD) (Hvenegaard et al., 2012). The gazetting of protected areas does not just happen. It is a politically complicated process, based on the intentions of governments, the level of popular support and activism, and the general level of understanding among constituencies.

This enormous escalation in the number of new protected area designations will require major shifts in political and informational processes by protected area managers (e.g. government agencies, indigenous and community managers etc) regarding the benefits and costs for each new site. It will also require a formidable effort by managers and decision makers in raising public awareness of the values of natural heritage and biodiversity. A valuable tool in this effort will come from the field of marketing. Marketing is the activity of *"creating, communicating, delivering, and exchanging offerings* (i.e. the natural heritage values such as ecosystem-based services and benefits of protected areas) *that have value for customers* (i.e. local residents, potential visitors), *partners and society at large*" (American Marketing Association, 2012).

The integration of marketing and management is always a challenge (Hall & McArthur, 1996; Hall & Piggin, 2003; Fyall & Radic, 2006; McCool, 2009). Most managers have little training (Eagles & McCool, 2000; Larderel, 2002) or interest in marketing (Eagles & McCool, 2000). This situation may be related to the resistance by protected area

Picture 1. Visitor centres with colourful up-to-date interpretive displays, such as those found within Shark Bay Discovery Centre in Western Australia, help market the site to a diversity of constituencies and build broader appreciation for a site and its ongoing protection. Exhibition Design: Freeman Ryan Design © John Gollings

staff to the notion that their property is being viewed simply as a tourism commodity instead of as a site being managed to conserve its natural and cultural resources (Figgis, 1999). To complicate matters, some managers continue to hold misconceptions and maintain biases about the role of marketing in the management of their property (Hall & McArthur, 1996; Eagles & McCool, 2000; Archer & Wearing, 2002; Hall & Piggin, 2003; Fyall & Radic, 2006; Halpenny, 2007). Nevertheless, protected area managers will need to develop new marketing-related skills and strategies, not only to build greater understanding and appreciation of the natural heritage values preserved within these new areas, but also to engage broad segments of the civic community to develop on-going support. Effective application of these skills will help build the public support needed for biodiversity protection to help achieve the Aichi Target.

Additionally, while tourism has a complex relationship with parks, it is broadly viewed as an important source of revenue for not only the management of protected areas (Bushell & McCool, 2007) but also for local residents and gateway communities (Spenceley, 2008; Fredman & Yuan, 2011). One way of achieving enhanced revenue streams from tourism is by more effectively marketing the heritage values contained within these sites.

Marketing protected areas has many dimensions such as building awareness, price setting, and developing and managing attractive products (high quality visitor experiences, maintaining product quality, selling wider benefits such as ecosystem services, etc.). Using well-designed marketing strategies, protected area staff can maintain and strengthen connections with local residents, communities and service providers (e.g., water authorities). See Picture 1.

Of fundamental importance in any marketing strategy; however, is the brand of a particular product or place. Strong brands have the ability to provide a variety of services for protected area constituencies (Eagles & McCool, 2000; Morgan et al., 2003; King 2011). If the Aichi Target 11 is to be met successfully, managers will need to embrace good branding practices.

This paper discusses how simple branding strategies can increase stewardship among park constituencies. We first introduce the anatomy of a brand and describe its essential qualities. Two high profile brands, World Heritage and national park, are presented from the view of branding and how they have been used to build public support for their management, attract visitors and develop expectations of appropriate experiences. We then present three techniques for constructing effective protected area brands. The paper concludes with remarks on some of the challenges and opportunities of managing brands within the context of the Aichi Target 11.

WHAT IS A PROTECTED AREA BRAND?

When any agency or organization creates a name or logo for a product or service, a brand has been created (Keller, 2008). The same holds true for protected areas. Game reserve, state forest, national park and World Heritage are all examples of well-established park brand names. These brands may engage emotions, evoke personal beliefs and prompt preferred behaviours (Kotler & Gertner, 2010) when properly marketed not only among visitors, but also decision makers, communities, tourism businesses and agency personnel. However, managers frequently fail to utilize these brands to their maximum potential, resulting in limiting the tangible and intangible benefits they could bestow if more effectively employed. Thus, a short review about brands and branding is warranted.

All brands, including those for protected areas, consist of tangible and intangible elements (Aaker, 1991). The tangible or physical aspects of a protected area brand include the brand name, logo and the size, colours, textures and distinctive fonts used to present them. It is the recognition and recall of the tangible elements of a brand that subliminally cue a visitor's memory concerning the second part of a brand, its intangible or emotional elements (Keller, 1993).

Picture 2. A World Heritage 'collector' proudly standing by the entrance signage to Macquarie Island, documenting his visit to this oceanic island located some 1,500 miles southeast of Tasmania and ticking one more World Heritage site off his list © Ted Brattstrom

The emotional part of a protected area brand consists of all the knowledge, factual and emotional, a visitor remembers about the brand. In other words, it is all the thoughts, feelings, associations and experiences a person has had with the protected area and its marketing efforts. The intangible value this adds to the brand is known as the brand's *equity* (Kotler & Keller, 2006). Brand equity begins when the mental components of the brand imprint themselves in the visitor's mind and are conjured up when the brand is somehow evoked (Keller, 1993). Once remembered, the brand's net equity has the opportunity to influence, either positively or negatively, the individual (Rossiter & Percy, 1997; see Picture 2). Overall positive brand equity stimulates affirmative thoughts and associations while prompting the visitor to behave in ways protected area managers prefer, while negative brand equity may provoke visitors to act inappropriately or visit elsewhere. Powerful brands have extremely positive brand equity (Kotler & Keller, 2009).

Stand-alone brand logos can also trigger brand knowledge and equity. A protected area logo is the physical and symbolic manifestation of the organization's core values, products and mission. When viewed alone, a strong logo will instantly communicate a variety of succinct messages to the viewer. If the logo fails to communicate with the visitor, it is simply taking up space on a sign (King, 2010). See Pictures 3-6.

It is the positive equity of protected area brand names and their logos that agencies must carefully build and sustain over time to encourage engagement and foster a stewardship ethic among constituencies. Such brand equity may also come into play during public debate over gazetting and influence the outcome of this political process. Thus, protected area managers are not only responsible for managing their area, but the strategic management of their brand(s).

Picture 3. Visitor at Jeju Volcanic Island and Lava Tubes World Heritage Area reading a sign that includes the World Heritage emblem © Lisa King

Picture 4. A large road sign welcoming visitors to Boodjamulla (Lawn Hill) National Park in far northwest Queensland.© Lisa King

Picture 5. Gunung Mulu World Heritage Area is an example of best practice in World Heritage branding. The World Heritage name and emblem are prominently, consistently and repeatedly presented to visitors during a park visit and is found on entrance and interpretive signage, staff uniforms, the official park web site and more. © Lisa King

Picture 6. Teaching World Heritage brand values using imagery that forms the World Heritage symbol. This artistic piece is found within the Gondwana Rainforests of Australia World Heritage Site in Queensland, Australia. © Lisa King

WORLD HERITAGE AND NATIONAL PARK AS HIGH PROFILE BRANDS

World Heritage and national park are two well-known protected site brands. Since 1974, the World Heritage brand has signalled, 'the best of the best' (Luly & Valentine, 1998, p. 12) and is awarded only to those properties meeting the rigorous criteria set forth by the World Heritage Convention. Examples of the nearly 1,000 natural World Heritage properties worldwide (as of September 2012) include the Grand Canyon, the Great Barrier Reef, Ngorongoro Crater, the South China Karst, the Messel Pit Fossil Site and Ha Long Bay.

Based on its symbolic meaning, the World Heritage brand possesses strong positive equity with those familiar with the brand (Hall & Piggin, 2003; King, 2011). King and Prideaux (2010) found that approximately 13 per cent of visitors to World Heritage Sites in Queensland, Australia actually 'collect' the brand. Furthermore, the cumulative effect of multiple World Heritage sites has a positive correlation with the willingness of a visitor to revisit the country (Poria et al., 2011).

The national park brand was created with the establishment of Yellowstone National Park in 1872 (National Park Service, 2012). With 140 years of publicity and hundreds of millions of people worldwide holding positive brand equity associated with the name, the national park brand is globally the most influential protected area brand, especially in terms of tourism.

Countries such as Australia and parts of Malaysia, for example, take full advantage of this fact and brand what in truth are state managed parks as national parks.

INCREASING SHARED STEWARDSHIP THROUGH BRANDING

By embracing basic branding concepts managers can not only help themselves meet the challenges of Aichi Target 11, but also make the process less frustrating. Three fundamental branding strategies managers can apply to build shared stewardship over time for existing and future protected areas are: building brand awareness, teaching the visitor brand meaning and growing positive brand equity.

Branding plays a critical role in determining the degree and type of visitation to any protected property (Weiler & Seidl, 2004; Morgan, 2006; Fredman et al., 2007; Wall Reinius & Fredman, 2007; King, 2011). To capitalize on the full range of visitor management benefits a protected area brand can bestow, management should provide multiple opportunities for the visitor to become aware of which brands their site possess. However, inconsistent presentation of a protected area brand makes it difficult for visitors to become aware of the brand and its values. For example, King (2010) collected photographs of signage approaching and within 15 World Heritage sites across Australia. The researcher found the World Heritage brand was erratically presented across different states, within multiple properties managed by the same agency and frequently even within the same site.

In a related study, King (2011) collected 1,827 standardized questionnaires from on-site visitors across five World Heritage Areas in Queensland, Australia between 1 April 2008 and 31 July 2008. King found that in four of Queensland's five World Heritage Areas, visitors who were unaware the site was World Heritage prior to their visit were insufficiently exposed to the brand on-site to easily recall its status upon their departure from the park. Interestingly, all the World Heritage sites included in the study also carried the national park brand. King's (2011) study found a significantly higher percentage of visitors were aware that the site they were visiting was a national park compared to those who were aware the site was World Heritage.

One technique to build visitor awareness of any protected area brand is to present the tangible elements of the brand prominently, consistently and repeatedly at points of on-site visitor contact, in such a way that a visitor will see it, remember it and connect their experiences with the name and logo (Aaker, 1991; Keller, 2008; King, 2010).

One strategy to ensure consistent presentation of a protected area brand is to develop and adhere to a visual identity guide for the brand. To maximize effectiveness, this guide should be integrated with communication and marketing strategies. A brand visual identity guide is the roadmap on usage of the brand in almost any situation. It presents a consistent layout in terms of space, colours and size relevant to the format being used, such as websites, entrance signage, flyers or brochures. A visual identity guide ensures a consistent presentation over time on all communications across administrations, staff changes or the well-meaning intentions of over-eager advisory boards or other constituencies. Guides can be done by professionals or produced in-house if there is sufficient staff expertise. Any visual identity guide will need to be periodically reviewed and updated.

Visitors taught about the natural and cultural values of protected area brands and their history, better appreciate the property they are visiting as well as the organisation charged with its management. Specifically, this involves explaining in plain language what the functions of the brand are and why a visitor should care (Keller, 2008). Awareness and understanding fosters brand stewardship. Yet, it is uncommon to find an explanation of the values of a protected area brand, such as World Heritage, prominently displayed in language that resonates emotionally with the visitor. It is also rare to find this information in more than one location within the designated site. Thus, if the visitor misses the single opportunity to read about the brand values, an opportunity has been lost. It is worthwhile to place such valuable information in more than one location on a property.

In the case of World Heritage, far too often the traditional bronze plaque is the only explanation of brand values found on-site. Even when placed in a prominent position, the plaque generally does not pique a visitor's curiosity and is frequently walked past with no more than a glance. In other instances, brand meaning is conveyed by extracting text from the World Heritage Convention and placing it on a sign. This text rarely connects emotionally with the average visitor. Not often enough is the Convention text simplified to be engaging enough for a visitor to remember the values of the World Heritage brand (King, 2010).

Communication and interpretive plans should include identifying strategies to transmit the brand values of the

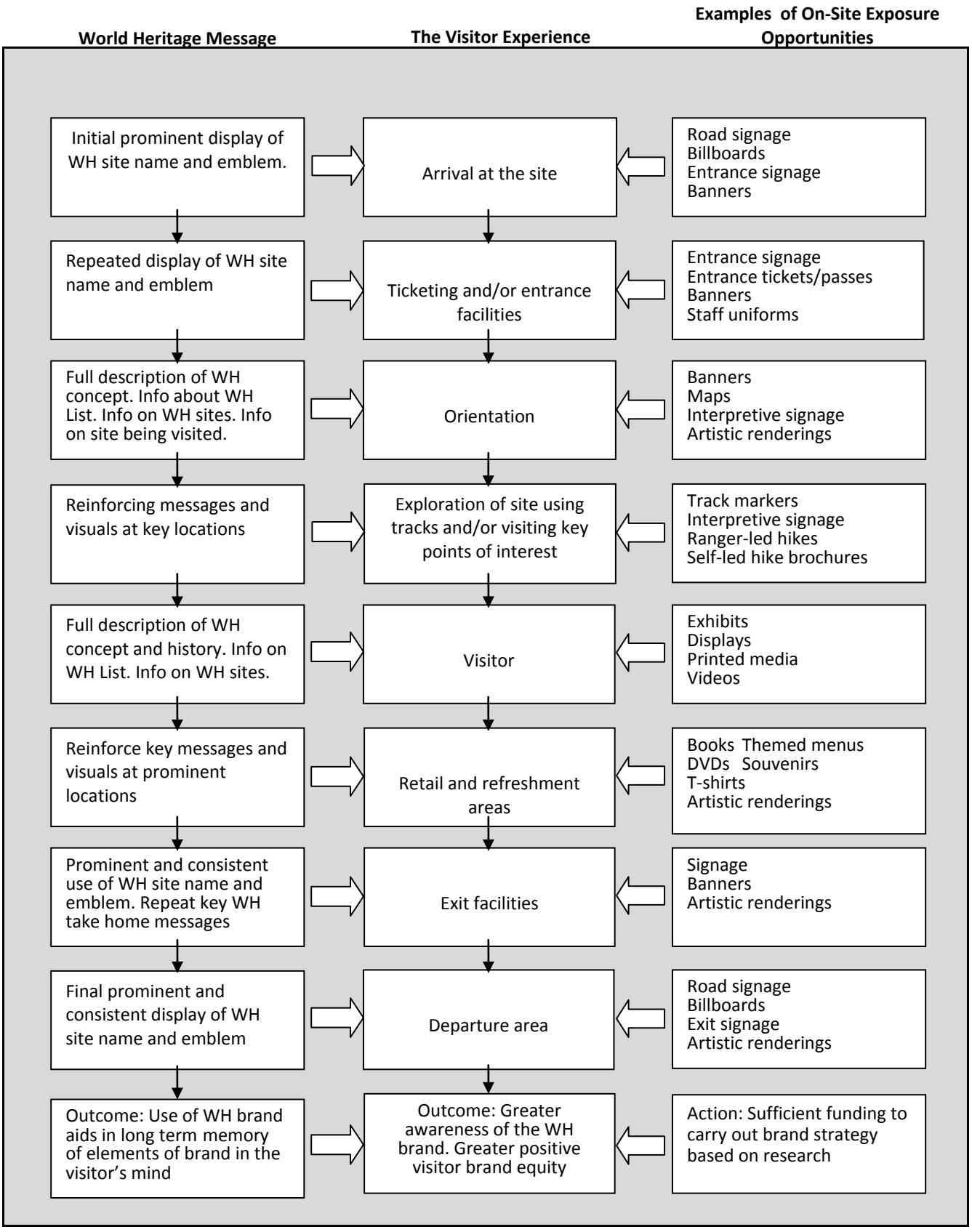

Figure 1. The Brand Equity Development Model for Protected Areas illustrates how to design a visitor's prominent, consistent and repeated exposure to a protected area brand during an on-site visit. Source, King (2011)

park to constituencies. Recent research in the field of persuasive communications (c.f. Ham et al., 2007; Curtis et al., 2011; Smith et al., 2010) will assist in this task.

Growing positive brand equity means linking a visitor's emotional experiences on-site with the brand possessed by the protected area. Positive brand equity forms the basis for behaviours protected area managers want to encourage such as public donations, in-kind contributions, volunteerism, self-policing, grassroots support and advocacy for any protected area carrying the brand. However, to maximize the benefits a protected area brand can bestow upon a property, the visitor must first be aware of the brand (King, 2010).

Too often management does not capitalize on the opportunities to appropriately transmit their brand to the visitor at visitor contact points, thereby slowing down the process of growing positive brand equity. Managers have the greatest control of this situation inside the protected areas under their charge. The Brand Equity Development Model (King, 2011), shown in Figure 7, provides a general template for developing brand awareness, teaching brand meaning and growing positive brand equity as a visitor moves through a generic protected area during the course of a visit. The model maps a visitor's movement through a site and identifies points of visitor contact while presenting a suggested brand exposure process on what types of messages to communicate and locations where they could potentially be transmitted. Although the World Heritage brand is used as the example in the model, any protected area brand could be inserted.

CHALLENGES AND OPPORTUNITIES FOR BRANDING PROTECTED AREAS

All protected areas possess a brand, whether managers have deliberately constructed one and are currently managing it or not. Within the context of achieving the Aichi Target 11, there are some unique challenges for protected area brands. These are summarized below.

1. *Lack of knowledge about key protected area brands*. IUCN's six categories of protected areas have varying degrees of public brand awareness. For example, national park and wilderness are probably the most familiar of the IUCN's categories. Other categories such as protected landscape/seascape and habitat management area most likely have little public awareness or understanding. Since many of the areas established to meet Aichi Target 11 are likely to be one of these less well-known categories, guidelines for a branding strategy to develop strong and consistent public images and communicate possible visitor experiences is essential to their gazetting and management, and needs to be developed at the international level and coordinated on a national level.
2. *Negative brand image among some constituencies*. Gazetting protected areas is often the culmination of a broad and frequently contentious public dialogue about conservation, impacts on local people and the level of commitment to the environment and international conventions. Some protected area brands within specific localities may develop a negative image amongst some constituencies. This situation will need to be mitigated as much as reasonably possible to further Aichi Target 11.
3. *Conflicting brand images between agencies and the private sector*. Managers charged with the protection of the natural heritage develop and maintain a brand image, but so do private businesses established around the property. These businesses may develop a brand image that distinctly conflicts with the protected areas brand image, causing not only confusion among local residents and potential visitors, but also influencing development of inappropriate expectations.

In contrast, developing a consistent, well-recognized brand, such as World Heritage or national park can help communicate the importance of preserving our natural and cultural heritage and demonstrate the relevancy of those sites to humankind. Within this context, there are several opportunities for developing and using brands that can jumpstart these objectives. For example:

1. *Implementation of brand plans between managers and destination marketing organizations (DMOs) at the national, regional and local level.* As new protected areas are gazetted, opportunities are created for protected area managers to work with DMOs to synchronize their brand messaging to create stronger protected area brands.
2. *Licensing items using the brand.* Managers may wish to license items for sale (such as T-shirts, caps and patches and products from the protected area) so they not only control how the brand is used, but also gain revenues to support the management of their site.
3. *Collaborate on brand usage between agencies and private protected areas*. Private protected areas will play an important role in achieving Aichi Target 11. These businesses will want to use well-recognized and highly valued protected area brands such as wilderness or game reserve to help secure the tourism dollars that

help make the management of their private protected area a viable proposition. It will be important for management agencies to develop workable relationships with those developing private protected areas to ensure the integrity of the brand being used and that the meanings conveyed are consistent.

CONCLUSION

The success of Aichi Target 11 of the Convention on Biological Conservation is intimately linked with the level of awareness, understanding, support and activism among constituencies concerning the benefits provided by protected areas and the need for more of them. The strategic management of a protected area brand, such as World Heritage or national park, can help transmit the importance of preserving our natural and cultural heritage while demonstrating the relevancy of such sites to humankind by emotionally connecting people with these places.

By using simple branding strategies that build brand awareness, teach brand meaning and grow positive brand equity over time, managers can not only engage visitor emotions and prompt preferred behaviours, but also help foster stewardship of the protected sites under their care. To ensure the consistent presentation of the brand over time, a visual identity guide for the protected area brand should be implemented. Additionally, brand placement and how brand values will be communicated to the visitor, should be carefully designed to ensure consistent and repeated exposure during an on-site visit.

To aid protected area managers in determining how to use their brands to their maximum benefit, future research needs to closely examine the dimensions of visitor brand awareness and knowledge. Specifically, these studies could include aspects such as researching the effects of brands on visitor attitudes and behaviours and what persuasive communications could be implemented to maximize the impact of protected area brands and their values among various constituencies. Developing appropriate benchmarks within properties and across countries is another way to determine which methods are most effective while identifying properties that could use further assistance in transmitting their brand values.

Without question, formidable challenges lie ahead in meeting Aichi Target 11. However, improving protected area branding strategies to increase stewardship among constituencies is one way to help meet the challenge.

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RESUMEN

Con la complejidad y la intensidad de los recursos necesarios para gestionar los parques, los administradores de áreas protegidas dependen cada vez más de la participación comunitaria en el ejercicio de la administración. Para cumplir con los propósitos de la Meta 11 del Convenio sobre la Diversidad Biológica, miles de nuevas áreas protegidas deberán declararse oficialmente. Este aumento dramático en el número de áreas protegidas a nivel mundial intensificará de manera significativa la dependencia de los administradores en la participación comunitaria para la protección y gestión de los parques. Una herramienta de gestión subutilizada para conectar de manera sostenible al público con los parques es la imagen de marca. La marca característica de un área protegida puede despertar emociones, evocar creencias personales y estimular los comportamientos favorecidos por los administradores cuando sus valores básicos están adecuadamente expresados. Sin embargo, la administración no suele explotar al máximo el potencial de estas marcas, limitando así los beneficios tangibles e intangibles que se podrían obtener con solo observar unas sencillas prácticas de comercialización. En este artículo se describen tres prácticas fundamentales –fortalecer la percepción de marca, enseñar el significado de la marca y aumentar la imagen de marca en el tiempo– que son aplicables a los objetivos de todo administrador de áreas protegidas. Estratégicamente desplegada, la imagen de marca desempeña un papel fundamental en la sostenibilidad de los parques y las áreas protegidas.

RÉSUMÉ

Du fait de la complexité et de l'intensité des ressources nécessaires pour gérer les parcs, les gestionnaires d'aires protégées se basent de plus en plus sur leurs circonscriptions pour assumer la responsabilité d'une gestion avisée. Afin de satisfaire aux intentions de l'Objectif 11 de la Convention sur la diversité biologique, des milliers de nouvelles aires protégées devront être reconnus officiellement. Cette augmentation considérable du nombre d'aires protégées dans le monde renforcera significativement la dépendance des gestionnaires vis-à-vis de leurs circonscriptions, obligeant celles-ci à être activement impliquées dans la protection et la gestion des parcs. La valeur de la marque est un outil de gestion sous-utilisé pour connecter durablement les individus aux parcs. En effet, les marques d'aires protégées peuvent faire appel aux émotions, évoquer des croyances personnelles et provoquer des comportements que les gestionnaires préfèrent lorsque les valeurs centrales de la marque sont correctement exprimées. Cependant, ceux-ci n'utilisent pas la plupart du temps ces marques au maximum de leur potentiel, limitant ainsi les avantages tangibles et intangibles qu'ils pourraient en tirer s'ils suivaient des pratiques de marketing assez simples. Cet article souligne trois pratiques fondamentales en termes de marque – renforcer la sensibilisation à la marque, enseigner la signification de la marque, et améliorer positivement la valeur de la marque avec le temps – qui sont applicables aux objectifs de chaque gestionnaire d'aire protégée. Une marque stratégiquement déployée joue en effet un rôle essentiel dans la durabilité des parcs et des aires protégées.

CONSERVING BIODIVERSITY THROUGH PARKS CANADA'S VOLUNTEER PROGRAMME

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ABSTRACT

This paper outlines how conservation volunteer programmes contribute to biodiversity protection and conservation in Canada's national parks. An inventory of some of these volunteer programmes is summarized and specific examples of volunteer conservation activities are provided through a case study of Kejimkujik National Park's volunteer programme. Observations from these conservation volunteer initiatives are combined with findings reported in scholarly literature to highlight factors that contribute to successful conservation volunteer programmes. Key outcomes arising from Parks Canada's conservation volunteer programmes include: support of biodiversity conservation, enhanced visitor experience, broadened support for national parks, and the introduction of new ideas and skills by volunteers. Many volunteers participating in these programmes are tourists; the final section of this paper highlights which CBD Aichi Targets these volunteers are assisting Parks Canada to meet.

INTRODUCTION

This paper focuses on how conservation volunteers contribute to conserving biological diversity in Canadian national parks. Lesson from these programmes may be useful to other park agencies seeking to achieve CBD Aichi Biodiversity Targets. Volunteerism in national parks is seen as a powerful means of engaging people in the protection of ecosystems, habitats and species important for conservation, and for endearing the role of protected areas to a country and its citizens (Parks Canada, 2011). This initiative broadens the awareness, understanding, and appreciation of the significance of national parks, and the importance of protecting them. It creates a shared vision for addressing the underlying causes of biodiversity loss, engages volunteers in broad actions that reduce pressures on biodiversity, strengthens partnerships for improving the status of species and ecosystems, and promotes stewardship of natural resources (Parks Canada, 2011).

Researchers studying volunteer conservation in other contexts suggest these types of outcomes are possible. For example, Thody et al. (2009) found that tern and plover conservation volunteers increased their knowledge and appreciation of threatened and endangered species and expressed an interest in contributing to conservation policymaking and a greater sense of efficacy in contributing to the recovery of legally protected species. McGehee (2002) found that Earthwatch volunteers reported increased post programme self-efficacy, new networks of collaborators, and greater engagement in social movements engaged in environmental protection and related actions. She also found that the challenges overcome and relationships established during Earthwatch volunteering resulted in consciousness-raising amongst participants (McGehee & Norman, 2002). How successful conservation programmes have been conducted by Parks Canada Agency, with the ultimate outcome to promote public awareness and engagement in conservation, is described next.

CANADA'S BIODIVERSITY AND NATIONAL PARKS

Canada plays a particularly important role as a global steward of significant portions of several important world

Red knot conservation in Mingan Archipelago national park. The project involves establishing the health status of the bird, its critical habitat, movement patterns, survival of the young, and energy needs © Parks Canada

ecosystems including about 10 per cent of the world's forests, 20 per cent of the world's circumpolar ecosystems, 25 per cent of global wetlands, and provides about 10 per cent of the world's fresh water supply. The country is home to the some of the largest herds of free-ranging caribou in the world, as well as some of the largest world populations of bears, wolves, martens, beavers, lynx and many furbearers. Many of Northern America's migratory forest birds, shorebirds, ducks and geese take up residence in Canada during the spring and summer (NRCAN, 2012). In 2010, an assessment of the status and trend of Canada's biodiversity (Federal, Provincial and Territorial Governments of Canada, 2010) revealed that much of the country's natural endowment remains healthy. A large part of the country's biological diversity exists within an extensive network of protected areas. In the past 15 years, federal, provincial and territorial terrestrial protected areas have increased in number, size, and the diversity of ecosystems represented. In a world of rapid change, national parks are seen as models of environmental stewardship and as an important legacy to be preserved for future generations.

Canada has an extensive system of national parks, 44 as of November 2012, representing 28 of Canada's 39 terrestrial regions. Among the national parks are areas recognized as World Heritage Sites, International Biosphere Reserves, and Mountain Biosphere Reserves. Together, these parks represent a very tangible and enduring demonstration of Canada's commitment to protecting the environment (Parks Canada, 2009). Through creation of new parks and expansion of existing ones, the area under national parks has increased by 53 per cent since 2003. Negotiations to create new parks in many parts of the country are in progress, some at very advanced stages. The achievements made by Parks Canada in the first decade of the 21st century have been possible due to the active support of the Canadian society through many partnerships. Conservation volunteerism is one important tool which will need to be maintained and broadened to address resource needs for managing Canada's expanding portfolio of protected areas.

ENAGING CANADIANS IN PARK ACTIVITIES

Parks Canada identifies public engagement as a cornerstone of its policy, planning and management practices to help ensure sound decision-making, public understanding, and opportunities for Canadians to contribute their knowledge, expertise and other resources (Parks Canada, 2010a). The Agency uses many approaches to engage Canadians in the management of its protected places, and in the development and implementation of its future direction.

Parks Canada recognizes volunteers as partners who can make fundamental contributions to heritage protection

School children participating in ecological monitoring projects in different national parks © Parks Canada

and environmental stewardship efforts. Engagement of volunteers is actively promoted to inspire Canadians to step forward and play a role in Parks Canada heritage places. Individual national parks offer exceptional volunteer opportunities as a means of connecting people to national parks and other heritage places.

IMPORTANCE OF CONNECTING PEOPLE TO PARKS

According to a Parks Canada survey (Parks Canada, 2010b), Canadian values towards national parks are strongly linked with visitation. Nearly all Canadians that had visited national parks (95 per cent) strongly felt that national parks are meant to be enjoyed by present and future generations, compared to only 74 per cent of Canadians that had not visited. The majority of Canadian national park visitors (86 per cent) indicated they would miss national parks if they ceased to exist, compared to just 39per cent of Canadians who had not visited. The survey also showed that visitation leads to stronger support of the National Parks system. Most Canadians (83 per cent) who had visited a national park strongly supported their tax dollars being used to maintain the national park system compared to just over half (52 per cent) of Canadians who had not visited (Parks Canada, 2010b). This survey revealed the importance of facilitating Canadian's visitation of and engagement with Canada's protected areas. Parks Canada believes that this visitation and engagement lead to support from Canadians. Scholarly literature supports this claim. For example, Halpenny (2010) noted that attachment of visitors to Point Pelee National Park in Canada was a strong positive predictor of park-specific pro-environmental behaviours such as volunteering at the park, picking up litter, participating in public meetings about the park, and contributing to personal donation programmes. Ramkissoon (2012) reported similar findings in her study of visitors to Dandenong Ranges National Park in Australia.

METHODOLOGY

This paper describes Parks Canada's volunteer programme. This is accomplished through an overview of the Agency's efforts; park specific activities are illustrated. An exploratory approach (Patton, 2002) was used to document and describe these activities, as no formal inventory of these efforts has been conducted previously. A more detailed case study of Kejimkujik National Park was also conducted – using appreciative inquiry method (Stowell & West, 1991) to identify what was working well. This was combined with a review of literature on nature-based volunteerism to highlight lessons on good practices that may be adapted to other parks in Canada and internationally. Finally, five categories of volunteer activities in Parks Canada protected areas were then evaluated for their contribution to key Aichi Biodiversity goals and targets.

PARKS CANADA'S VOLUNTEER PROGRAMME

Parks Canada's national volunteer programme was established in 1979 to create a standardized and coherent approach across the Agency. Today, the programme that started with a few hundred people, attracts nearly 6,000 volunteers annually, who work on diverse activities throughout the country. This number compares favourably to the 8,000 volunteers that the United Nations Volunteer Programme mobilizes globally every year (United Nations Volunteers, 2012).

These programmes contribute to Parks Canada's vision, *"Canada's treasured natural and historic places will be a living legacy, connecting hearts and minds to a stronger, deeper understanding of the very essence of Canada."* Each park creates volunteer opportunities according to its own objectives and needs; recruits and trains them, and provides direction and supervision within the national policy framework.

High school students participating in ecological restoration in Point Pelee National Park © Parks Canada

THE VOLUNTEERS

Many of the volunteers come from communities surrounding parks; the others come from across Canada, and even from overseas. The parks use many conservation programmes to enhance their volunteer base and to further develop park-based constituencies. Volunteers are selected based on their interests, skills and the opportunities available in parks.

Volunteers include: professionally-trained people; youth who want practical experience before breaking into the job market; students who require volunteer placement hours from their educational institutions; community groups and clubs that offer volunteer time related to their organizational goals; individuals who provide time on behalf of their employer; and individuals and families who want to learn about and spend time in national parks and contribute to the special places they value and appreciate. Numerous studies have examined park-based and conservation-oriented volunteer tourists (e.g., Cassie & Halpenny, 2003; Douglas & Rollins, 2007; Halpenny & Cassie, 2003; Measham & Barnett, 2008; O'Brien, Townsend, & Ebden, 2010; Ryan, Kaplan & Grese, 2001; Savanick Guiney & Oberhauser, 2009; Wearing & Neil, 2001).

VOLUNTEER ACTIVITIES

Volunteer activities at Parks Canada are developed and implemented within five categories that support the three elements of the Agency's mandate: resource conservation, visitor experience and public education (Parks Canada, 2010). These categories are (i) Research and Monitoring Support, (ii) Special Events, (iii) Host, (iv) Living History and (v) Caretaker Activities. Activities under the Research and Monitoring Support category are research-related tasks such as observation, measurement or computation, and include carrying out resource inventories, wildlife surveys, ecological monitoring, data analysis, mapping, and water quality studies. Activities under the Special Events, Host and Living History categories relate to visitor experience and public education. They include receiving and welcoming visitors, translations/interpretations for foreign visitors, visitor safety, tour guiding, rafting and canoeing patrols, hosting campground visitors, and conducting visitor surveys. Volunteers also participate in Caretaker type of activities such as ecological restoration, species at risk recovery projects, management of invasive species, trail repair and maintenance, and providing administrative support.

This paper demonstrates how volunteer participation in activities associated within the Research and Monitoring Support and Caretaker categories are contributing to the achievement of the Aichi Biodiversity Strategic Goals and Targets (CBD, 2010). While nearly all parks have volunteer programmes, the Kejimkujik National Park programme is used to serve as an example. Appendix 1, which summarizes volunteer conservation activities in other national parks, is provided to highlight the diversity of programmes across the Canadian national park system. Park-specific volunteer activities can be viewed at individual park websites (*see* www.pc.gc.ca/eng/agen/vol-ben/vol-ben07.aspx). Kejimkujik was selected as a case study because it has an extensive volunteer programme that has contributed strongly to biodiversity conservation efforts in the park. Kejimkujik National Park is located in eastern Canada and protects two areas: the upland interior of the Nova Scotia peninsula and a smaller unit along Nova Scotia's coast.

CONSERVING BIODIVERISTY THROUGH KEJIMKUJIK NATIONAL PARK'S VOLUNTEER PROGRAMME

Kejimkujik National Park exemplifies Parks Canada's vision for volunteer programmes: *"Parks Canada and volunteers share ideas, knowledge, talent and skills to build a legacy for Canada's natural and historic treasures.*

Removing invasive species to restore the Gary Oak ecosystem in Gulf Islands National Park © Parks Canada

By lending a hand, Parks Canada volunteers feel connected, enrich their lives and make a difference" (Parks Canada, 2011, p. 5). The park is an important tourism destination, attracting visitors from the Atlantic region, other parts of Canada, the United States, and abroad. It covers 381 square kilometres of lush woodlands, rivers, still waters and island-studded lakes. Due to ancient geophysical, sea level, and climatic events, Kejimkujik has diverse habitats that teem with wildlife, including bear (*Ursus americanus*), beaver (*Castor canadiensis*), coyote (*Canis latrans*), white tailed deer (*Odocoileus virginianus*) and porcupine (*Erethizon dorsatum*). The system supports a large concentration of rare and threatened species that include mammals such as the American marten *(Martens Americana)* and moose (*Alces alces*), reptiles such as the Blanding's turtle (*Emydoidea blandingii*) and Eastern ribbonsnake (*Thamnophis sauritus*), birds such as the piping plover (*Charadrius melodus*) and rusty blackbird (*Euphagus carolinus*), insects such as the Monarch butterfly (*Danaus plexippus*), and plants such as the water-pennywort (*Hydrocotyle umbellate*) (Parks Canada, 2010b).

The park works in partnership within the Southwest Nova Biosphere Reserve Association, the Mersey Tobeatic Research Institute, the Bear River First Nations, the Mi'kmaw communities, Bird Studies Canada and Acadia University to sustain a volunteer programme that offers participants unique opportunities to contribute to protecting regional biodiversity while providing outstanding and memorable experiences to visitors. Some of the volunteer activities in Kejimkujik are listed below.

Recovery of the Endangered Blanding's Turtle

Blanding's turtles exist in three small geographically isolated populations and have been listed as endangered under the *Species at Risk Act*. One of the concerns for this long lived (80+ years), slow maturing (20+ years) species is the lack of young adults in the population. This is of particular concern in the population at Kejimkujik where only five young females have been recorded during the last decade. Predation of unprotected nests by racoons (*Procyon lotor*) poses the greatest threat, and can affect 100 per cent of the nests. Headstarting is a conservation tool that aims to boost turtle recruitment by rearing

hatchlings for the first two years of their life and releasing them back into their natural habitats, avoiding high mortality rates associated with early life stages. An annual volunteer-based nest protection programme that was established in Kejimkujik has been expanded to populations outside the park to engage the public in protecting turtle nests. The volunteer activities include protecting nest sites with predator exclosures, collection of eggs for off-site incubation, captive rearing of hatchlings for two years, and releasing them into the wild. Over 150 turtles were released into the wild since the spring of 2011. The turtles are monitored through radio tracking to determine habitat requirements, distribution and movement patterns. Volunteers restore turtle habitat and clear garbage to keep racoons away from nest sites. They also reach out to the local landowners to raise the profile of the species to help foster awareness and appreciation for its conservation. In addition, they educate park visitors about the role of national parks in conserving Blanding's turtles and other species. This programme has become very successful and it is now volunteer-driven.

Protecting endangered Piping Plover

The Piping Plover is a small shorebird that has been listed as an endangered species in Canada since 1985. The bird nests on white sandy beaches. In recent years, the number of nesting pairs of Piping Plovers in Nova Scotia has decreased significantly due to habitat disturbance, loss and fragmentation; predation; and development of over-wintering grounds. Monitoring plover adults and chicks within Kejimkujik is done to assess population levels and to implement a suite of management strategies focused on protecting and sustaining their numbers. Volunteers track the plovers, protect nesting habitats, create signage, conduct beach surveys, and share messages with visitors on the plight of the species, and the importance of protecting the park's and regional ecosystems and biological resources. They also monitor predators, clean up the beaches and restore habitats for the Piping Plover and other species.

Restoration of the Monarch Butterfly habitat

The Monarch butterfly is a charismatic species that captivates people due to its amazing life history and long distance migration. The Monarch is impacted by habitat loss, and chemical and pesticide use throughout its range. A native shrub, the swamp milkweed (*Asclepias incarnata*), is key to the survival of Monarchs because females lay their eggs only on this plant and caterpillars only eat its leaves. Volunteers in this project encourage people to plant chemical- and pesticide-free gardens to provide habitats for the Monarch butterflies and other species in areas outside the park. They create awareness in the communities on how to address the underlying threats to the Monarch and the steps to take to improve its conservation status. Improving the habitat for the Monarch enhances the protection of other butterfly and insect species that provide important ecosystem services.

Enhancing the survival of the iconic loon - an indicator of environmental health

The Common loon (*Gavia immer*) is a highly visible water bird, a Canadian icon of wilderness that captivates visitors by its beauty and haunting call. It is widely used as an indicator of the health of lake ecosystems. Concerns have been raised about the health of loons after very high blood mercury concentrations were found in Kejimkujik loons. These levels have been associated with impaired reproduction and altered breeding behaviour in some areas. The Loon Watch initiative, based on similar LoonWatch initiatives across North America, began on 16 lakes within Kejimkujik in 1996. In 2006, the programme was expanded to areas outside the park, where volunteers are trained to observe and record loon activity and breeding success using standardized protocols. The volunteers also monitor other stressors in the environment that affect the health, reproduction, and survival of the loon. These stressors include loss of nesting habitat to human development, loss of eggs to flooding and predation, and human disturbance. The information obtained is used to develop targeted approaches for addressing specific challenges. LoonWatch monitoring by volunteers is conducted across many national parks in Canada including an initiative at Waterton Lakes National Park in southern Alberta where the findings are shared with Glacier National Park in Montana, USA.

Brook trout and aquatic connectivity

The Brook trout (*Salvelinus fontinalis*) is the most popular sport fish in Nova Scotia and the main fish species sought by anglers in Kejimkujik. Brook trout are sensitive to environmental stressors such as habitat degradation, increased water temperature, competition and over exploitation, thereby making it a good indicator species. Aquatic connectivity within and between watersheds has been identified as critically important for the survival of Brook trout and populations of other fish species. Barriers to fish passage, such as dams, badly designed culverts or modifications to the natural stream bed, can significantly reduce the ability of fish to migrate within the watershed,

and can limit accessibility to suitable spawning, feeding, overwintering and summer habitats. Habitat fragmentation is therefore considered to be a significant threat to the integrity of freshwater ecosystems in the region. To help restore connectivity for Brook trout, ineffective crossings on fish bearing streams have been identified in and around Kejimkujik and prioritized for remediation actions. Volunteers are engaged in Brook trout monitoring to establish movements and population trends. They collect data on fishing success, fish size, age and health conditions, fish habitat characterization, stream flow, and water quality. They also assist in the restoration of Kejimkujik's waterways and creating awareness on sustainable fishing practices and the role of healthy and functional aquatic networks.

Management of invasive species

There are several invasive alien species in Kejimkujik. Glossy buckthorn (*Rhamnus frangula*) and the green crab (*Carcinus maenas*) are some of the most problematic species. Introduced to North America from Europe, these species are now established in Kejimkujik and neighbouring areas. They have the ability to exclude other species and dominate a site indefinitely. Volunteers have been assisting in controlling the spread of the glossy buckthorn and restoring previously colonized habitats with native species. Work on the green crab involves the use of specially designed traps to remove these crustaceans. In addition, volunteers help in removing crabs from boats to minimize spreading into new areas. In 2010 for example, volunteers removed about 200,000 crabs from a single area in Kejimkujik. Monitoring and control of invasive species is a very popular volunteer activity from both the national parks perspective and the volunteers' perspective. This activity involves volunteers from a variety of ages and abilities and is a great introduction to conservation issues. The results are tangible and a sense of accomplishment is immediate.

Monitoring threatened and rare plant species

More than 90 species of fascinating plants collectively known as Atlantic Coastal Plain Flora can be found in Kejimkujik and the surrounding areas. Eleven of these, including water-pennyworth, are listed as species at risk, mainly due to shoreline development. Volunteers are involved in shoreline surveys to provide information on species abundance and distribution. By taking simple measurements along the shoreline, volunteers help monitor shoreline change. They are also directly involved in piloting various shoreline-monitoring techniques, including substrate and slope measurements. To monitor long-term trends, the volunteers photograph parts of the shoreline at different times of the year. This data will provide insight into the changing shorelines and the impact it has on the distribution of the Atlantic Coastal Plain Flora.

Volunteers check an endangered Blanding's Turtle nest and release hatchlings in Kejimkujik National Park © Parks Canada

Other volunteer initiatives in Kejimkujik include monitoring cougar (*Puma concolor),* American eel (*Anguilla rostrata*), salamander (*Plethodon cinerus*), and Eastern ribbonsnake populations. In addition, they support Kejimkujik's special events and the Campground Host Program, where they assist campers and other visitors.

Through these initiatives, the volunteers are taking ownership of these conservation efforts, and have become advocates for the environment and for Parks Canada. In 2011, the volunteer programme in and around Kejimkujik National Park recorded its 1,000th volunteer, and its 100,000th volunteer hour since 2000.

The Friends of Kejimkujik publish the *Volunteers News* – a newsletter that is distributed annually throughout the region, providing updates on volunteer contributions and opportunities for participation around Kejimkujik and the Southwest Nova Biosphere Reserve. They also organize many information and outreach sessions to create awareness of and actions for enhancing biodiversity conservation in the park and the surrounding regions for the benefit of all.

Table 1. Contribution of volunteers to achieving the Aichi Biodiversity Targets.

Aichi CBD Strategic Goal	Aichi Targets Directly Contributed to by Parks Canada's Volunteer Programme	Aichi Targets Indirectly Contributed to by Parks Canada's Volunteer Programme
A. Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society	Increasing awareness of the values of biodiversity and steps to conserve it (1)	Biodiversity values integrated into local development strategies (2)
B. Reduce the direct pressures on biodiversity and promote sustainable use	Reduce rate of loss of natural habitats, biodiversity degradation and habitat fragmentation (5); Control spread of invasive species (9) Anthropogenic pressures on vulnerable ecosystems minimized (10)	Reduce pollution (8),
C. Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity	Prevent extinction of threatened species and improve their conservation status (12)	Support establishment of protected areas (11)
D. Enhance the benefits to all from biodiversity and ecosystem services	Restore and safeguard ecosystems that provide essential services (14); Enhance ecosystem resilience through conservation and restoration (15)	
E. Enhance implementation through participatory planning, knowledge management and capacity building	Respect traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources (18)	Knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied (19)

AN OVERVEIW OF VOLUNTEER ACITIVITES IN CANADA'S NATIONAL PARKS IN 2011

Volunteer programmes similar to those described above take place in national parks throughout the country. Appendix 1 shows initiatives undertaken in 2011 by volunteers in projects related to resource protection, ecological restoration, ecological monitoring and natural resource stewardship. These activities occurred in 35 national parks involving 1,801 people and 31,483 hours.

The combined skills of the volunteers enhance the capacities of each park, bring in new perspectives and approaches to addressing conservation issues, strengthen implementation of park conservation programmes, and through research and monitoring, help to accelerate the generation of important information for decision-making.

OBSERVATIONS ABOUT THE MANAGEMENT OF VOLUNTEERS IN PARKS CANADA

Taking feedback from managers who engage conservation volunteers at their parks, and in particular Kejimkujik National Park, this next section outlines some of the lessons learned from implementing these programmes. First, understanding volunteer motivations and needs is paramount. Volunteers are driven to fulfil a wide range of needs; this is shaped by their life stage, personality, socio-economic status, education, occupation history, and so on. A universal motive for volunteering is social interaction. Bell et al. (2008) perhaps describes this best by stating that, *"volunteer satisfaction involves a temporary escape from everyday life into an intense, 'authentic' social world"* (p. 3452). Positive social interactions generate trust, long-term friendships, a safe environment for self-improvement and related benefits (Measham & Barnett, 2008). This social interaction is also linked to some individuals' need to engage in collective action, especially efforts to protect the environment (McGehee, 2002; Ryan, Kaplan, & Grese, 2001; Savanick Guiney & Oberhauser, 2009, Wearing, 2002).

Altruism, a second common motive, varies with each context and volunteer. Managers must be aware of its diversity of focus, and attempt to match volunteers with programmes accordingly. For example, an interest in birds rather than habitat may attract and maintain avian enthusiasts for a longer period of time in a bird sanctuary programme (Weston et al., 2003). Kejimkujik National Park has used the Blanding's turtle very successfully to draw in support. However, a caveat must be noted here that over reliance on 'flagship species' to draw volunteers

has been warned against by some critiques due to the attraction of volunteers who may be unwilling to engage in the conservation of other species and habitats (Cousins et al., 2009; Entwistle, 2000; Simberloff, 1998).

Another motive that is commonly reported by managers and researchers is the desire to increase skills and employability. The skills and experiences gained through volunteering can be leveraged to gain more advanced employment opportunities, or a change in career path (Cassie & Halpenny, 2003; Galley & Clifton, 2004). Conservation volunteerism has also been linked to addressing the needs of occupationally deprived adults, who have experienced social exclusion and mental ill-health due to unemployment (Birch, 2005).

Experiencing wellness and health through engagement in conservation volunteerism is another major motivation. Physical and mental fitness and restoration are often reported to be more readily achieved in nature based settings (Birch, 2005; Hartig, 2001; Lemieux et al., 2012; Savanick Guiney & Oberhauser, 2009). While some programmes associated with conservation volunteering can involve administrative work, by far the greatest draw for volunteers working in parks is an opportunity to interact with nature (Weston et al., 2003). These are just some of the key motives that park managers need to be aware of in attracting and retaining volunteers. Researchers have documented many others including learning (Measham & Barnett, 2008; Ryan, Kaplan & Grese, 2001), adhering to one's values (Campbell & Smith, 2006; Halpenny & Caissie, 2003), pleasure seeking (Caissie & Halpenny, 2003); attachment to a particular place (Halpenny, 2010; Measham & Barnett, 2008), leaving a legacy (Caissie & Halpenny, 2003); identity building and re-shaping (Wearing & Neil, 2000), and fostering a connection with nature (Savanick Guiney & Oberhauser, 2009).

A second major observation taken from Parks Canada's conservation programmes is how volunteer programmes are promoted and delivered. Coghlan (2007) conducted a study that asked potential volunteer tourists to sort volunteer programme brochures. Four types of volunteer organizations were identified. Her main recommendation arising from this was that organizations need to be aware of their perceived images in order to match their volunteers' expectations and needs with appropriate programmes. At a national level, Parks Canada stresses this in the Agencey's *Conservation Volunteer Guidelines* (Parks Canada, 2011) and web pages that promote volunteer opportunities. On this same web site financial assistance and work permit/visa policies are mapped out, setting the expectations of international and local volunteers interested in working in the Agency's parks.

A final set of recommendations derived from Park's Canada's conservation volunteer programmes, and reinforced by scholars, are related to programme structure and character. Structure needs to be flexible, in terms of when and how long volunteers can participate, and the types of activities that volunteers can engage in (O'Brien et al., 2010). High quality training is essential to foster confidence amongst participants, as well as rigor (in the case of citizen science; Cohn, 2008) and safety (Leslie et al., 2004; Weston et al., 2003). Communication is necessary at the beginning of new programmes, in terms of goal setting and sharing, and throughout the initiative. Communication related to supervision and feedback to the participants, especially personal acknowledgement of the volunteer's efforts is deemed to be especially important (Weston et al., 2003).

Volunteer opportunities to develop programme improvements and communicate them to organizers are another key ingredient in maintaining volunteers; this fosters a sense of inclusion, empowerment and respect (Phillimore, 2001). Access to unique opportunities at each park also inspires volunteers to join and remain part of the team (Halpenny & Cassie, 2003). For example at Elk Island National Park, volunteers assist with the round up and inspection of bison; the volunteers can reach out and touch these wild, powerful animals when they are immobilized for medical inspection. Programme leadership, that includes excellent communication and organizational skills combined with scientific expertise, inspires conservation volunteers (Coghlan, 2008; Douglas & Rollins, 2007).

Finally, tangible outcomes are a very important aspect of many volunteer programmes. As noted above, invasive species monitoring and removal in various Parks Canada protected areas is especially popular because volunteers feel and see real results. The data collected from citizen science programmes, while less tangible, is also gratifying to volunteers; however, the data collected must be perceived by volunteers as scientifically valid and contributing to a larger base of knowledge. This has characterized Canada's LoonWatch programme, which generates and shares data collected by volunteers internationally.

Nahanni National Park and World Heritage site © Sue Stolton

OVERAL VOLUNTEER CONTRIBUTION TO PARKS CANADA'S MANDATE

The volunteer programme provides opportunities to involve Canadians in the management of national parks. This is not only an excellent mechanism of presenting the parks to the public but it also fosters a greater awareness of park and conservation issues in general, creates a greater sense of public ownership of national parks, and increases support for their existence.

The following section summarizes the value added by volunteers:

i. **Support conservation of biological diversity***:* Volunteers participate in conservation projects that address threats and improve the status of biodiversity in parks and neighbouring areas. They also carry out research and monitoring activities that generate knowledge to support management decisions. In addition, volunteers help to cover larger areas, tackle multiple issues and deal with numerous parameters.
ii. **Enhance visitor experience**: Volunteers contribute to enhancing visitor experience and fostering public education and appreciation of Canada's natural and cultural heritage.
iii. **Broaden support for national parks:** Volunteers become park ambassadors. They share their passion with people at home, abroad, and virtually; building the image of the parks and increasing the constituency of volunteers and supporters.
iv. **Bring new ideas and skills:** Volunteers usually bring creativity, fresh ideals, and new perspectives. Their presence creates a richer, warmer, more enthusiastic environment that provides parks with an increased variety and quality of service.

In some areas, volunteer initiatives have become the backbone of conservation success, as in the case of the recovery of the Blanding's turtle in Kejimkujik National Park. Successes in national parks are a strong motivation for initiating similar efforts elsewhere, providing a template for replication and scaling up.

VOLUNTEER CONTRIBUTION TO MEETING CBD TARGETS

Parks Canada volunteer programme plays a key role in promoting the protection of ecosystems, habitats and species important for conservation, and endearing the role of protected areas to the people of Canada and abroad. Table 1 shows how volunteer activities are contributing, directly or indirectly to achieving the 2020 CBD Aichi Strategic Goals and Targets.

CONCLUSION: CONSERVATION IS A SHARED RESPONSIBILITY

Canada's national parks exist for all Canadians. While Parks Canada plays a custodial role for these special heritage places, fulfilling the protection, education, and visitor experience mandate is a shared responsibility. Volunteerism has become a powerful means of sharing this responsibility. Through this initiative, volunteers are provided with opportunities to better understand, and appreciate their national parks while making valuable contributions to their successful management.

Through their participation, volunteers have inspired other people and helped to create a shared vision and galvanize actions for promoting biodiversity conservation for the benefit of Canadians. Parks Canada will continue to build upon its successful track record of working with volunteers, and looking externally to share best practices and experiences with other organizations.

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Appendix 1: Summary of Parks Canada 2011 Volunteer Conservation Activities

Park	No. of people	No. of hours	Volunteer activities on
Terra Nova	3	231	Otter monitoring
Gros Morne	5	570	Monitoring the health of coastal ecosystems ; monitoring moose, birds, fish, *resource conservation
Cape Breton Highland	3	72	Monitoring coyote, American eel
Kejimkujik	358	7,843	See section above
Fundy	59	586	Monitoring eel, moose count, Christmas bird count, resource conservation
Kouchibouguac	47	2,296	Monitoring, eel, salmon and striped bass. Piping plover recovery project, river flora inventory, Tern survey, Christmas bird count
Prince Edward	42	714	Monitoring plover, bird surveys
Mingan	35	280	Bird survey
Forillon	27	190	Bird survey, American marten, fish, tern colony
St. Lawrence	7	265	Muskellunge habitat and monitoring, Pitch pine restoration, Wetland monitoring
Bruce Peninsula	2	58	Resource conservation
Fathom Five NMCA	4	208	Research on invasive species, Bird count
Point Pelee	178	1,024	Monitoring snakes, frogs, soils, archaeological objects
Pukaskwa	6	1,080	Resource conservation
Lake Superior	1	10	Bird watching
Banff	44	1,750	Research, social science, resource conservation
Kootenay	6	127	Communication, wildlife monitoring, deer collaring
Yoho	9	290	Prescribed fires, wolf monitoring
Lake Louise	113	909	Ecological restoration, vegetation analysis
Jasper	16	821	Resource conservation, amphibian monitoring, caribou counts, aquatic habitat monitoring and restoration
Mt. Revelstoke	8	160	Amphibian and sub-alpine plant monitoring
Waterton Lakes	78	581	Aquatic and bear research, avalanche assessment, weed mapping, butterfly counts, loon survey, resource conservation
Riding Mountain	47	198	Fish and water monitoring, invasive species management, elk collaring and monitoring, resource conservation
Elk Island		1,114	Research and monitoring
Grasslands	39	1,104	Monitoring mormon metalmark, black-footed ferret, sage grouse, bird counts, resource conservation
Ivvavik	12	720	Ecological integrity monitoring
Auyuittuq	2	20	Penny Ice cap research
Quttinirpaaq	1	5	Wildlife regulations
Pacific Rim	499	2,085	Dune and Garry Oak restoration
Gulf Island	10	108	Bivalve sampling, eelgrass monitoring, marine surveys, ecosystem restoration
Gwaii Haanas	13	2,738	Riparian habitat restoration, habitat mapping, vegetation monitoring, bird surveys, visitor surveys
Kluane	16	210	Ecological monitoring, resource conservation
Vuntut	2	82	Peregrine Falcon Survey, resource conservation
Rideau Canal and TSW	109	3,034	Species at Risk recovery projects
Total	1,801	31,483	*Resource conservation includes protection, restoration, management,

RESUMEN

Este documento describe cómo contribuyen los programas de voluntariado en apoyo de la protección y la conservación de la biodiversidad de los parques nacionales de Canadá. Se resume un inventario de algunos de estos programas de voluntariado y se presentan ejemplos concretos de actividades de conservación emprendidas por voluntarios con base en un estudio de caso de un programa de voluntariado en el Parque Nacional Kejimkujik. Las observaciones de estas iniciativas de voluntariado para la conservación se combinan con las conclusiones señaladas en la literatura científica para resaltar los factores que contribuyen al éxito de los programas de voluntariado en apoyo de la conservación. Entre los principales resultados derivados de los programas promovidos por Parks Canada cabe resaltar: el apoyo a la conservación de la biodiversidad, experiencia mejorada para los visitantes, mayor apoyo a los parques nacionales, e introducción de nuevas ideas y habilidades por parte de los voluntarios. Muchos de los voluntarios que participan en estos programas son turistas; la sección final de este documento destaca las Metas de Aichi del CDB a las que estos voluntarios están ayudando a cumplir.

RÉSUMÉ

Ce document souligne dans quelle mesure les programmes volontaires de conservation contribuent à la protection de la diversité biologique et à la conservation dans les parcs nationaux du Canada. Un inventaire de quelques-uns de ces programmes volontaires est résumé et des exemples précis d'activités volontaires de conservation sont présentés par le biais d'une étude de cas, sur le programme volontaire du parc national de Kejimkujik. Les observations tirées de ces initiatives volontaires de conservation sont ajoutées aux résultats rapportés dans les publications scientifiques afin de souligner les facteurs contribuant au succès des programmes volontaires de conservation. Les principales réalisations à imputer aux programmes volontaires de conservation de Parcs Canada incluent notamment : le soutien envers la conservation de la diversité biologique, une amélioration de l'expérience du visiteur, un soutien élargi envers les parcs nationaux et l'introduction de nouvelles idées et compétences par les volontaires. La plupart des volontaires participant à ces programmes sont des touristes. Dans la dernière partie du document, les Objectifs d'Aichi de la Convention sur la diversité biologique visés par Parcs Canada grâce à l'action de ces volontaires sont soulignés.

SUPPORTING THE CBD AICHI BIODIVERSITY CONSERVATION TARGETS THROUGH PARK TOURISM: A CASE STUDY OF PARKS CANADA'S VISITOR EXPERIENCE PROGRAMME

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ABSTRACT

Since 2005, Parks Canada has embarked on an agency-wide effort to face the challenge of remaining relevant to Canadians. Visitation to Canada's system of National Parks, National Historic Sites, and National Marines Conservation Areas has been declining, in part, because of a changing social context. Parks Canada Agency believes that fostering visitation will result in individuals' appreciation of and connection with Canada's parks. It is suggested that this can lead to increased support for Canada's national system of natural and cultural heritage sites. Parks Canada has embraced the concept of visitor experience to help address this decline in visitation. Integrated with the protection and education elements of its mandate, the focus on visitor experience is how the Agency will ensure these special places are relevant to Canadians now and in the future. This paper describes how visitor experience is integrated within Parks Canada's mandate and delivered within each of its protected areas. The paper discusses the Agency's work to improve visitor experience at all of its parks and highlights how outcomes arising from this initiative are assessed. Visitation to parks, the income that this generates and the awareness and connection to biodiversity generated amongst park users is an important goal for all countries. Parks Canada's engagement in social science research, and advanced application of a visitor experience approach to parks management provides best practice examples for other countries that will help achieve Aichi targets.

INTRODUCTION

> *In the end we will conserve only what we love. We will love only what we understand. We will understand only what we are taught.*
> Baba Dioum, 1968.

Baba Dioum's words, spoken to the general assembly of the International Union for Conservation of Nature in 1968, have often been quoted by conservations. They highlight what Parks Canada, Canada's national parks agency, is attempting to foster through its visitor experience programme. A case study of this programme is outlined in this paper; the programme is designed to connect more Canadian citizens with Canada's national parks, making Canada's parks more relevant and ensuring continued support for biodiversity conservation. High quality experiences designed with the visitor in mind are a means by which Parks Canada can maintain and increase relevance to Canadians, build visitation and encourage their appreciation and support for the country's system of national heritage places (national parks, historic sites and marine conservation areas).

Beginning with the creation of the External Relations and Visitor Experience Directorate in 2005, Parks Canada embarked on an agency-wide effort to face this challenge.

Birdwatchers at Point Pelee National Park, Canada © Glen Hvenegaard

The Agency improved its methods for collecting and analysing social science data, and began working with partners to better understand visitors' unique motivations and interests. The Agency has reviewed the entire visitor experience cycle at Parks Canada protected areas to improve the experiences that are available, and it has launched a number of national programmes targeted at key market segments. The efforts are designed to help the Agency meet its visitor experience objectives related to connection, visitation, enjoyment, satisfaction and learning. Achievement of these objectives will enhance Parks Canada's ability to meet Aichi biodiversity targets (Convention of Biological Diversity, 2010) especially Target 1 (people's awareness of biodiversity values) and Target 19 (knowledge transfer to the public on how to protect biodiversity) through citizen education and engagement.

This paper first situates visitor experience in the context of Parks Canada's mandate. It then describes Canada's changing society, highlighting implications for the relevancy of protected areas. This is followed by a description of the visitor experience concept used by Parks Canada, and a discussion of the Agency's work to improve visitor experience at all of its parks across the country. Lessons for other countries interested in more intensive engagement in social science, in particular integrating a visitor experience approach with other park management and planning, are discussed.

THE CONTEXT FOR PARKS CANADA'S VISITOR EXPERIENCE CONCEPT

Parks Canada integrates three key elements in all aspects of managing Canada's national heritage places:

- Protection - Conserving heritage resources;
- Education - Fostering public understanding and appreciation; and,
- Visitor Experience (VE) - Fostering enjoyment

These three elements are present throughout the Agency's mandate and vision (Parks Canada, 2010a), as well as its strategic outcome: *Canadians have a strong sense of connection, through meaningful experiences, to their national parks, national historic sites and national marine conservation areas and these protected places are enjoyed in ways that leave them unimpaired for present and future generations. (Parks Canada, 2010a, p. 12).* These elements guide Parks Canada's corporate direction,

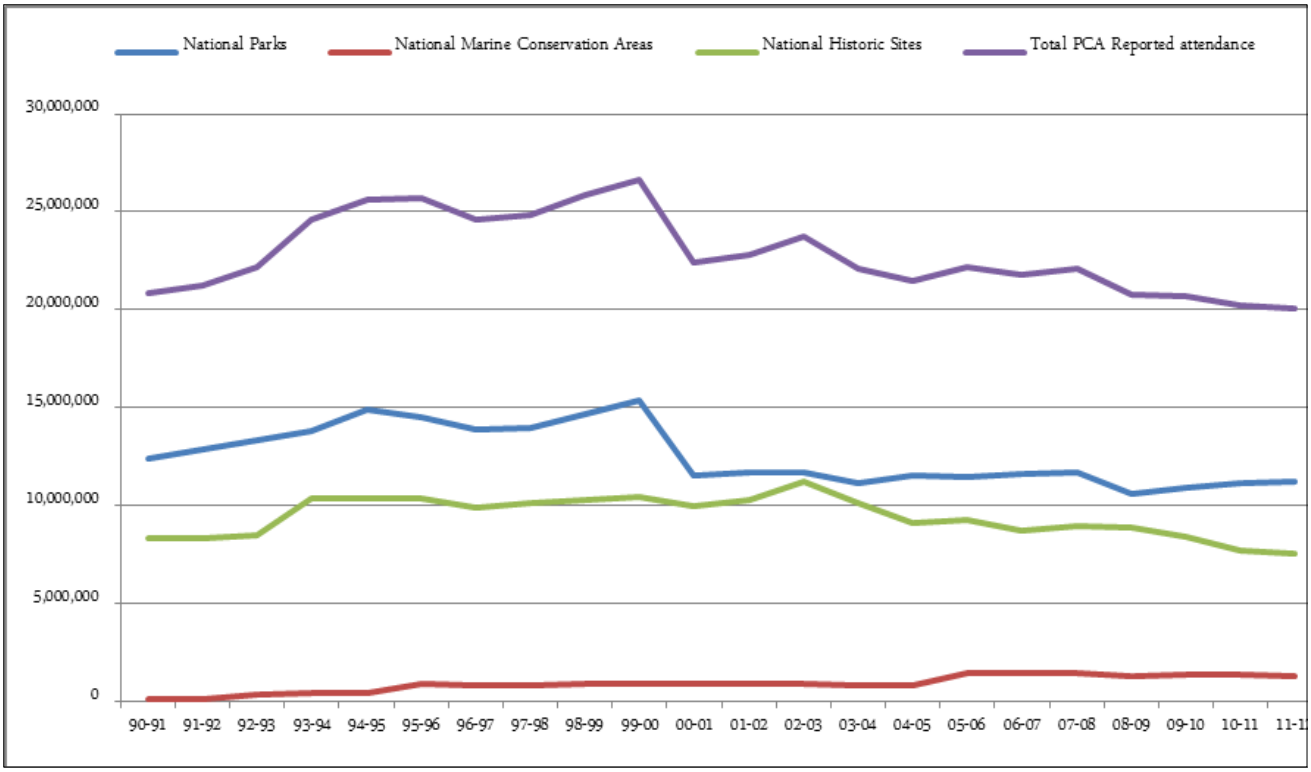


Figure 1: Attendance at Parks Canada Agency Parks, 1990-2012.

Note: Attendance is measured in Person-visits, which is defined as: Each time a person enters the land or marine part of a reporting unit for recreational, educational or cultural purposes during business hours. Through, local and commercial traffic are excluded. Same day re-entries and re-entries by visitors staying overnight in the reporting unit do not constitute new person-visits.

performance management framework, its reporting requirement to the Canadian parliament, its related policies, plans and regulations, and they are linked to the organization's management structure.

Parks Canada has defined a new cohesive management approach that integrates the three elements of protection, education and visitor experience. The Agency has clearly stated that its objective is to protect national parks (NP), national historic sites (NHS) and national marine conservation areas (NMCA) with and for Canadians, not from Canadians (Latourelle, 2010).

While visitor experience is the focus of this paper, this along with protection and education are constantly engaged in to achieve ecological and commemorative integrity. *"Parks Canada's objective is to allow people to enjoy national parks as special places without damaging their integrity…ecological integrity is our endpoint for park management"* (Parks Canada, 2009c). *Ecological integrity* (EI) is a *"condition that is determined to be characteristic of its natural region and likely to persist, including abiotic components and the composition and abundance of native species and biological communities, rates of change and supporting processes*" (Parks Canada, 2000c). Similar definitions guide the Agency's effort to protect cultural heritage. This is defined as *commemorative integrity* (CI) and it describes the health and wholeness of a national historic site. These sites possess commemorative integrity when: (a) the resources directly related to the reasons for designation as a national historic site are not impaired or under threat, (b) the reasons for designation as a national historic site are effectively communicated to the public, and (c) the site's heritage values (including those not related to designation as a national historic site) are respected in all decisions and actions affecting the site (Parks Canada, 2009b).

It is believed that enhanced visitor experiences work with achievement of ecological and commemorative integrity because optimized visitor experiences foster Canadian awareness of and connection with the country's federal parks. Awareness is tied to the education mandate listed above; humans will not support the protection of natural and cultural heritage that they do not know exists (Bamberg et al., 2007; Chawla, 1999; Hines et al., 1987;

Newhouse, 1990). Connection can be characterized by positive emotional bonds, individual and group identification with parks, and on-going use or visitation of parks. Functional, emotional and identity-based bonds can move individuals and groups to engage in place protective behaviours such as park volunteerism, voting for pro-conservation politicians and support of park fund raising programmes (Halpenny, 2007a, Halpenny, 2010; Kohl, 2006; Ramkissoon, 2012). These bonds can also result in positive word-of-mouth promotion and repeat visitation (Halpenny, 2007b; Yuksel, Yuksel, & Bilim, 2010). This concept has been expressed by Rick Potts, formerly of the United States National Parks Service: *"You cannot love a park or wilderness to death. Although love cannot kill a wild area, apathy and irrelevance certainly can"* (Potts, 2007). For Parks Canada, visitors are part of the solution, not the problem. Visitors are an essential part of the future of protected areas and their experiences are an integral component of the Agency's mandate.

Visitation has important financial implications for all protected areas agencies that are increasingly forced to seek sources of revenue that are not derived directly from government coffers (Crompton & Kaczynski, 2003; Crompton & Kaczynski 2004; Eagles & McCool, 2002; Emerton, Bishop, & Thomas, 2006). Increased stewardship and patronage of Canada's Parks by Canadian citizens is theorized to result, indirectly, in ecological and commemorative integrity. However, there is also the challenge within Parks Canada Agency to allocate resources effectively towards protection, education and visitor experience, to achieve these integrity goals.

While visitation is perceived to be very important to maintaining Canadian citizens' support of the nation's protected areas, Parks Canada parks have experienced visitation declines. From 2001 to 2009 visitation to NPs dropped by 5.3 per cent while visitation to NHSs decreased by 13.6 per cent (Parks Canada, 2010b). These visitation declines are particularly challenging when one considers the clear link between experiencing heritage and connecting with it. For example, by segmenting the results of its 2009 National Survey of Canadians, Parks Canada found that visitation to NPs is critical to connecting Canadians to these national treasures. Nine out of ten (90 per cent) Canadians who had visited one of Canada's 42 NPs in the previous three years expressed feeling a 'sense of connection' to them. By comparison, only two out of ten (20 per cent) Canadians who had not visited a NP were able to say the same (Parks Canada, 2010c).

A CHANGING SOCIAL CONTEXT

Parks Canada operates in a globalized arena; recent years have brought significant changes that affected visitation. The aftermath of 9-11, the down turn in the global economy, and a stronger Canadian dollar in recent years have contributed to reduced park visitation. While the Agency may not be able to affect these national and global trends, it can address institutional factors that may also influence visitor numbers; these include entry fees and user fees (e.g., firewood). In addition to these global and institutional factors, Parks Canada must consider a number of demographic and social trends as it strives to increase visitation and ensure the continued relevance of national parks and historic sites to Canadians. The Canadian population is aging rapidly. As the large 'baby boomer' cohort ages, the number of Canadians age 55-64 continues to increase; from 9.4 per cent of the Canadian population in 2001 to 12.7 per cent in 2011 (Statistics Canada, 2011). It is estimated that Canadian seniors, age 65 and over, will outnumber Canadians under the age of 15 by 2016. These older Canadians present unique opportunities and challenges. They typically have more time, resources and desire to travel; however, they are also more interested in soft adventure activities and more comfortable accommodations (Foot & Stoffman, 2000). Parks Canada must evaluate the opportunities currently offered in NPs and NHSs in light of these evolving interests.

Canada is a highly urbanized society, with 35 per cent of Canadians now living in the three largest cities, Toronto, Vancouver and Montreal. Eighty-two per cent of Canadians live in cities with more than 10,000 people (Statistics Canada, 2011). While Canada has been highly urbanized for some time, an accumulative effect arising from several generations of urban living could be creating a psychological disconnection with 'the land' (Balmford, 2002; Kareiva, 2008). Additionally, less leisure time reported by Canadians may be constraining their ability to take the long vacations necessary to reach and enjoy distant national parks (Canadian Index of Wellbeing, 2012; Duxbury & Higgins, 2012).

The disconnect between people and nature, referred to as nature-deficit disorder, has gained an elevated profile in recent years and has initiated international movements like the Children and Nature Network, inspired by Richard Louv's (2008) book *Last Child in the Woods*. Parks Canada's research with urban Canadians highlighted the barriers this distance creates to visitation and connection (Decima Research, 2010). In some ways, urbanization does

Table 1: Explorer Quotient types

Traveller type	Description
No hassle Traveller	A bit of an escapist, you search for worry-free and secure travel. You look for relaxation, simplicity, and a chance to experience the outdoors with family and friends.
Free Spirit	Something of a thrill-seeking hedonist, travel satisfies your insatiable need for the exciting and the exotic.
Cultural History Buff	You strive to go beyond your own roots to understand the history and culture of others. You are the most likely to own a passport, and you enjoy solitary travel.
Gentle Explorer	You like to return to past destinations and enjoy the security of familiar surroundings. You appreciate convenience, relaxation and typically look for all the comforts of home.
Virtual Traveller	Tending not to travel very often, you prefer the comforts of home to the uncertainties of new places or cultures.
Cultural Explorer	You are a very active traveller who enjoys frequent weekend escapes. Always on the move, you immerse yourself in nature, local culture and history.
Authentic Experiencer	Your traveller type is something of an improv artist, exploring nature, history and culture, all on the path to personal development.
Rejuvenator	For you, travel is a chance to totally disconnect and get away from it all. When you travel, you want to stay in top hotels where you are most comfortable, secure, and can...
Personal History Traveller	You travel to gain a deeper understanding of your ancestry and heritage. Your travel tends to be a shared experience, both during and after the trip.

Source: Parks Canada (2012): Planning your visit – Explorer Quotient: www.pc.gc.ca/voyage-travel/qe-eq/qe-eq_e.asp

not pose the same challenge for NHSs, since many are located in or near major urban centres; however, they often lack the profile of NPs and their visitation has been declining at an even faster rate than that of NPs.

Canadian society is also becoming increasingly diverse because of immigration. Immigrants represented approximately 21 per cent of the Canadian population in 2011, up from 18.4 per cent of the population in 2001. These new Canadians are also contributing to the urbanization of Canada with 97 per cent of new immigrants choosing to settle in an urban area and 69 per cent of them settling in Toronto, Vancouver or Montreal

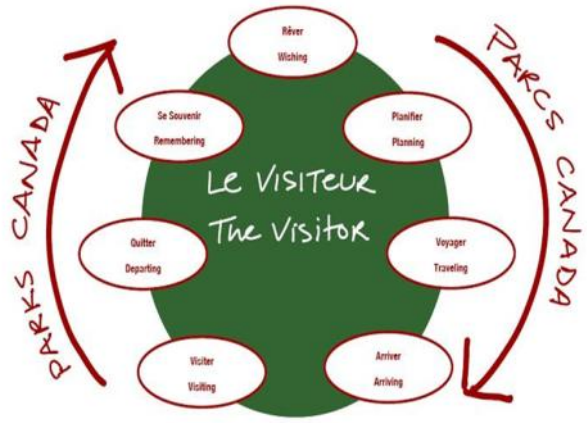


Figure 2: The Visitor Experience Cycle

(Statistics Canada, 2006). At the same time, new Canadians are significantly under-represented in visits to NPs and NHSs, representing 12 per cent of visitors (Parks Canada, 2009). New Canadians bring with them different experiences, interests and perspectives. Parks Canada must better understand and respond to their needs if it hopes to be relevant to Canadians, particularly as immigrants become a larger part of the Canadian population (Deng, Walker, & Swinnerton, 2005; Deng, Walker, & Swinnerton, 2006; Ho, Sasidharan, Elmendorf et al., 2005; Hung, 2003; Lin, 2010; McBane, 2007).

Influenced by these and other factors, the tourism industry is also changing. Travellers want a wide variety of unique, authentic, interactive and personalized experiences (Ellis & Rossman, 2008; Mossberg, 2007). This trend is linked to the idea of the experience economy, the shift in the source of economic value from commodities, to goods, to services, to experiences, is seen in the evolution of the tourism sector (Pine & Gilmore, 1999). Linked to this shift is the division of travellers into more distinct market segments that need to be better understood, specifically identified and targeted with specialized products, promotions and communications (Arsenault & Gale, 2004). At the same time, there is increased competition for potential visitors' time and attention. Travellers have more choice, are better informed and want a bigger role in choosing and creating their travel experiences. Parks Canada has been working to

Table 2: 2012-13 Performance Management Framework – Visitor Experience

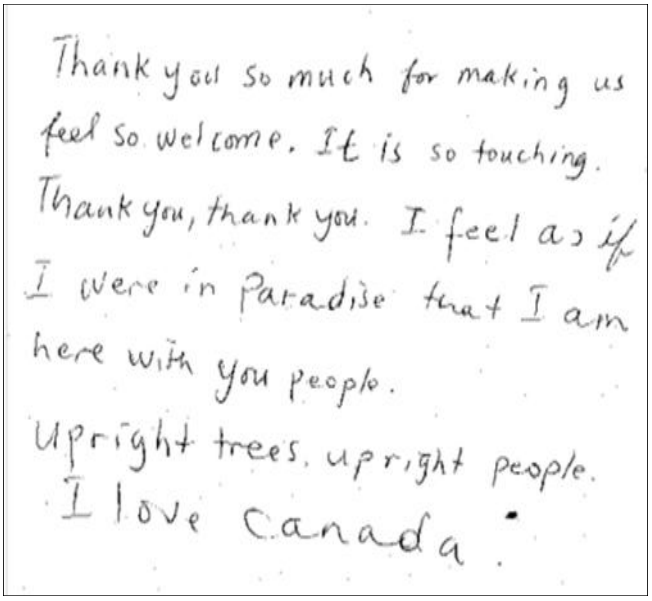
VISITOR EXPERIENCE	
Expected Results:	Visitors at surveyed locations feel a sense of personal connection to the places visited.
Performance Expectations:	On average, 85 per cent of visitors at all surveyed locations consider the place meaningful to them. On average, 90 per cent of visitors at surveyed locations are satisfied and on average, 50 per cent are very satisfied with their visit.
MARKET RESEARCH AND PROMOTION	
Expected Results:	Canadians visit Parks Canada administered parks.
Performance Expectations:	22.4 million visits at Parks Canada administered parks by March 2015.
NATIONAL PARKS INTERPRETATION	
Expected Results:	Visitors at surveyed national parks learned from experience and active participation.
Performance Expectations:	On average, 60 per cent of visitors at surveyed national parks and national marine conservation areas reported they learned about the natural heritage of the place. On average, 85 per cent of visitors at surveyed national historic sites reported they learned about the cultural heritage of the place.
NATIONAL PARKS VISITOR SERVICE OFFER	
Expected Results:	Visitors at surveyed national parks enjoyed their visit.
Performance Expectations:	On average, 90 per cent of visitors at surveyed national parks enjoyed their visit.

understand these distinct market segments, develop opportunities that correspond to visitor needs and interests, and describe the opportunities in the traveller's terms so that Parks Canada protected areas are part of their travel experience.

In 2010, Parks Canada conducted focus-group research in Montreal, Toronto and Vancouver on attitudes and behaviours regarding visiting national parks and national historic sites. Participants highlighted the need to increase awareness of national parks and national historic sites in general and the diversity of experiences available. They also recommended that Parks Canada develop tailored experiences for different types of visitors. Specific suggestions included designing opportunities for young Canadians that build on their desire for social interaction, recognize their cost sensitivity and accommodate their busy lives. Parents desire experiences that appeal to their children, are educational and allow parents to enjoy themselves as well. Participants also noted the perception that visiting a national park was synonymous with camping and that there needed to be a wider variety of accommodation options available. These suggestions are clearly linked with the larger demographic shifts taking place in Canada.

WHAT DOES PARKS CANADA MEAN BY VISITOR EXPERIENCE?

Parks Canada's renewed focus on visitor experience starts with good data about visitors. Decision-making must be based on solid knowledge of current and potential visitor needs and expectations gathered through social science research. Embedded in this market-based approach is the Explorer Quotient (EQ) programme (Canadian Tourism Commission, 2010). The EQ programme was developed by the Canadian Tourism Commission with the market research firm Environics Analytics, and uses research methods based on psychographics. It explains why people travel and why different types of travellers seek out different travel experiences. Parks Canada is one of the first organizations to apply the EQ programme to connect nine EQ types (*see* Table 1) with opportunities that match their values, interests and expectations. Example itineraries at each park, for different EQ types can be found at: www.pc.gc.ca/voyage-travel/qe-eq/qe-eq_e.asp. Combined with other market intelligence, the EQ programme helps Parks Canada make sound decisions on how to effectively develop and facilitate experience opportunities that are relevant to Canadians. An introduction to EQ is part of Parks Canada's core staff service training (offered to more than 4,000 staff each


Thank you so much for making us feel so welcome. It is so touching. Thank you, thank you. I feel as if I were in Paradise that I am here with you people. Upright trees, upright people. I love Canada.

Feedback from a participant in the Learn to Camp pilot in Banff National Park, Canada © Parks Canada

Parks Canada's OTenTik © Parks Canada

year) and EQ has been specifically applied at over 50 Parks Canada protected areas. It is reflected in promotional materials and is part of a wide variety of visitor experience planning tools used across the organization.

The Agency recently added another important social science tool to help build its understanding of visitors. Environics Analytics has developed a segmentation system called PRIZM C2 that classifies Canada's neighbourhoods into 66 unique lifestyle types based on psychographic and demographic data. PRIZM C2 also cross-references EQ types with neighbourhoods. With this information Parks Canada can better understand the experiences sought by potential visitors and how to target promotion of these experiences (*see* en-corporate.canada.travel/resources-industry/explorer-quotient for details). This tool is being integrated into Parks Canada's visitor experience planning tools and market segmentation training.

The next step is to look at how the visitor experiences 'the place'. The visitor brings their personal story, their values, motivations, expectations and interests. Parks Canada, along with its tourism partners, sets the stage by preserving natural settings, facilitating access to culture and by providing facilities, services, staff, products and programmes. The interaction of the visitor with the place (the physical infrastructure, the people and the services) creates the visitor experience. Parks Canada then uses the Visitor Experience Cycle to develop opportunities that incorporate all aspects of the experience. The various stages of the experience are consciously evaluated to maximize their positive impact. The visitor's experience is divided into the following stages:

- **Wishing:** How are the experiences available at Parks Canada parks promoted to potential visitors?
- **Planning:** What information does the visitor need to decide on their destination and plan their visit?
- **Travelling:** How can Parks Canada facilitate the travel experience so that it is as easy and enjoyable as possible?
- **Arriving:** How is the visitor welcomed and informed about the experiences available?
- **Visiting:** Are the products, programmes, services and facilities available on site designed, delivered and maintained with the visitor in mind so they lead to positive, memorable experiences?
- **Leaving:** Is there a distinct sense of departure? What can they take with them to remember their experience?
- **Remembering:** When the visitor recalls and shares the details of their visit through pictures, stories, souvenirs can they follow-up with Parks Canada in ways likely to lead to a return visit?

Combining an understanding of larger social trends, the variety of needs and expectations of visitors, and a comprehensive approach to the entire VE cycle, Parks Canada is working to develop opportunities for visitors to experience Canada's natural and cultural heritage and build a strong sense of connection to these places.

MAKING THE VISITOR EXPERIENCE CONCEPT A REALITY

As noted earlier in this paper, Parks Canada's renewed focus on visitor experience started in October 2005 when the External Relations and Visitor Experience Directorate was created. This directorate includes a Social Science function as well as the Visitor Experience Branch. In 2008, Parks Canada realigned the External Relations and Visitor Experience functions in the field to equip all sites with a team of people responsible for aligning the experience with the needs and expectations of visitors.

The organization also reviewed its performance management framework as related to VE, and established targets related to visitation, learning, connection, enjoyment and satisfaction (*see* Table 2). Parks Canada's visitor survey programme or Visitor Information Programme (VIP) evaluates these factors. Parks Canada has set increased visitation as a clear target for the organization – an increase of 10 per cent by 2015 (Parks Canada, 2010a). Performance measures such as this will help Parks Canada continue to build on and improve its focus on VE. The integration of the VE concept into the organization's management framework and the development of policies and guidance that consider the visitor's needs first, are key to providing support and guidance to managers and their teams. Parks Canada has developed a suite of performance indicators and measures related to understanding visitors, providing opportunities, delivering high quality services and connecting visitors to these special places. The measures are aligned with the Agency's corporate direction and are part of the planning and reporting framework (Parks Canada, 2010a). The measurements include: number of visitors, visitor satisfaction, enjoyment and sense of connection and learning. In addition, the organization sets performance targets for its parks and sites that encourage the on-going renewal and diversification of the visitor experience offer. In 2012, each Parks Canada place was required to renew or diversify at least three experiences. This objective supports an environment of continual improvement.

River walker, Mississippi River, Canada © Elizabeth Halpenny

Initially, visitor experience planning was organized around the Visitor Experience Assessment (VEA). The assessment looks at the current state of opportunities offered from the perspective of the visitor to help managers, staff and partners work collaboratively to assess, understand and enhance visitor experience. Participants assess a broad range of themes related to the VE Cycle including: visitor research, pre-trip planning services, on-site reception, interpretation programmes; working with partners, management and business planning, staff training, infrastructure, performance measurement and visitor feedback. Based on social science information, areas where the performance of the park or site could be improved are identified and specific actions are developed. Once completed, the assessment provides guidance for the management of the NP or NHS in areas related to visitor experience.

The VEA tool has been used at more than 90 locations since 2005. On average, locations using the assessment tool have generated 77 actionable items designed to improve the experience on site. On average, 65 per cent of these actions are completed or are underway. Action items cover all the elements of the VE cycle. Across the system, sites have highlighted the need for more specific social science data and more strategic thinking in planning and product development. These locations have also identified actions to address issues raised in VIP surveys. The planned changes vary in scope and scale; the majority are smaller, gradual changes rather than wholesale (i.e., change to more serviced campsites over time or the introduction of more diversified accommodation offerings).

The data available through the Explorer Quotient programme and Prizm C2 has allowed for the development of additional visitor experience planning tools that integrate this important social science information. Parks Canada is currently reviewing the suite of visitor experience planning tools and is piloting a market segmentation approach, as well as a product development tool linked to the EQ programme.

The Agency recently took advantage of two significant anniversaries to increase awareness of Canada's National Parks and National Historic Sites. 2010 was the 125th anniversary of the establishment of Banff National Park, Canada's first national park. This anniversary also coincided with the Vancouver Winter Olympics and Parks Canada launched a national advertising campaign during and after this event. Last year was the 100th anniversary of the creation of Parks Canada, the world's first national park service. Surveys show that these strategies helped increase awareness of Parks Canada from 66 per cent in 2007, to 87 per cent in early 2010. During this period the Agency also improved its media relations capacity and as a result has maintained awareness at or above 80 per cent into 2011. Increased awareness is a critical component of the VE cycle (wishing) and was highlighted by participants on the previously cited focus-group research.

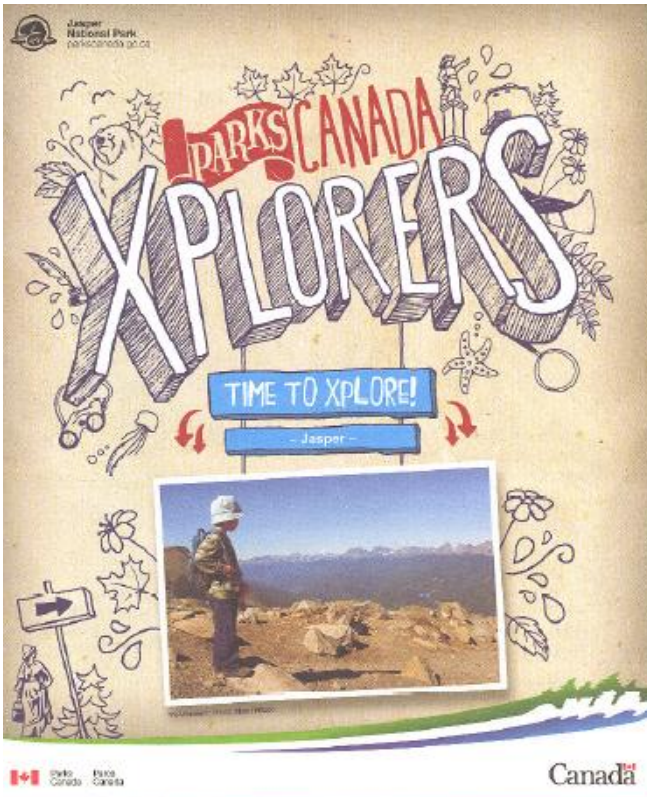
To help managers consider new activities, the organization issued a tool titled: *Recreational Activity and Special Event Assessments* in 2008 (Parks Canada, 2008b). This management bulletin helps managers assess new or existing activities and events that present significant opportunities and areas for improvement. An assessment involves a wide range of staff, partners and stakeholders, and the output is a set of guidelines to follow during development and implementation. The assessment may be national or local in scope. Since issuing the bulletin, six national assessments have been undertaken covering geo-caching, mountain biking, traction kiting, guided interpretive canopy walks, zip lines, via ferrata and aerial parks, non-motorized hang-gliding and paragliding, and one non-tourism activity, community gardening. The assessment process guides the Agency in decision making regarding new activities and is designed to help managers to consider all aspects of the mandate, including current and potential visitor needs and expectations.

One example of how the Agency is adapting to the needs and expectations of potential visitors is the introduction of the Learn to Camp programme in 2011. The programme

Mountain hiking in Banff National Park, Canada © Elizabeth Halpenny

aims to introduce new Canadians and families with young children from urban areas to the camping experience. The programme began with a coordinated national urban event in June 2011 that was held at 10 urban centres across Canada – Vancouver, Victoria, Edmonton, Calgary, Winnipeg, Toronto, Ottawa, Montreal, Quebec and Halifax. More than 1,000 participants took part in a variety of activities, including interpretive programmes, camping workshops (focused on equipment, camping etiquette, camp cooking, etc.), and camping-related activities such as campfire sing-a-longs and stargazing. Feedback on the programme has been positive. Participants point to the experience as being part of becoming Canadian and many follow-up by visiting a nearby national park for their own camping experience.

Building on the success of the first year, Parks Canada expanded the event to 17 sites and nearly 2,000 participants in 2012. A virtual camping component has been added to the Parks Canada website, and on-site Learn to Camp activities in national parks will support positive experiences for new campers (*see* www.pc.gc.ca/eng/media/ltc-dlc/index.aspx). Parks Canada launched the Learn to Camp app that has been downloaded more than 20,000 times.



Xplorers programme pamphlet © Elizabeth Halpenny

Parks Canada's effort to connect urban Canadians with their natural and cultural heritage continues with the Government of Canada's plans to create Canada's first National Urban Park in the Rouge Valley in Toronto. The lands of Rouge Park are currently managed by a variety of provincial, municipal, aboriginal and community stakeholders. As plans proceed, Parks Canada will be responsible for this special place; it will be a showcase for Canada's system of national parks within easy reach of 20 per cent of the Canadian population. Parks Canada's visitor experience approach will help connect Canada's most urban and diverse community with the country's rich natural and cultural heritage.

To reach youth and families, 2011 also saw the launch of Parks Canada's Xplorers programme. Xplorers is designed for children between 6 and 11 years old and their families. The programme encourages participants to discover and connect with the parks they visit in their own way through a wide variety of activity options. Once they complete the programme, they receive a certificate and a souvenir. Activities are different at every place and most national parks use some activities as an opportunity to introduce themes and messages related to conservation. The programme allows participants to customize their experience, since completion is based on a selection of available activities. The programme is in place in 43 Parks Canada locations and in the first year, there were 78,000 participants. It was expanded to more than 60 parks in 2012 with more than 100,000 participants. Xplorers responds directly to input from urban Canadians parents, who desire experiences that appeal to their children, are educational and can be enjoyed by the whole family.

To meet the needs of visitors seeking a more comfortable and accessible camping experience, Parks Canada has started to offer diversified accommodation experiences. In 2011, the Agency developed guidelines to help Parks, Sites and Conservation Areas modernize their accommodation offer and adapt to changing demands and markets. In association with those guidelines, a number of tools have been developed to help managers in the field make sound decisions and to facilitate the implementation of diversified accommodation options. These include a fee structure, a unique accommodation offer (the Parks Canada *o*TENT*ik*) exclusive to Parks Canada, and a facilitated financial analysis tool to ensure diversified accommodation is offered on a cost-recovery basis. There are now unique accommodations in 10 parks across the country and 100 *o*TENT*iks* will be added at 10 locations in 2013. Demand for the offer has exceeded expectations. Feedback has been positive and responds to the desire many visitors have for comfort and ease while participating in the unique experiences that only Parks Canada offers.

Parks Canada's efforts to improve visitor experience opportunities across Canada's systems of national parks, historic sites and marine conservation areas are having a positive impact on Canadians and the Agency. The trend of declining visitation has been reversed in national parks and marine conservation areas with visitation growing from 11.9 million in 2008 to 12.5 million in 2011. At national historic sites, there have been some success stories at specific sites, but the overall trend has not been reversed. Despite this, it is clear that new offers, events and activities are in demand and generating visitation leading to positive experiences. Examples include Halloween programming at Lower Fort Garry NHS in Manitoba; an Aboriginal weekend at Rocky Mountain House NHS in Alberta; the cranberry festival in Fort Langley NHS in British Columbia; the murder mystery evenings at Les Forges du Saint-Maurice and the Farmer's Market in Coteau-du-Lac, national historic sites in Quebec.

Work to improve the opportunities that are meaningful and memorable for visitors is also happening in other

areas. Parks Canada's Quality Visitor Experience training programme continues to bring the visitor experience concept and related service standards to all employees. A visitor-centred approach is integrated with interpretive planning tools through professional education and interpretive product development. Parks Canada also has significantly enhanced their social media presence on YouTube, Facebook and Twitter. In all these cases, the core concepts of Visitor Experience and understanding current and potential visitors is key to the decision making process.

CONCLUSION

Stakeholders from other park systems can take several important lessons from this case study. Of primary importance is well-executed social science. All park agencies need to make a commitment to engage in and support social science research, conducted either internally or by research partners. Humans significantly affect biodiversity; knowledge of humans and their processes is equal in importance to the study of natural elements and processes. While Parks Canada has access to significant resources to fund national surveys and partnerships with private sector research partners, alternative, lower cost approaches to learning about visitors and non-visitors can be achieved through partnerships with universities, ENGOs, donor agencies and so on. Second, social science needs to be fully integrated into the planning, management and operations of protected areas. Good science is not effective if it is not applied in a holistic and systematic manner. At the heart of Parks Canada's visitor experience approach is a commitment to integrate knowledge about visitors and non-visitors with other facets of park management. Third, evaluation of the effectiveness of new programmes, such as the visitor experience programme, needs to have well-constructed indicators, and political and financial commitment to measure outcomes on an on-going basis. Parks Canada's commitment to monitoring learning, connection, number of visitors, visitor satisfaction, enjoyment, and conducting Visitor Experience Assessments, is an example of this. Finally, recognition that visitors are not a problem, but an opportunity to push forward the biodiversity conservation agenda worldwide needs to be embraced by park agencies. Visitation, if managed in a sustainable manner, is a powerful tool for fostering awareness, connections, environmentally friendly behaviour and support for protected areas and biodiversity conservation.

Parks Canada has embraced the concept of visitor experience as vital to the success of the NP, NHS, and NMCA treasures with which it is entrusted. Integrated with the protection and education elements of its mandate, the focus on visitor experience is how the Agency will ensure these special places are relevant to Canadians now and in the future. The agency has incorporated the visitor experience concept into its corporate direction and its national and local organization structure. It has developed a framework to implement a visitor-focused approach across the organization and it has undertaken national initiatives to improve the visitor experience. The Agency's work is starting to produce results and it will be critical to evaluate this approach over the next five years to ensure that Canada's national heritage protected areas are increasingly relevant to Canadians. Continual appraisal will be essential to evaluating the effectiveness of the visitor experience approach. In addition to monitoring sense of connection, visitor numbers, and visitor satisfaction, additional evaluation of outcomes related to learning and awareness as well as the more difficult to assess leap from connection to support would be valuable. Support is currently assessed by increases and decreases in the number of visitors frequenting Parks Canada's protected areas. More research in this area would help our understanding of the kinds of support that are inspired by the enhanced visitor experiences that are now offered. Support can include personal donations of money, voting patterns, petition writing, membership in parks support groups, and hands-on stewardship such as citizen science and other types of conservation volunteerism. Mapping these outcomes, especially over a longer time period of multiple visitor experience opportunities, would help park managers understand the more profound contributions an emphasis on visitor experience can have on Parks Canada's efforts to meet its mandate, including its work to maintain ecological and commemorative integrity.

Other park agencies throughout the world have engaged in varying degrees of visitor management and planning; however the extensive application of visitor experience theory and practice by Parks Canada is what makes this case study unique. Other park agencies should consider the opportunities the approach presents; the emphasis on visitor experience in tandem with the application of many sophisticated marketing approaches that enable directed outreach to key population segments and facilitate matches between visitors and the experiences they are seeking, can generate greater returns for biodiversity conservation and achievement of the Aichi targets.

NOTE

This paper presents an update to information provided about Parks Canada's visitor experiences programmes detailed in "Managing for Visitor Experiences in Canada's National Heritage Places", published in the Jager, E. et al., (2006). *IUCN Parks Magazine*, 16(2): 18-24, and Jager, E. and Sanche A. (2010). "Setting the Stage for Visitor Experiences in Canada's National Heritage Places," published in *The George Wright Forum*, 17 (2): 180-190.

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RESUMEN

Desde 2005, Parks Canada ha venido afrontando el reto de seguir siendo relevante para los canadienses. Las visitas al sistema de parques nacionales, sitios históricos y áreas marinas de conservación de Canadá han disminuido, debido en parte a un contexto social cambiante. La agencia Parks Canada cree que promoviendo las visitas se incrementará el aprecio y la conexión de la gente con los parques de Canadá. Se sugiere que esto podría devenir en un mayor apoyo para el sistema de sitios del patrimonio natural y cultural de Canadá. Parks Canada ha adoptado el concepto de experiencia del visitante para ayudar a contrarrestar esta disminución en las visitas. Junto con los elementos de protección y educación de su mandato, el enfoque basado en la experiencia del visitante contribuirá a fomentar el interés de los canadienses en estos lugares especiales, ahora y en el futuro. Este artículo describe cómo se integra la experiencia del visitante en el mandato de Parks Canada y cómo se lleva a la práctica en cada una de sus

áreas protegidas. El documento analiza la labor de la agencia para mejorar la experiencia del visitante en todos sus parques y pone de relieve cómo se evalúan los resultados derivados de dicha iniciativa. Las visitas a los parques, los ingresos que ello produce y la sensibilización y conexión con la biodiversidad generada entre los usuarios de los parques es un objetivo importante para todos los países. La participación de Parks Canada en la investigación en ciencias sociales y la aplicación avanzada de un enfoque basado en la experiencia del visitante para la gestión de los parques ofrece ejemplos de buenas prácticas que podrían ayudar a otros países para el logro de las metas de Aichi.

RÉSUMÉ

La reconnaissance officielle de dizaines de milliers d'aires protégées pour répondre à l'Objectif 11 d'Aichi augmentera en conséquence les besoins en gestion compétente. La plupart de ces aires protégées s'appuieront sur le tourisme et la fréquentation pour au moins une partie du financement nécessaire à leur gestion, également préconisé dans l'Objectif 11. La gestion du tourisme et de la fréquentation demande un certain nombre de compétences indispensables qui offrent des cadres de direction. Ces compétences incluent la pensée stratégique, la planification et les domaines opérationnels. Il est peu probable que l'enseignement supérieur offre, à court-terme, les compétences éducatives nécessaires. Il est donc indispensable de développer des programmes de formation continue et des communautés de pratique afin de répondre à ce besoin.

BUILDING THE CAPABILITY TO MANAGE TOURISM AS SUPPORT FOR THE AICHI TARGET

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ABSTRACT

Gazetting the tens of thousands of protected areas needed to meet Aichi Target 11 will increase the need for competent management. Many of these protected areas will rely on tourism and visitation for at least part of the funding needed for the effective management also called for in Target 11. Managing tourism and visitation requires a number of needed competencies that provide frameworks for leadership. These competencies involve strategic thinking, planning and operational domains. Given that tertiary education is unlikely to provide in the short term the kind of educational background needed, developing continuing education programmes and communities of practice can help fill this need.

INTRODUCTION

What capabilities and proficiencies do managers of protected areas need to help achieve the Aichi Target through tourism and visitation? This question is central to the global discourse about the nexus of tourism and natural heritage protection—an interface many see as potentially beneficial as it may be damaging (Bushell & Eagles, 2007). For tourism to meet its useful promise, it must be understood within a complex political, social and environmental dynamic, as one of many expectations of protected areas, that carries heightened hopes that tourism will not only provide needed funding for management but also serve as an engine of economic development and benefits for nearby residents.

These expectations exist in a world that is contentious, changing, complex and uncertain; where the future will not be like the past; where problems are wicked and messy; and where there is often little agreement among scientists about cause-effect relationships and society frequently lacks consensus on the objectives for specific protected areas. Within the protected area management field itself, there are differences about the role of tourism and the need for management. During the 2003 World Parks Conference sessions on capacity building, little mention was made of the need for capabilities to manage tourism despite the fact that tourism exists in many areas. Some managers hold that that the role of protected areas to preserve natural heritage relegates tourism to a minor use. Others are more accepting (Luo & Lawson, 2011).

Within this context, managing protected areas for tourism and visitation in a way that minimizes their negative impacts on biodiversity, enhances support for management, provides visitors with opportunities to learn about the role of biodiversity in human life and provides local residents with opportunities to improve their livelihoods is imperative. Many of the world's 157,000 protected areas now listed in the World Database on Protected Areas (World Conservation Monitoring Centre, 2012) have some potential for tourism development. Tourism management must be viewed as an integrated component in the stewardship of these areas.

The current need is large because many managers have little background in tourism and visitation and see a

International Seminar on Protected Area Management (USA) participants discuss the capacity challenges in private protected area management © Steve McCool

substantial need for greater capability (Pitkin, n.d.; McCool, 2008). The WCPA Capacity Theme description notes that, *"A particular area that requires attention is to build up the skills of staff involved in enhancing visitor experiences"* (World Commission on Protected Areas, 2012). This need will grow enormously over the next few years as countries, seeking compliance with Aichi Target 11, gazette new areas and gear up for their stewardship. In addition, the Aichi Target 11 sets a goal of effective and equitable management, which is critical to maintain a variety of park values, including biodiversity conservation (Woodley et al., 2012). Even today, perhaps only one-quarter of existing protected areas are managed with a high degree of effectiveness (Leverington et al., 2010), leaving one to wonder how effective the management of new areas will be.

Given projections for continued growth in international travel (at an average rate of 3.9 per cent per year 2010-2030; UNWTO, 2011), we expect that many of the new areas will be developed to meet this demand. For example, growing affluence in China has greatly increased visits to protected areas in Taiwan, nearly overwhelming their capability to offer high quality experiences (Hsu et al., 2011). And, given the generally acknowledged interest in nature-based tourism, visitors would likely hold expectations for experiences based in viewing, appreciating and understanding natural heritage (Carpentier, 2010). These expectations would provide a foundation for meeting several of the Aichi Targets concerning awareness of biodiversity and human impact on it. In this paper, we frame the challenge of building the professional competency needed to manage tourism in protected areas within the context of the Aichi Target. The Target itself recognizes the importance of managerial capacity in both Strategic Goal E *("Enhance implementation through … capacity building")* and in Target 11 which calls for protected areas to be 'effectively and equitably managed'.

A variety of actors are involved in managing tourism in protected areas: local businesses that provide needed services (e.g., food, transportation, lodging, interpretation); community and destination marketing organizations 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

The demands of tourism in this private nature reserve in Namibia are perhaps focussing too much on visitor experience and not enough on species conservation © Sue Stolton

and exploit new opportunities; and management which 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.

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. For example, in Mozambique, as in many other countries, management of concessions is an important task (Spenceley et al., 2012). Management bears this responsibility while working with the unique constellation of actors involved in tourism in its region. 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). Budgets are often minimal, and society is growing to expect management to be more efficient. Building professional competency is one way of becoming more efficient in decision making and implementation.

FRAMING THE CAPACITY BUILDING CHALLENGE

In order to meet the Aichi Target, capacities will be needed in a variety of domains, including governance, institutional policy, planning, managerial, and others. Enhancing management capability is a significant challenge given the dynamic character of the political, social and biophysical context in which interpretations of policy and law must be made, the potential for surprises and unintended consequences and the need to move toward resilient social-ecological systems and to share the benefits from them. For

example, a group of southern Africa universities (University of KwaZulu-Natal, Monash University South Africa, University of Namibia, and Copperbelt University) have joined with the University of Montana in creating the INSAKA consortium to build capacity to better share benefits from these systems.

A variety of competencies are increasingly viewed as essential components of capacity (Competencies Working Group, 2002). We focus here on professional competencies because it is the management agency which generally holds the legal responsibility and accountability for sustaining the natural heritage in these areas and for ensuring that day-to day-decisions are effectively implemented and the consequences are equitably distributed. Ultimately, however, the aim of capacity building programmes is to improve the effectiveness of protected area management. In the Kingdom of Jordan, for example, the Royal Society for the Conservation of Nature (who manages many of the natural reserves in the Kingdom) has developed a Nature Academy to enhance the effectiveness of protected area management in the mid-East.

In this paper, we focus on 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), or as Horton and others argue (2003, pg. vi), 'thinking evaluatively'. These latter capacities are the less tangible ones and include capacities to:

- Learn, focus and strategize;
- 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 (Wigboldus et al., 2010).

Our suggestion of emphasizing critical thinking skills for protected area managers is consistent with evolving perspectives on capacity building that have ranged from institutional strengthening to training people in northern universities to physical skill development to constructing knowledge networks (Blagescu & Young, 2006). It is also consistent with growing recognition that tourism exists within a complex, adaptive system characterized by uncertainty (Farrell & Twining-Ward, 2004; Plummer & Fennell, 2009; Strickland-Munroe et al., 2010). Adapting to the surprises that are inevitable in such systems, developing responses to new expectations and demands and forging alliances for conservation requires management that encourages critical thinking, evaluation and thoughtful planning.

Middle management plays an essential role in protected area agencies, forming the, 'lynchpins of organizational change' (Luscher & Lewis, 2008, page 221; Huy, 2002) needed to respond to the new challenges and opportunities presented by the Aichi Target. Management will need to 'make sense' of these challenges, surprises and unanticipated events and frame them in ways that give rise to new insights and useful responses (Luscher & Lewis, 2008). Because many situations are likely to be ambiguous, both in terms of the problem source and its solution, abilities to engage in double loop learning are indispensable in understanding underlying trends and driving forces (Argyris, 1993).

OECD (2006, pg. 12) defines capacity development (or building) as, *"the process whereby people, organizations 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, n.d.; Strasdas et al., 2007) except that it focuses on development of critical thinking skills. Critical thinking involves *"reasonable reflective thinking focused on deciding what to believe or do"* (Ennis, 1993, pg. 180).

In Jordan, Nature Reserve managers identify needed topics for a new curriculum on protected area management © Steve McCool

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 leave. But building capacity should occur within a programme (Ackoff, 1996) rather than being viewed as an event.

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. For example, protected areas in Iceland (Box 1) are in a different stage of development and management than those in North America. Protected areas in Africa face a different mix of challenges and opportunities than those in Asia. And developing countries like China (Box 2) and Taiwan are vulnerable in conserving biodiversity because of 'dominant economic development discourses' that emphasize development for income and foreign exchange purposes (Luo & Lawson, 2011).

And yet, as powerful as the argument for capacity building may be, a variety of potential barriers to implementing effective capacity development programmes exist. These may include an organizational culture that does not value learning, supervisors who are concerned that educated subordinates may capture their own jobs, priorities of NGOs and development organizations that favour institutional and legal capacities over managerial ones, an event-oriented approach to capacity building, lack of adequately trained instructional staff, a pedagogical approach that is not built upon adult education principles, and paradigms of management and capacity building no longer appropriate for 21st century protected area management. Organizational learning disabilities (Senge, 1990a) often develop into an environment that provides few incentives for individuals to seek additional proficiencies, prevents application of what they may learn or does not provide opportunity for building confidence. These barriers must be addressed as part of the process to re-invent professional development within an organization.

In summary, professional capacities or competencies to manage tourism and visitation recognize 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 skilful 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.

TYPES OF PROFESSIONAL COMPETENCIES

While many governmental and non-governmental organizations maintain training programmes, few systematic needs assessments exist in the published literature concerning what competencies protected area managers require for addressing tourism and visitation. In

BOX 1. DEMAND FOR MANAGERS WITH INTEGRATIVE PLANNING COMPETENCIES WILL INCREASE—AN EXAMPLE FROM ICELAND

In Iceland, wilderness and natural areas are valuable for both tourism and hydro-electric and geothermal power production. During the latter half of the last century several glacier-fed rivers in the Icelandic Highlands have been dammed and hydropower plants built. Now there are plans for further exploitation at many of the major glacial rivers in the Highlands, as well as for more power plants at several of the biggest geothermal areas. Worldwide the demand for green energy is steadily increasing and recently the idea of a submarine cable connecting Icelandic to the European energy market has been revisited. If realized it will be the longest submarine cable in the world, at over 1600 km (Sæþórsdóttir and Ólafsson, 2010a). However, both power plant development and increased tourism utilize nature and reduce the naturalness of a place and requires that the development sites have to be carefully chosen (Sæþórsdóttir, 2010a; Sæþórsdóttir and Ólafsson, 2010a).

The Icelandic tourism industry has complained about being ignored when it comes to serious decisions regarding land-use planning and utilisation of natural resources, and that its economic and social significance has been overlooked. As wild and untamed natural areas are an important resource for the tourism industry (Sæþórsdóttir, 2010b), their interests need to be taken into serious consideration when planning land use in the Highlands. If the aim is to build Iceland's economy on both power intensive industry and nature-based tourism, these conflicts have to be addressed and the location of new power plants needs to be carefully planned (Sæþórsdóttir and Ólafsson, 2010b).

the following paragraphs, we describe a set of professional competencies (the things that managers do) that are needed to manage protected areas. These competencies were identified in several workshops and assessments (McCool, 2008; McCool et al., 2011; Kopylova & Danilina, 2011) through reviewing the literature, and through our own personal experience working within or with protected area agencies. We recognize that (1) no one manager can possibly hold all these competencies; (2) the competency needs will vary from area to area as the context shifts, and (3) the level of competency needed may vary as well. In listing these competencies, our goal is not to be prescriptive, but rather to provide a foundation for acknowledging that*, "we need to develop the capacity to manage not for a static world, but rather to manage adaptively in a world of continual and in some cases accelerating global change"* (Lillo et al., 2004, pg. 138).

We have identified three areas of professional competency needed: strategic, planning and operational. Strategic competencies 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. Planning competencies 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. Operational competencies address the day-to-day needs of managing tourism and visitation.

We emphasize here that each of these competencies focuses on the evaluative or critical thinking discussed below and would be based on appropriate frameworks for applying such thinking. Frameworks help management work through challenges, suggest questions to ask, encourage deeper understanding about trends and structures underlying individual events, and provide routes that eventually lead to solutions.

We have organized the various competencies into three categories: strategic, planning, and operational. The following discussion presents a brief overview of each competency by category.

STRATEGIC

Developing a vision for the area: While protected areas often have legislation establishing them, the values for which the area was established are often only vaguely defined. Therefore, a needed competency is the ability to articulate a more specific vision and mission. For example, the management plan for the Point Sable Environmental Protection Area in Saint Lucia envisions integration of both biodiversity protection and enhancing community livelihoods in implementing management (Gardner, 2009). This vision provides the direction and motivation for all the visitor and tourism management activity that occurs within and adjacent to the site. Building a vision that constituencies can agree to can be difficult. It requires leadership, communication skills, ability to work with various constituencies and building trust among participants in planning processes.

Visitors seeking information at Zion National Park, USA © Elizabeth Halpenny

Partnership/stakeholder outreach and engagement: Partners are essential for nearly every aspect of protected area management. Whether it is working with partners or engaging constituencies and members of civil society, managers need skills in interpersonal relationships, conflict resolution and communication. Given the emphasis recently on community engagement and working with the tourism industry to secure sustainable sources of funding, the ability to generate enthusiasm, address community concerns and respond to complaints has developed into an important proficiency. Cooperation with other government agencies, NGOs and other important constituencies is important in many places. In some situations, needed scientific support is conducted by universities or independent scientific organizations. Managers need communication skills that not only will help them understand research results, but will also be useful in communicating information needs to scientists so they conduct research valuable in addressing issues.

BOX 2. CHANGE IN MANAGEMENT APPROACH BRINGS RAPID GROWTH IN TOURISM-BASED REVENUE USED TO ENHANCE CONSERVATION

Huang Shan (or Yellow Mountain World Heritage Site in China provides one example of how approaches to management can lead to dramatic changes in revenue generation. We quote from Luo and Lawson (2011, pg. 306-307): "As one of the most beautiful and famous scenic sites in China, it has been listed as a double UNESCO World Natural Heritage and World Cultural Heritage site as well as a World Geological Park. However, it had been in debt for a long period under the centralized management system of the Chinese Government. In 1996, the Huang Shan Tourism Development Co. Ltd was established not only to charge entrance fees to the area, but also to manage its scenic areas, to run restaurants and tour agencies as well as to construct and maintain the cableways. By the end of 2000, the company had paid off the debt of 190 million RMB (approximately $30 million US) and expanded its total capital by 5.38 times with the help of money invested from the stock market. Considerable financial investment in the park enabled conservation work to be undertaken."

This change, which may or may not be appropriate in other contexts, could only come about with managers and policy-makers shifting their vision, focusing on needed competencies and experimenting with an alternative to a failing system. It required acknowledgement that then current system was no longer working and was based upon a critical assessment of what needed to be done.

Negotiation: Much of planning and management involves negotiation—working with partners, constituencies, personnel from other agencies and even politicians—to ensure that the goals established for a protected area are achieved. Negotiation may be viewed by some as compromising, but by others as seeking acceptable routes to desired ends. In many protected area situations, there may not even be social agreement about goals, in which case the manager needs to tread sensitively in working with constituencies in building consensus, not only about goals but also the various means to achieve them.

Understanding the Context: Competent decisions are made with an understanding of the social, political, economic and environmental context. Managers need to know about local and regional trends, anticipate budgetary and policy changes, and sense local community attitudes and perceptions. For example, in parts of Africa, both conventional government and traditional authorities are involved in many land use decisions. Their respective roles must be understood in many protected area problems (Ntsebeza, 2004). In other settings, some decisions may incidentally favor some groups or villages over others, potentially creating a sense of unfairness. Past dealings with a protected area agency may have led to feelings of distrust (Stern, 2008).

Innovation and Entrepreneurship: Domestic and international funding for protected areas development has been declining since the 1990s (Emerton et al., 2006). The significant increase in the level of public debt in regions such as the Caribbean (Sahay, 2005), suggests that there will be further reduction in government funding support for protected areas management. The global financial crisis that started in 2007 has resulted in increasing public debt and austerity measures in even the more developed countries, with forecasted adverse impacts on protected areas staffing and operations. In the face of this trend, coupled with the rising and broadening expectations of

A workshop involving the private sector in World Heritage site tourism management (Switzerland), managers and tour operators engage in a lively debate about roles and needed professional competencies © Steve McCool

Participants in the International Seminar on Protected Area Management (USA) discuss management of wildland fire next to communities © Steve McCool

protected areas, managers must be creative in protecting biodiversity and in providing opportunities where appropriate for high quality visitor experiences. For example, the Finland protected area authority, Metsähallitus Natural Heritage Services, applied the concept of Limits of Acceptable Change, and at the same time created two progressive quality programmes, Green Destination Quality Net (Green DQN™) and Green Destination Management Net (Green DMN®), which effectively bring together local actors from the tourism industry and the nature conservation field to promote sustainable tourism (Tapaninen, 2010).

PLANNING

Integrating Development and Protection: Undoubtedly, many of the sites designated to meet Aichi Target 11 will be located within IUCN's categories of V (Protected Landscapes/Seascapes) and VI (Protected Area with Sustainable Use of Natural Resources), simply because many areas of the earth that are not now formally protected are occupied or used as sources of natural resources and ecosystem services. Gazetting these sites will likely not involve removal of local populations to the extent that has been conducted in the past. Designation then will require more consideration of how developmental needs for sustenance, shelter and employment can be integrated into the protection mission. A particular thorny question involves competition between tourism and other resource uses—competition that is likely to intensify as demand for ecosystem services accelerates (Box 1).

Knowledge of facility and infrastructure design and construction: If a vision gives us guidance of where to go, developing infrastructure and facilities for visitor use and tourism is one of the pathways to get there. Infrastructure involves roads, highways, trails, visitor centres, administrative facilities, maintenance sheds, toilets, sewage treatment, water systems, signs, parking lots, computer networks and intelligent transportation systems. Knowledge of this technology and the requirements for construction and development is a fundamental requirement of a competent site manager.

Not only must a manager understand how such development would proceed, but awareness of maintenance is also a part of the needed skill set.

Considerations of operational costs and maintenance have to be factored into the design and siting of facilities. In addition, there is a greater awareness and constituency demands for facilities to be 'green' or made using sustainable processes and local materials to reduce carbon footprints.

Visitor use and tourism planning: Developing and implementing plans for visitors and tourism is a challenging task, often occurring within a dynamic, contentious setting. Managers must often make decisions between competing goals–protecting biodiversity, but also allowing access for visitors to understand, appreciate and enjoy it. Given the rate of change in technology and social preferences, critical thinking skills are needed to ensure plans are adaptive and responsive to shifts in visitor behaviour that are currently unanticipated. Nearly all protected areas require some level of competency in developing and implementing visitor use plans.

Making tradeoffs among competing goals is not an easy task, and requires not only technical information about the consequences of varying tradeoffs but a variety of value judgments about the social utility, costs and benefits of differing scenarios. Aichi Target 4 deals in part with reducing impacts of use of natural resources; good tourism planning reduces impacts through siting facilities and encouraging appropriate visitor behaviour.

Planning requires both technical skills (including knowledge of visitor preferences, expectations and use patterns) and public engagement proficiencies, including negotiation. Knowledge of value systems, the interplay of biodiversity with other site values, and the consequences of varying alternatives on communities and values are important proficiencies in the manager's repertoire of planning skills. Planning for visitation also includes understanding the key interpretative messages to be delivered to visitors.

An example may be the dramatic changes in youth participation in nature-based activities brought on in part by new technologies. It is important that managers are prepared to make decisions with respect to increasing demands for access to cell phone and internet in protected areas and the potential conflicts originated between different groups of visitors as a result of this situation. Managers also need to be prepared to understand this new reality in order to be able to create, evaluate and develop alternatives to the engage young urban clientele whose focus is on technological forms of recreation, and exploit these interests to stimulate enjoyment of protected areas.

Education and interpretation: This competency is significant given Aichi Target 1, Building Awareness of the Value of Biodiversity. Presentation of the biodiversity and natural values within an area requires that information about them be provided to visitors and other constituencies. This is commonly done through provision of educational and interpretative programmes that usually involve naturalists/guides, signage, visitor centres, trails, brochures and electronic media. Such programmes provide visitors with the opportunities not only to learn about the values contained within the site, but also to appreciate them. Further, interpretation often has an inspirational component, where visitors are encouraged by the programme to seek additional information or even take action for protection of the visited site or other sites.

While many sites do have active educational programmes, changing contexts have raised new questions, issues and opportunities about how interpretative material can be presented. For example, can a site set up a not-for-profit and administratively separate educational institute? This type of institute may provide educational programming, such as courses, not normally within the purview of agency regulation.

Monitoring: Monitoring may be defined as the periodic and systematic measurement of indicator variables, tabulation of the resulting data and evaluation of the data to determine trends and if actions are needed. Monitoring is involved in a variety of contemporary notions such as adaptive management, Limits of Acceptable Change and the Visitor Experience and Resource Protection visitor planning frameworks (McCool et al., 2007). Protected area managers should have knowledge of the 'theory' of monitoring, how to capture the information gained and how to modify a visitor use plan if needed (Hsu & Li, 2011).

Data could include spatial and temporal patterns of visitor use; impacts of visitors on World Heritage areas of outstanding universal value or on visitor experiences and the biophysical condition of the area; attitudes and beliefs; and demographic characteristics of visitors.

OPERATIONAL

Revenue generation mechanisms: Many protected areas lack adequate and sustainable sources of funding needed for their stewardship. Given that management of

The awarding winning Napo Lodge within the Yasunì National Park, Ecuador © Nigel Dudley

these areas requires a substantial infusion of funding to support operations needed to protect values contained within them, managers should have an awareness of the alternative mechanisms for raising and generating revenue. Of primary interest are methods of raising funds from tourists and the tourism industry which would help in achieving Aichi Target 20 which calls for enhanced financial resources devoted to conservation. Generating revenue also encompasses enhancing economic opportunity in the local area, particularly for vulnerable populations, which is partly reflected in Aichi Target 2. An example of one site's experience in revenue generation is depicted in Box 2.

Concessions (such as lodges and tour guides) capitalizing on increasing demand for nature-based experiences are examples of methods to increase revenue to protected area organizations. But managing concessions is an often challenging task, requiring not only legal expertise, but knowledge about business practices as well (Spenceley et al., 2012). Poorly designed concessions agreements are found nearly everywhere, with loopholes, unfair competition, and potential for corruption possible, for example as fee revenues may become 'lost' in various exchanges or in monitoring of contracts (Eagles, 2009). As such, Buckley (2010) suggested that parks agencies need to exercise caution in political negotiation, and apply practical tests of sincerity to tourism enterprises who want to operate there.

Administration, human resource management/ staff capacity building, and leadership: The management organization varies from small, nearly single person staffs, to very large organizations that may have hundreds of employees in a variety of divisions and departments. Administering this organization, regardless of size, is ultimately the manager's responsibility. Much of this administration has to do with human resource management (e.g., hiring, advancement, and evaluation), building the technical competency of the staff itself and providing overall leadership and even inspiring the staff to keep it operating at a high level of productivity.

Leadership is an important quality of an effective site manager. But there are real questions about training people to be inspirational, courageous and visionary. It is more realistic to expect managers to hold abilities to structure organizational environments that encourage employees to do their best, to work with staffs in identifying strengths and weaknesses, and in implementing strategies to deal with administrative and human resource issues.

Senge (1990b, pg. 9) argues that the leader's 'new work' is building a learning organization. These leaders, Senge notes, *"are responsible for building organizations where people are continually expanding their capabilities to shape their future—that is leaders are responsible for learning."* Senge's vision of leadership is thus central to a

functioning, efficient and productive protected area organization in the 21st century, where professional staff members are encouraged to gain the competencies to deal with complexity, change and uncertainty.

Financial management and business planning capacity: Protected areas, as noted above, require funding to support operations and infrastructure development. Regardless of the source of funding, the expenditure of funds must be directed by accepted financial management practices. Such practices, actually good business principles, are fundamental to efficient and appropriate use of the funds available, ensuring they are spent on appropriate materiel, personnel and services. Thus, understanding financial management principles and processes is an important skill needed at the site management level.

In addition, since many protected areas are managed by public agencies or parastatal organizations, there is a need for transparency and accountability in spending of funds. This means that financial management and spending procedures must be open to public scrutiny and regular audits. Transparency of the financial management systems is an increasingly important issue, as more protected areas are being managed by non-governmental organizations, which traditionally are not required to meet the same standards as public agencies.

Marketing: Marketing is an important technical proficiency needed by managers. While marketing is commonly miscast solely as promotion, it is about making connections between people and the products (the experiences with natural heritage) they desire. Marketing involves the 4-"Ps": price, product, promotion and place. To implement a successful protected area marketing programme, site managers need some understanding of how these fit together in a comprehensive and systematic manner.

Because marketing strategies also affect the viability of the tourism industry, managers need to understand how the industry is structured (e.g., tour operators, wholesalers, etc.) as well as their views about the viability of different market segments. Thus, working with the tourism industry is an essential part of developing a marketing strategy. Understanding branding, for example, can help sites produce greater revenues, protect values, and influence visitor expectations and behaviour at World Heritage Sites (King et al. this issue).

Regulation and enforcement: Protected areas are by definition different than the areas within which they are situated. Visitors entering them are subject to a number of sanctions and norms that are different from their homes. Rules, regulations and codes of ethics are all designed to preserve the values contained in the area. Managers need to hold proficiencies with regard to development of rules or alternative actions that are appropriate to protect these values. Administrative procedures are important technicalities in development of rules and penalties when rules are broken. Managers must communicate to agency counsel the need for certain rules and the behavior that should be prohibited.

Enforcement of rules is an art and skill itself. Should violators be treated in a 'heavy-handed' manner? Should rangers and wardens seek to understand reasons for violations? Should there be an educational component to an enforcement action? Therefore, managers need proficiencies in developing an enforcement approach that is effective, but respectful and gentle at appropriate times, emphasizing education and information. However, in the case of the cost of the enforcement exceeding the revenue it raised, managers may consider the issue of equality and allow access for all instead of insisting on cost recovery (Hughes & Carlsen, 2011).

A final aspect of site regulations is that dealing with guiding and tour operators. What licensing is required? Who can provide guiding services? What quality assurances are there for visitors when selecting guides? What conditions are required for an operator to enter? What about use fees? This set of regulations requires substantial technical proficiencies, as raised earlier, in dealing not only with the tourism industry, but understanding visitor experiences and developing an appropriate and effective regulatory environment.

BUILDING A COMMUNITY OF PRACTICE

The competencies described above enable managers to meet the challenges of their jobs, to think and reflect critically on the inevitable problems and opportunities arising in the course of protected area stewardship and frame problems in ways in which they can be resolved. However, enabling a manager and achieving more effective and efficient levels of performance are two different things.

The wide diversity of needed competencies will challenge even the most learning-focused organization. Managers need help in testing ideas, experimenting with various

visitor management approaches, applying research and otherwise wrestling with complex and dynamic situations. A community of practice can provide that help. Wenger and Snyder (2000, pg. 139) define such communities as, *"groups of people informally bound together by shared expertise and passion for joint enterprise"*. Improving performance in a community of practice is facilitated through voluntary engagements, critical discourse, shared experiences and *"creative ways that foster new approaches to problems"* (pg. 140). The output is enhanced knowledge and learning, something difficult to quantify and measure.

A community of practice, as Wenger and Snyder (2000) state, is not a team within an agency nor a formal work group initiated to develop a product, service or policy. What makes a community of practice distinctive is the passion with which members pursue learning and excellence in a voluntary way. Such a community of practice including managers, scientists and non-governmental organizations operating on a regional basis, would increase confidence and raise the skill with which decisions are made. Developing and maintaining a community of practice works only if membership is voluntary and potential members share a commitment to learning.

Communities of practice make good complements to formalized continuing education and professional development programmes; in a sense they serve as a kind of 'help line'. Achieving the Aichi Target will require tens of thousands of new managers, many with responsibility in managing tourism and visitors. Tertiary education does not have the capability of delivering this number of appropriately trained people over such a short time frame. Communities of practice coupled with well-structured continuing education programmes are two ways of qualifying the needed management expertise.

Building opportunities for managers to gain the competencies and critical thinking skills will require organizations committed to not only protected area management but also to inculcating a culture of learning. Organizations, such as Brazil's Instituto Chico Mendes de Conservação da Biodiversidade (which manages nationally designated protected areas in Brazil) with active professional development programmes are more likely to succeed. Jointly operated continuing education centres—involving both universities and agencies (or NGOs)—balance the practical with the conceptual and encourage debate and the critical thinking essential for double loop learning.

Few continuously active capacity building programmes exist. The Center for Protected Area Management and Training located at Colorado State University in the U.S. offers a month-long Spanish language course in management. Offered for over 20 years, the course emphasizes 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 in the U.S. Operating for over 13 years, it emphasizes transboundary planning and climate change, integrated planning, community engagement and tourism management. Both 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.

With bureaucracies evolving to be focused on a more horizontal and less vertical style of decision-making, professional staff must hold the critical thinking skills to make informed decisions. Relying on tourism and visitation will require management be competent in that area to ensure opportunities for quality experiences, minimize impact, and appropriately administer concessions and operators. Protected area bureaucracies can provide the discretion for these decisions, but must also arrange for staff to hold the competency to do so. Perhaps only about one-fourth of the world's protected areas are managed effectively (Leverington et al. 2010). We cannot afford to embark on preserving the remaining biodiversity only to find our efforts have not been effective.

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RESUMEN

La declaración oficial de decenas de miles de áreas protegidas necesarias para cumplir con la Meta 11 de Aichi aumentará la importancia de la buena gestión. Muchas de estas áreas protegidas dependerán del turismo y las visitas para la generación de buena parte de los fondos necesarios para la gestión eficaz que también exige la Meta 11. La gestión del turismo y las visitas precisan de una serie de competencias para facilitar marcos de liderazgo. Estas competencias suponen pensamiento estratégico, planificación y ámbitos operativos. Dado que es poco probable que la educación superior pueda proveer en el corto plazo el tipo de formación académica necesaria, el desarrollo de programas de educación permanente y la creación de comunidades de prácticas pueden ayudar a satisfacer esta necesidad.

RÉSUMÉ

La reconnaissance officielle de dizaines de milliers d'aires protégées pour répondre à l'Objectif 11 d'Aichi augmentera en conséquence les besoins en gestion compétente. La plupart de ces aires protégées s'appuieront sur le tourisme et la fréquentation pour au moins une partie du financement nécessaire à leur gestion, également préconisé dans l'Objectif 11. La gestion du tourisme et de la fréquentation demande un certain nombre de compétences indispensables qui offrent des cadres de direction. Ces compétences incluent la pensée stratégique, la planification et les domaines opérationnels. Il est peu probable que l'enseignement supérieur offre, à court-terme, les compétences éducatives nécessaires. Il est donc indispensable de développer des programmes de formation continue et des communautés de pratique afin de répondre à ce besoin.

SUSTAINABLE TOURISM CAPACITY BUILDING FOR MARINE PROTECTED AREAS

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ABSTRACT

Marine protected areas and networks can safeguard natural and cultural resources and foster collaborative learning to address a number of biodiversity-related goals. Sustainable nature-based tourism can aid biodiversity protection, while offering local communities opportunities for social and economic benefit. However, to be effective, each enterprise requires appropriate knowledge, skills, abilities, and institutional arrangements to define and solve problems, and employ legitimate participatory processes that support cooperation and afford stakeholders influence and benefit for their involvement. The NOAA International MPA Management Capacity Building Program works with partners at a regional 'seascape' scale to develop capacity for MPA networks. The sustainable tourism curriculum emphasizes the challenge and necessity of balancing competing goals – biodiversity protection and sustainable use. The framework helps managers develop capacity to engage stakeholders, identify conservation and tourism targets, define potential threats and impacts, establish objectives, and select appropriate management applications. On-going evaluation actions inform programme elements to address regional priorities and learner needs, and support long-term capacity development.

INTRODUCTION

Capacity development for biodiversity conservation is a global priority. Threats to biodiversity from landscape fragmentation, rapid economic development, resource depletion, and climate change require new approaches to maintain and safeguard ecosystem processes and ecosystem services, vital for ecological integrity and human wellbeing (Naeem et al., 2009). Marine protected areas (MPAs) are established and implemented to support a number of different conservation-related objectives, including maintenance of biodiversity; habitat protection and restoration; cultural and historic resource preservation; scientific research and education; delivery of ecosystem services; and sustainable multiple-use and economic development. However, the effectiveness of MPAs in achieving stated objectives is often limited by lack of capacity in key competency areas. Sustainable tourism can serve as a mechanism to aid biodiversity protection, while simultaneously affording opportunities for economic benefits and increased collaboration between protected areas and local communities. However, to effectively meet the increasing demand for nature-based tourism marine and coastal areas, MPA managers and their partners must have the appropriate capacity. Targeting conservation professionals from protected areas, state and local authorities, environmental nongovernmental organizations (ENGOs), and their partners, the International MPA Management Capacity Building Program works with hosts in Asia, Oceania, North, Central and South America, Europe, and Africa, to develop local and regional capacity for planning and management of marine protected area networks. This paper will focus primarily on the sustainable tourism training in the context of the Convention on Biological Diversity (CBD) strategic goals and Aichi 2020 Targets (Secretariat of the Convention on Biological Diversity, 2012) sustaining natural and cultural heritage resources essential to achieving environmental, social, and economic objectives.

Participatory mapping to inform sustainable tourism planning for local community-based mangrove reserve in Koh Kong Island, Cambodia © T. Fish

Understanding the concept of carrying capacity in Gorgona National Park, Colombia © A. Walton

MARINE PROTECTED AREAS AND TOURISM

Worldwide, MPAs – and MPA networks – are increasingly recognized as a valuable science-based resource management tool for supporting biodiversity and ecosystem services protection and ecosystem-based conservation (Agardy, 1997; Gaines et al., 2010). By engaging partners across multiple sites at national and regional scales, MPA networks foster communication and collaborative learning, as well as increased opportunities to address ecological, social, managerial, and economic goals (Feurt, 2011; IUCN-WCPA, 2007; IUCN-WCPA, 2008).

Participants at the Fifth World Parks Congress in Durban, South Africa articulated a 'Global Commitment for People and Earth's Protected Areas' through the Durban Accord (IUCN, 2003). In alignment with previous calls to action for marine and coastal resource protection and biodiversity conservation (e.g., COP 2 Decision II/10, Jakarta Mandate; CBD COP IV/5, Programme of Work), the recommendations from the 5th World Parks Congress and Durban Action Plan called for the establishment of a global system of effectively managed and representative networks of marine and coastal protected areas by 2012 (IUCN, 2004; Vierros, 2006). However, despite an annual increase in MPA areal extent of 4.6 per cent since 1984, recent assessment of MPA coverage indicates that global representation remains less than one per cent of total ocean and two per cent of Exclusive Economic Zone extent, respectively (Wood et al., 2008; Laffoley et al., 2008). Additionally, the WCPA-Marine thematic team reported in their *MPA Plan of Action* that, five years after the Durban Accord and Fifth World Parks Congress, *"global*

Developing coordinated tourism plans at the MPA network level in Bird's Head Seascape, Papua, Indonesia © A. Walton

Developing MPA vision and asset inventory for sustainable tourism plan in Nui Chua National Park, Vietnam © T. Fish

Table 1. Recommended capacity development and assessment typology *(adapted from GEF, 2011).*

Measurable Capacities	Description
Capacities for engagement	Capacities of relevant individuals and organizations (resource users, owners, consumers, community and political leaders, private and public sector managers and experts) to engage proactively and constructively with one another to manage a global environmental issue.
Capacities to generate, access and use information and knowledge	Capacities of individuals and organizations to research, acquire, communicate, educate and make use of pertinent information to be able to diagnose and understand global environmental problems and potential solutions.
Capacities for policy and legislation development	Capacities of individuals and organizations to plan and develop effective environmental policy and legislation, related strategies and plans – based on informed decision-making processes for global environmental management.
Capacities for management and implementation	Capacities of individuals and organizations to enact environmental policies and/or regulatory decisions, and plan and execute relevant sustainable global environmental management actions and solutions.
Capacities to monitor and evaluate	Capacities in individuals and organizations to effectively monitor and evaluate project and/or programme achievements against expected results and to provide feedback for learning, adaptive management and suggesting adjustments to the course of action if necessary to conserve and preserve the global environment.

distribution of protected areas is both uneven and unrepresentative at multiple scales, and only half of the world's Marine Protected Areas are part of a coherent network" (Laffoley, 2008, p. 3).

Tourism is one of the largest global industries, representing one of every twelve jobs (UNWTO, 2012b). The UNWTO estimates international visitors will exceed one billion globally in 2012 (UNTWO, 2012a). Much of the growth is associated with nature-based tourism in highly desirable destinations near 'pristine' natural environments (e.g., coastal and marine protected areas) (Balmford et al., 2009; RAMSAR, 2012). At the seventh CBD Conference of the Parties (COP), COP President Dato' Seri Law Hieng Ding, emphasized the *"need to address gaps and institute capacity-building for conservation and sustainable use of biodiversity"* (IUCN, 2004, p. 13). United Nations Environment Programme (UNEP) Executive Director Klaus Töpfer also highlighted the need for capacity building and management of biological diversity, emphasizing that, *"responsible and sustainable tourism [is] also necessary to ensure that the local people benefited from their biodiversity assets"* (IUCN, 2004, p. 14). Sustainable tourism can capitalize on benefit opportunities generated by protected areas to achieve multiple social and environmental outcomes (e.g., CBD Aichi 2020 Targets, Millennium Development Goals) (UNWTO, 2010).

The success of MPAs and aligned sustainable tourism relies on social processes and opportunities for local stakeholders (e.g., affected parties) to access, participate in, and influence decision-making. Elkington's (1997) 'triple bottom line' concept – expressed in terms of simultaneously achieving social and cultural, environmental, and economic objectives – is often suggested as a working model for sustainable tourism. However, the complexity of social-ecological systems that support sustainable (nature-based) tourism make measurement of related inputs and outputs difficult to quantify (Buckley, 2003). Eagles et al. (2002) outline potential risks in terms of observable economic, financial, social, cultural, and environmental costs associated with tourism at protected areas, but indicate that proper planning and management can help alleviate these. Pomeroy et al. (2003) suggest that institutional arrangements must be present that support an individual incentive structure (e.g., social, economic) affording benefits from co-management actions (Pomeroy et al., 2006). That is, community members must foresee an immediate or long-term benefit (e.g., personal, social, cultural, economic, environmental, quality of life) in order for them to expend their energy or resources on MPA priorities (Pomeroy et al., 2003). Successful co-management derives from institutional structure that enables recurring involvement and fosters legitimate influence and trust that benefits local communities and

sustains natural and cultural heritage for future generations.

DEMAND FOR CAPACITY DEVELOPMENT

Capacity development is a global priority for achieving both biodiversity and sustainability goals. The Global Environment Facility (GEF) and United Nations Development Program (UNDP) combined efforts under the Capacity Development Initiative (CDI) to broadly assess capacity needs and develop a conceptual framework for supporting national capacity development activities for meeting environmental priorities (Bellamy & Hill, 2010). Results from the CDI led to development of the GEF *Guide for Self-Assessment of Country Capacity Needs for Global Environmental Management* (2001) and *Strategic Approach to Enhance Capacity Building* (2003), and the National Capacity Self-Assessment (NCSA) programme. The NCSA programme fosters a consistent approach: *"to identify country level priorities and needs for capacity building to address global environmental issues, in particular biological diversity, climate change, and land degradation, with the aim of catalyzing domestic and/or externally assisted action to meet those needs in a coordinated and planned manner"* (GEF, 2001, p.1). More than 150 countries have received GEF funding to implement NCSA actions. A recent synthesis of NCSA activities reported that most countries list biodiversity conservation (84 per cent) and capacity development (75 per cent) as national priorities (Bellamy & Hill, 2010).

MedPAN South training participants working together on tourism stakeholder characterization in Kas, Turkey © A. Walton

Establishment of regional MPA networks in many parts of the world has prompted growing need for training, technical assistance, and coordination to support marine, coastal, and estuarine conservation. For example, the government of Indonesia has recently proposed a plan for increasing management capacity for dozens of new MPAs over the next five years (Coral Triangle Initiative, 2012). MPA management requires mastery of a wide range of complex skills, processes, and dynamic information across multiple scales, topics, and disciplines – biological, physical, social, cultural, legal, economic, managerial, and political. In 2004, the U.S. Ocean Commission's report – *An Ocean Blueprint for the 21st Century* – recommended that, *"the United States should increase its efforts to enhance long-term ocean science and management capacity in other nations through grants, education and training, technical assistance, and sharing best practices, management techniques, and lessons learned"* (U.S. Commission on Ocean Policy, 2004, p. 455).

Capacity is defined in several ways. The following definition of capacity, adapted by donor organizations relative to sustainable development, aligns well with the goals of the MPA capacity building programme: *"… the process by which individuals, groups, organizations, institutions and societies increase their abilities to: (1) perform core functions, solve problems, define and achieve objectives; and (2) understand and deal with their development needs in a broad context and in a sustainable manner"* (OECD, 1995; UNDP, 1998, pg. 6). Capacity development occurs at several levels, from the individual or micro- level (e.g., MPA manager, team) to the meso-level (e.g., community, programme, sector) to the macro- or system- level (e.g., agency, nation, MPA network) (UNDP, 1998; GEF, 2010). The Global Environment Facility recommends the following capacity typology (Table 1), distilled from GEF (2003) and UNDP (2009) capacity development approaches, to guide development and assessment at multiple levels (GEF, 2011, pp. 8-9).

BUILDING REGIONAL CAPACITY

The NOAA MPA capacity building programme operates at a regional or 'seascape' scale, stemming from the IUCN category V – Protected Landscape/Seascape (Dudley, 2008) and related Conservation International (2007)

Table 2. Regional seascapes and countries involved in the MPA capacity building programme.

Regional Seascapes	Countries Involved (not all currently participating)
Coral Triangle (Bird's Head Seascape)	Indonesia, Philippines
Eastern Tropical Pacific Seascape	Columbia, Costa Rica, Panama, Ecuador
Gulf of California	Mexico
Mediterranean (MedPAN South)	Albania, Algeria, Croatia, Egypt, Lebanon, Libya, Montenegro, Morocco, Syria, Tunisia, Turkey
Oceania	American Samoa, Fiji, Republic of Kiribati, Western Samoa
South China Sea	Cambodia, China, Vietnam
Western Indian Ocean	Comoros, Kenya, Madagascar, Mauritius, Mozambique, Reunion, Seychelles, Somalia, South Africa, Tanzania
APEC (Asia-Pacific Economic Cooperation)	Australia, Brunei, Canada, Chile, China, Hong Kong, Indonesia, Japan, South Korea, Malaysia, Mexico, New Zealand, Papua New Guinea, Peru, Philippines, Russia, Singapore, Taiwan, Thailand, United States, Vietnam

operational definitions and descriptive elements. Conservation International defines seascapes as: *Large multiple-use marine areas, defined scientifically and strategically, in which government authorities, private organizations and other stakeholders cooperate to conserve the diversity and abundance of marine life, and to promote human well-being. Seascapes typically have high biological diversity, ecological and economic connectivity, and aesthetic and cultural values. Seascapes may include government-authorized protected areas for addressing special management needs, and provide an opportunity for government agencies to coordinate their efforts voluntarily to secure more effective regional management programmes* (Bensted-Smith and Kirkman, 2010, p. 6).

Candidate seascapes must satisfy 'minimum criteria' for programme development, including: (1) a defined need and high priority interest in MPA management capacity building; (2) presence of an applicable legal and management policy framework to support implementation of MPAs; (3) presence of the basic physical and institutional infrastructure necessary to support a recurring multi-year training programme; (4) documented commitment from the dominant MPA management authority in support of capacity development toward improving MPA management effectiveness; and (5) documented commitment from on-the-ground partners to support implementation of the training programme for a minimum of three years.

Long-term capacity development is accomplished through establishment of an advisory board and exercising a train-the-trainer model with regional mentors. Advisory boards comprise appropriate energetic representatives from seascape MPAs, authorities, ENGOs, and other stakeholders and serve as the coordination body for the programme. In addition to teaching responsibilities, mentors assist with programme coordination, oversight of student teams, real-time translation, community field exercises, post-training projects (e.g., tourism community survey), and evaluation, providing consultative support and guidance for implementing lessons learned. Garnering long-term institutional support for new and innovative actions can prove challenging. The development of social networks and an online presence help to maintain information flow, foster collaborative learning, and sustain energy to retain capacity and aid MPA effectiveness across networks. Several regional programmes have directly involved senior ministry officials in trainings to gain first-hand experience in the work of their field staff. This has led to increased support, and in some cases broad endorsement (e.g., authorization, requirement), for all relevant MPA or agency staff to participate in trainings.

The training programme employs a learner-centred approach, drawing from dominant adult learning theory and practice to maintain high-functioning and nonthreatening learning environments, delivering content in a manner best suited to learner needs and preferences (Hunter, 1994). The instructional framework stems from the ADDIE (i.e., Analysis, Design, Development,

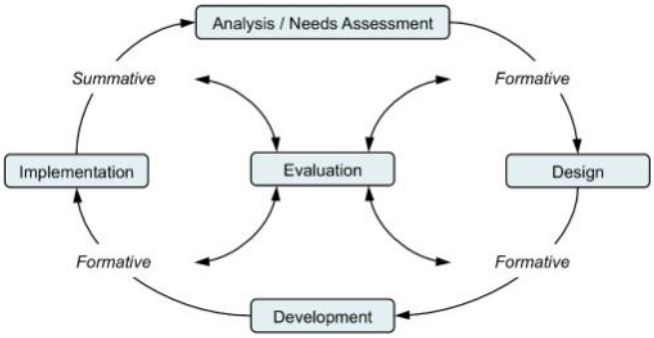

Figure 1. Simplified ADDIE instructional design model *(adapted from Branson et al., 1975; NOAA, 2006)*

APEC training in Xiaman, China © Tom Fish

Implementation, and Evaluation) instructional systems design model (Branson et al., 1975), incorporating evaluation throughout the process (Figure 1). The analysis phase includes a comprehensive assessment of the learning environment, learner needs and characteristics (e.g., existing knowledge, skills, attitudes, behaviours), desired competencies, social and cultural context, and potential constraints. Assessments are informed through in-depth involvement from state and local ministry staff, MPA managers, local stakeholders, donor organization representatives, and international training programme staff. Steps include face-to-face meetings, literature and policy review, training in programme design and evaluation, questionnaires and interviews, and targeted site visits. The design phase focuses on the 'architecture' of the capacity development programme, using a logic model to define programme elements (i.e., inputs, activities, outputs, objectives, outcomes), develop a timeline, and formulate an evaluation plan. The development phase provides the operational structure for achieving learner objectives and constructing the building blocks of the programme (e.g., specific content, delivery strategies, instructional materials, resource and logistical requirements). The implementation phase moves the programme from pilot test to production, with opportunities for adjustment, adaptation, and refinement based on informal and structured evaluation actions.

Inclusion of evaluation actions throughout the process aligns with current best practice recommendations for protected area capacity development (Kopylova & Danilina, 2011). The needs assessment serves as a 'front-end' evaluation to guide overall programme direction. Formative evaluations are used at regular points (e.g., daily debriefings with trainers, mentors, and team leaders; post-training questionnaires for participants, mentors, and trainers) to ground-truth programme elements and inform mid-stream modifications and adaptive measures. Summative evaluations are conducted following the 3-5 year programme life cycle, as a means to gauge performance against initial needs assessment findings (e.g., gap analysis), specific objectives, and outcomes, and to drive future capacity building in particular need areas (e.g., fisheries, enforcement). While the context for evaluation varies from programme to programme, findings are based on direct feedback from participants, identifying particular strengths and weaknesses, and priorities for improvement.

Beginning in the South China Sea in 2005, the programme has conducted more than 100 training sessions across six regional seascapes with participants (n>2,500) from dozens of countries (Table 2). The programme has evolved in alignment with identified needs, delivering a range of protected area topics and skill areas, including MPA fundamentals, public involvement and conflict management, sustainable fisheries management, climate adaptation planning, sustainable financing, and marine spatial applications. Trainings are interactive, employing a combination of individual and participatory methods – lectures, case studies, multimedia presentations, guided discussions, games, hands-on small group activities, and community field exercises. Mandatory attendance and active participation in classroom and field activities are required. Students are strongly encouraged to share experiences from their respective MPAs and communities. Training content draws from a range of government, academic, and conservation organization sources to ensure

Training team from four Eastern Tropical Pacific Seascape countries (Costa Rica, Panama, Colombia, and Ecuador) working on a sustainable tourism zoning plan © A. Walton

timely and appropriate context-relevant examples. Materials are provided in English and in the host language (s) to enhance the learning experience across different English proficiency levels. Field exercises and guided visits to nearby protected areas are arranged with local managers and community leaders to highlight on-the-ground management issues and allow interaction with local stakeholders. Vietnam's Nui Chua National Park provided the backdrop for course participants to observe target resources, traditional resource use, tourism activities, and management applications pertinent to the course content. Conversations with local ministry staff revealed a recent upsurge in coastal tourism development, which fuelled group discussion regarding potential best practices to reduce threats to target resources and enhance community involvement and benefits. Nui Chua National Park recently worked with provincial agencies, local communities, tourism sector representatives, and other stakeholders to develop a sustainable tourism plan.

SUSTAINABLE TOURISM PLANNING FOR MPAS

The sustainable tourism planning curriculum includes an overview of protected area planning and management basics; sustainable tourism concepts; identification and prioritization of conservation targets vis-à-vis tourism assets; sustainable tourism programme planning, assessment, and monitoring methods; tourism industry practices and impacts; education, outreach, and marketing techniques; community and stakeholder involvement approaches; and development and implementation of field -based community involvement exercises. The curriculum content stems from seminal U.S. public land management and carrying capacity planning frameworks – for example, *Limits of Acceptable Change* (Stankey et al., 1985) and *Visitor Experience and Resource Protection* (National Park Service, 1997) – and other pertinent guidance materials developed by academic, ENGO, industry, and public sector practitioners (e.g., Eagles et al., 2002; Pomeroy et al., 2004; Secretariat of the Convention on

Biological Diversity, 2004). The operational framework adheres to recognition that marine protected area managers are challenged with balancing two competing goals – protection of natural and cultural resources and provision of opportunities for public use or visitor experiences. Further recognition is required that some level of compromise between the two goals is necessary, where one goal constrains the other. For example, a biodiversity protection goal might constrain a tourism goal regarding access to a specific natural area. The process comprises a systematic series of steps that help managers work with stakeholders to establish objectives relative to conservation and tourism targets, define potential threats and impacts, evaluate root causes of change, create indicators and standards (i.e., minimally acceptable conditions) for inventory and monitoring of resource and social conditions and tourism outputs, and select and implement appropriate management prescriptions (Figure 2).

CAPACITY FOR ACHIEVING BIODIVERSITY TARGETS

Balancing competing goals is both a challenge and a necessity for protected areas in coupled social-ecological systems (Buckley, 2009; Newton, 2011). To achieve conservation targets set at local, regional, or global scales, protected area managers and their partners should have the appropriate context-relevant knowledge, skills, and competencies. Using a MPA capacity building lens, one can see alignment of several MPA training programme elements toward achievement of CBD strategic goals, Programme of Work on Protected Areas (PoWPA), and specific Aichi 2020 biodiversity Targets. For example, the programme directly supports capacity building for planning, establishment, and management of protected areas at the national and regional level (e.g., COP 10 X/31, PoWPA 3.2), for communication and education (e.g., PoWPA 3.5), and for evaluation and management effectiveness (e.g., PoWPA 4.2). Specific to sustainable tourism, the MPA training programme supports Aichi 2020 Targets 1 and 2, with curriculum content highlighting the connections between biodiversity and successful tourism, as well as education, outreach, marketing, and community engagement approaches that can increase conservation literacy among stakeholders, and reduce biodiversity impacts. The programme addresses Targets 4 and 8 directly, by highlighting unsustainable (avoidable) impacts, demonstrating alternative 'green' business practices and community engagement techniques to reduce

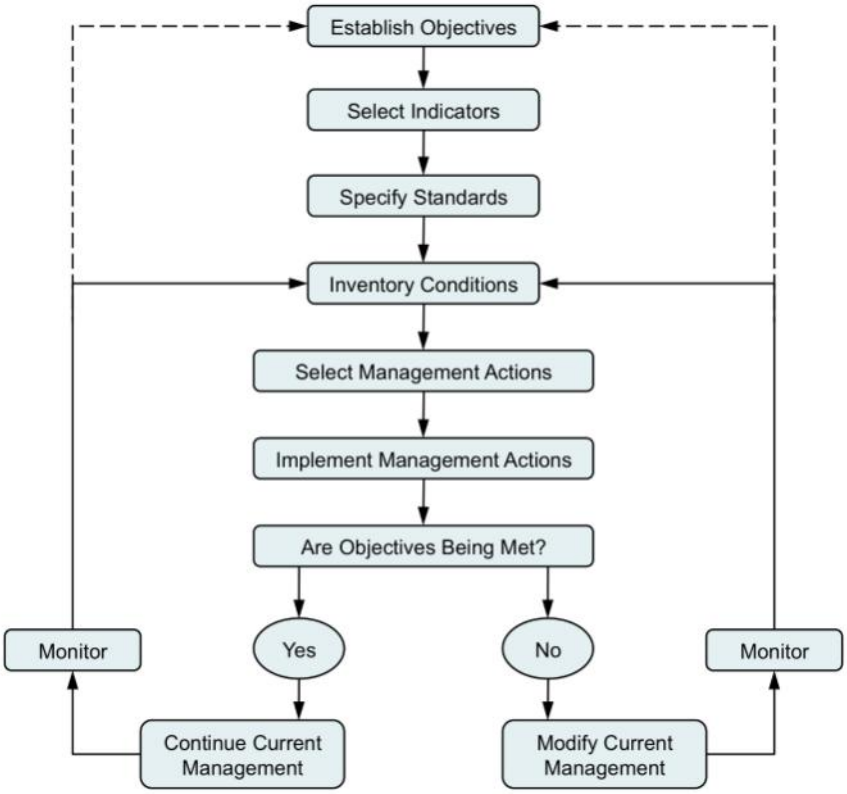

Figure 2. Simplified protected area management planning framework *(adapted from Hammitt & Cole, 1998; Leung & Marion, 2000)*

waste and pollution, offset costs, and enhance image and marketability. The programme addresses Target 18 by emphasizing the importance and value of indigenous populations, traditional and cultural practices, and traditional ecological knowledge in the context of informing MPA management and supporting diverse opportunities for sustainable tourism. Lastly, the programme directly supports Target 11 by operating within a context of MPA networks, developing regional capacity for achieving conservation targets.

LESSONS LEARNED

Implementing capacity development at a seascape scale requires consideration of a complex range of sub-national, national, and transnational relationships, regulatory frameworks, conservation programs, social dynamics, skill sets, and levels of commitment. Each seascape presents its own challenges, but despite claims that every network of MPAs is unique, there are often more commonalities than differences. Institutional barriers and operational resource limitations are ubiquitous across the MPA community. Levels of community involvement, trust, acceptance, and support vary from location to location. Garnering public support for sustainable tourism requires vigilance and persistence in building trust, community engagement, and creating opportunities for mutual benefit. Local capacity is essential to a successful MPA-based nature tourism enterprise; however, it is difficult to build sufficient management capacity at the individual manager or MPA site level. It is more efficient to consider system-wide capacity development to bolster collective capacity across a network of MPAs, which can also aid implementation at the individual site level.

To fully realize the value of collective capacity across MPA networks, a functional operational framework must be created that all parties can agree upon and jointly implement. For example, using decision support processes that are logical, quantitative, and replicable is important to building consistency across MPA networks. In addition to increasing the capacity of on-the-ground managers, continuous effort is needed to garner the necessary institutional support and political will to move from training delivery and content knowledge to practical implementation and regional coordination. This goes beyond the development of specific topical expertise (e.g., sustainable tourism) to include other process-based aspects of protected area management, such as meeting facilitation, public involvement, conflict management, sustainable financing, marine spatial planning, and policy development.

Evaluation of capacity development and programme effectiveness at the seascape level is an on-going process. Qualities that participants have reported as important to regional capacity development include:

- enlisting instructors representing content experts and seasoned MPA practitioners with specific management experience;
- presenting seascape-relevant curriculum content and specific case studies;
- fostering dynamic learning environments that include ample opportunities for hands-on experiential peer-to-peer learning; structuring practical exercises that engage local stakeholders;
- ensuring participation by multi-level MPA practitioners to foster collaborative learning across the management hierarchy;
- providing availability of post-training consultation with instructors and mentors; and,
- maintaining an *"infrastructure support system for programme coordination, communication, evaluation, and to provide a framework for implementation"* (Di Carlo et al., 2012, p.11).

The train-the-trainer method has been a successful approach in fostering regional capacity to champion on-going capacity development and support for MPAs, allowing the international capacity development programme to balance long-term commitments with successful programme transition to in-country leaders.

The programme is adaptive and responsive to changing demands relative to MPA management and planning, biodiversity conservation, sustainable tourism, and local and regional community development; yet, there is always more to learn. Working with partners across varied geographies and cultures constantly informs the capacity development process. Every day, every engagement, and every story provides a learning experience that enriches our own knowledge base and makes us better resource managers. Sharing examples from different settings and management contexts affords a richer understanding and forces us to consider multiple perspectives in identifying key elements for addressing resource management issues. What often appears to be the logical path to implementing an element of a management plan might not be feasible under particular cultural settings or institutional arrangements. These new ways of thinking not only inform the moment, but can often be applied in other locations and provide inspiration for our own work at home.

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RESUMEN

Las áreas marinas protegidas y las redes de estas áreas pueden resguardar los recursos naturales y culturales y fomentar el aprendizaje basado en la colaboración para abordar una serie de objetivos relacionados con la biodiversidad. El turismo sostenible basado en la naturaleza puede ayudar a proteger la biodiversidad al tiempo que ofrece a las comunidades locales oportunidades para el beneficio social y económico. Sin embargo, para ser eficaz, cada iniciativa precisa de conocimientos, habilidades y capacidades apropiadas, además de acuerdos institucionales para definir y resolver problemas, y procesos participativos legítimos que apoyan la cooperación y procuran influencia y beneficios a los interesados directos como resultado de su participación. El Programa internacional de desarrollo de capacidades para la administración de AMP de la NOAA trabaja con otros organismos a escala regional del paisaje marino para desarrollar la capacidad de las redes de AMP. El plan de estudios para el turismo sostenible hace hincapié en la necesidad de equilibrar objetivos contrapuestos—la protección y el uso sostenible de la biodiversidad. El marco ayuda a los administradores a desarrollar la capacidad para involucrar a los interesados directos, identificar los objetivos de conservación y turismo, definir las posibles amenazas e impactos, establecer objetivos y seleccionar aplicaciones de gestión adecuadas. Las acciones de evaluación informan los elementos del programa para abordar las prioridades regionales y las necesidades de aprendizaje, y apoyan la creación de capacidad a largo plazo.

RÉSUMÉ

Les aires protégées marines et leurs réseaux peuvent protéger les ressources naturelles et culturelles et encourager l'apprentissage collaboratif afin d'atteindre un certain nombre d'objectifs liés à la diversité biologique. Le tourisme durable fondé sur la nature peut favoriser la protection de la diversité biologique, tout en offrant aux communautés locales des possibilités d'avantages sociaux et économiques. Cependant, pour être efficace, chaque initiative requiert les connaissances, les compétences, les capacités ainsi que les accords institutionnels appropriés pour définir et résoudre les problèmes et utiliser des processus participatifs légitimes qui soutiennent la coopération et permettent aux parties prenantes d'influencer et de profiter de leur implication. Le Programme de renforcement des capacités de gestion des aires marines protégées de la NOAA (Agence américaine d'étude des océans et de l'atmosphère) travaille avec des partenaires à l'échelle du paysage marin régional afin de renforcer les capacités des réseaux d'aires marines protégées. Le programme de tourisme durable souligne l'importance et la nécessité d'équilibrer des objectifs concurrents – la protection et l'utilisation durable de la diversité biologique. Le cadre aide les gestionnaires à renforcer leurs capacités pour impliquer les parties prenantes, identifier les objectifs en matière de conservation et de tourisme, définir les menaces et les impacts potentiels, établir des objectifs et choisir des applications de gestion appropriées. Les actions actuelles d'évaluation informent les éléments du programme afin de répondre aux priorités régionales et aux besoins des apprentis, et encouragent le renforcement des capacités à long-terme.

COMMUNITY-BASED MONITORING OF TOURISM RESOURCES AS A TOOL FOR SUPPORTING THE CONVENTION ON BIOLOGICAL DIVERSITY TARGETS: A PRELIMINARY GLOBAL ASSESSMENT

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ABSTRACT

Tourism can play a significant role in contributing to multiple Convention on Biological Diversity (CBD) Targets. Monitoring tourism resources and impacts is crucial in gauging the performance of tourism in support of the CBD Targets. Community-based monitoring (CBM) offers a viable solution to the concerns about costs and longevity of monitoring programmes, allowing for the continuation of monitoring plans on a lower budget while creating a venue for civic engagement and capacity building. This paper provides a preliminary global assessment and typology of CBM programmes with a focus on tourism resources (CBM-T). Twenty-nine CBM-T programmes with two primary monitoring approaches were identified based on an extensive literature review, including an *infrastructure-based* approach focusing on tourism facilities, and an *ecosystem-based* approach focusing on natural resources that support the tourism experience. These programmes are further differentiated by spatial scale, goals, biome, and resources, as illustrated by 10 representative programmes. Two case examples, one on trail monitoring in Taiwan and another on wildlife monitoring in Namibia, are used to illustrate design and implementation of each CBM-T approach. Lessons learned, such as criteria for communities with potential for sustainable CBM-T programmes, are discussed.

INTRODUCTION

The relationship between tourism and protected areas may be perceived differently ranging from discordant to symbiotic (Budowski, 1976), but most would agree that this relationship is long-standing and crucial. According to the IUCN's Sustainable Tourism Guidelines, tourism is a critical component to consider in the establishment and management of protected areas (Eagles et al., 2002). While contributing towards the protection of natural and cultural heritage through protected area establishment, interpretation, and education, tourism can also create economic reasons for local communities to support management objectives of protected areas which otherwise have little perceived value (Spenceley, 2008). However, if not managed effectively, tourism operations and visitor activities can induce adverse ecological effects and jeopardize the conservation goals of protected areas. A variety of tourism impacts have been documented (Buckley, 2004).

In order to gauge the sustainability of tourism and evaluate specific benefits and costs, protected area managers recognize the value of monitoring that yields timely data on visitor use and protected area resources (Eagles et al., 2002). Monitoring serves as an indispensable tool for validating the contribution of tourism to management objectives of protected areas from a local to a global scale, including the *2011-2020 Aichi Biodiversity Targets* (or

CBD Targets) set forth by the Convention on Biological Diversity (CBD, 2010). The 20 Aichi Targets support five strategic goals that are aimed at tackling biodiversity loss, enhancing sustainable use of and benefits from ecosystem services, and improving implementation through participatory planning and capacity building (CBD, 2010).

COMMUNITY-BASED MONITORING, TOURISM RESOURCES AND THE CBD TARGETS

Monitoring is a highly effective yet resource-intensive component of conservation and protected area management plans. Community-based monitoring (CBM), is described by Whitelaw et al. (2003, p.410) 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."* As such, CBM offers a viable solution to the problem of limited resources in management, facilitating the establishment and/or continuation of a monitoring plan on a lower budget while creating a venue for civic engagement and environmental activism. Examples of CBM include water quality (USEPA, 2012), wildlife (NRMN, 2012) and human resource use (NRMN, 2012).

The study of CBM and similar phenomena such as citizen science, community science, public participation in scientific research, and community-based management has risen since the late 1980s (Conrad & Hilchey, 2011). CBM programmes or initiatives have been observed around the world in diverse forms regarding goals and approaches, often determined by the community's interest in the resource to be managed and/or monitored (Danielsen et al., 2008). These programmes tend to support science, management and/or civic engagement goals. This paper focuses on community-based monitoring of tourism resources (CBM-T), an application of CBM, which has not yet been widely examined. Specifically, this paper intends to provide an initial global assessment of CBM-T programmes through a set of representative programmes and two case examples.

As nature-based tourism is a prominent ecosystem service of protected areas, there is a clear need to monitor tourism resources in support of sustainable management and conservation. CBM-T programmes can be a creative and effective solution. At a global level, CBM-T effectively meets several Aichi Biodiversity Targets (CBD, 2010), including the involvement of local communities and the use of indigenous knowledge (Target 18) in the protection of essential ecosystem services (Target 14), natural habitats and global biodiversity (Targets 1, 4, 5, and 8). Such involvement helps build awareness of biodiversity values and facilitates co-management of tourism infrastructure and resources (Targets 1, 4, 5, and 8). Through successful and inclusive CBM-T programmes, additional protected areas may be established in inhabited areas (Target 11), and provide a participatory plan for tourism resources in new protected areas to be effectively and economically managed (Target 17).

APPROACHES OF CBM-T PROGRAMMES: ASSESSMENT METHODS

The goals of a monitoring programme determine its approach, structure and the indicators selected (Eagles et al., 2002; Danielsen et al., 2008). While the scope of this paper is limited to tourism resource monitoring from the community perspective, the authors recognize that monitoring tourist or visitor experiences from the visitor's perspective is important within a broader tourism management context. Bushell and Griffin (2006) and McCool (2006) provide excellent discussion with examples on this aspect of tourism monitoring. Community participation in visitor experience monitoring; however, is even less common than tourism resource monitoring.

Through extensive searches of both academic and grey literature, 63 CBM programmes were identified and investigated. While some scholarly literature was found through library searches (e.g., Science Direct, Springer Link), many programmes have not been published academically. Instead, these programmes were identified through a series of Internet searches (e.g. Google) using key terms such as environmental monitoring, community monitoring, tourism, recreation, and trails. While non-academic searches turned up many relevant programmes, the nature of this type of search resulted in programmes which (a) have a presence on the Internet and (b) are written about in English.

Through personal contact with group leaders, the initial 63 programmes were narrowed down to a shortlist of 29 programmes, which met the basic criteria of community-based programmes with a focus on tourism resources (i.e., CBM-T). Many definitions for community exist, including groups linked by common history, geographic location, or social, economic or political interest (Merriam-Webster, 2012). The authors have chosen to focus on communities of people with common geographic location. This

Table 1. A classification of approaches to community-based monitoring of tourism resources (CBM-T) programmes with specific examples.

Approach	Project	Country/ Territories	Spatial Scale	Goal(s)*	Biome(s) *	Tourism Resource	Other Resources Benefitted	Reference
Infra-structure	Shih-Pan Trail Monitoring	Taiwan ROC	Local; 1.7 km trail	NRM, CE	t	Hiking trail	NA	Lu et al., 2011
	Colorado Canyon Trail Monitoring	USA	National; Conservation Area; 55 km of trail	CE, NRM	t	Hiking trail	NA	Colorado Canyons Association, 2012
	Volunteer Trail Ambassadors	USA	Regional; 177 km of trail	NRM, CE	t	ATV trail	Ecology	Minnesota Department of Natural Resources, 2012
	ParkScan San Francisco	USA	Municipal; over 200 parks	NRM, CE	t (c)	Park facilities	NA	ParkScan San Francisco, 2012
Ecosystem	Eye on the Reef	Australia	National; 3 areas, 18 sites	NRM, CE, NRR	m	Wildlife viewing	Ecology	Musso & Inglis, 1998
	Seagrass-Watch	Australia	International; 258 sites in 17 countries	CE, NRM, NRR	m	Wildlife viewing	Ecology	McKenzie et al., 2000
	Mamirauá Sustainable Development Reserve	Brazil	Local; 60 communities, 11,240 km	NRM, CE	t, fw	Wildlife viewing	Ecology, Fisheries, Forestry	UNEP, 2011
	Adopt-A-Stream	Canada	Provincial; 26 sites	NRM, CE	fw	Recreational Fisheries	Ecology, Fisheries	Nova Scotia Salmon Association, 2012
	The Event Book System	Namibia	National; over 50 conservancies, 70,000 km	NRM, CE	t (fw)	Wildlife viewing	Ecology, Hunting	Stuart-Hill et al., 2005; Bourdreaux & Nelson, 2011
	Community-based Coastal Resource Management	Philippines	National; 43 programmes	NRM, CE	c	Wildlife viewing	Ecology, Fisheries	White & Vogt, 2000

* General goal(s) *'NRM'* = Natural Resource Management, 'CE' = Civic Engagement, 'NRR' = Natural Resource Research. Goals are listed in order of priority, when priority is present.
** Biomes: 't' = Terrestrial, 'fw' = Freshwater, "m" = Marine, "c" = Coastal. Codes written in parentheses are secondary biomes monitored.

definition of CBM-T addresses programme sustainability, since local people may benefit socially and economically through increased investment in their local tourism resources. For illustration purposes 10 CBM-T programmes are summarized in Table 1 to represent the diversity of these programmes with respect to approach, location, spatial scale, goals, biome, tourism resource targeted, and other resources benefitted.

This preliminary assessment suggests that CBM-T programmes exist in different world regions and biomes, and can range from local, site-specific programmes (e.g., Colorado Canyon Trail) to international programmes with multiple sites (Seagrass-Watch) (Table 1). Though the spatial scale of programmes varies, the programmes analyzed here maintain the 'common geographic location' definition of community. The main goals of CBM-T programmes are comparable to those of broader CBM programmes, including natural resource research and science, natural resource management, and civic engagement and education. Based on their specific monitoring indicators some CBM-T programmes can contribute to ecological management or resources such as forestry, hunting, and fisheries (Table 1).

CBM-T programmes seem to fall into two broad monitoring approaches: infrastructure-based and ecosystem-based monitoring (Table 1). *Infrastructure-based monitoring* programmes tend to focus on maintaining facilities built for tourism and are often used in management of trails, campsites, activity sites and facilities. Data gathered through this approach are specific to the site and community, but methodologies can be adapted across communities. Scientists must work with community members to determine the aspects to be monitored, considering factors important to tourists. Examples may include recording which parts of the trail need maintenance with regards to soil compaction, removal of vegetation, sign damage, safety, or other factors (Lu et al., 2011). Data retrieved by monitoring trail condition, for example, are usually specific to the trail surface and adjacent corridor and do not necessarily include information pertinent to the health of surrounding ecosystems.

Another approach to monitoring is based on the premise that nature-based tourism is determined by the conditions of natural resource and ecosystem elements integral to the tourist experience. This *ecosystem-based monitoring* approach is implemented especially in areas where tourist activities are not confined to artificial infrastructure. Recreational fishing, hunting, water sports, and many other nature tourism activities use ecosystem-based monitoring to improve and/or conserve the local tourism attraction (Stuart-Hill et al., 2005; Nova Scotia Salmon Association, 2011). Ecosystem-based monitoring may include well-established techniques used for scientific monitoring of ecosystem health, and often will not require an intensive preparatory stage. Established techniques must be selected and fine-tuned by scientists and stakeholders to develop a programme that will benefit the local community and tourism resource of interest (Stuart-Hill et al., 2005). Although science is not the primary goal discussed here, data retrieved from this type of monitoring programme may have potential for contributing towards a base of long-term data on ecosystem health, if data are scientifically acceptable. However, Stuart-Hill et al. (2005) argue that it is important to keep scientific purposes separate from management purposes, as will be discussed in more detail in the case study of Namibia.

LESSONS LEARNED THROUGH LITERATURE REVIEW

Through review of the CBM literature, several lessons were learned regarding the success of CBM-T programmes. These lessons are explained below.

Feasibility of sustainable CBM-T Programme: target communities

To determine the viability of CBM in a study location, the SAFIRE (Southern Alliance for Indigenous Resources) (Fröde & Masara, 2007) recommends conducting a feasibility study involving a physical assessment of the area and interviews with key informants. A report drawn from this information should then be discussed within the community and relevant stakeholders to decide if a CBM project should be pursued.

In a study on adaptive capacity of CBNRM, Armitage (2005) identified three primary factors that influence the performance of CBNRM programmes. Indicators of these factors can be determined on a case-by-case basis and used to monitor the performance of CBM and CBNRM programmes. These factors include:

a. Focus: clarity of goals and directions of activities of the programme
b. Capabilities: skills, competencies, and capabilities of participants
c. Will: commitment to community-based initiatives, attitude towards protection of the resource and valuation of the resource.

A review of other sources on this subject revealed the following criteria for communities with potential for sustainable CBM-T programmes:

a. Existence of active community organization (as seen in the first example of Shih-Pan Trail, Taiwan ROC) (Lu et al., 2011)
b. Presence of community motivation to become involved in monitoring their tourism resource (Pollock & Whitelaw, 2005)
c. Potential to develop multi-stakeholder groups to consider the issues, perceptions, and problems of the community (Conrad & Daoust, 2007). Successful projects tend to have links across four or five levels of organization (Berkes, 2007).

Access to tourism resource

According to Berkes (2007), open access systems lead to positive feedback loops of resource degradation; if no institution is responsible for responding to signals from the resource, overuse or misuse of the resource will easily go unabated. Applying this lesson to CBM-T suggests that tourism resources for which, access can be controlled will have more success in implementing CBM than those, which cannot control access. Managers should consider who has control over access to the tourism resource when determining if a community-based approach is feasible.

Picture 1: A focus group meeting held in Linmei Village to solicit community input on indicator measures and monitoring procedures © The authors

Management versus research

Monitoring programmes must establish the goal of either management or research. Through a management goal, the monitoring programme is designed according to the community's interest and is thus self-motivated, consistent with points addressed in lesson one. Stuart-Hill et al. (2005) explain that research monitoring programmes may be set up alongside of management monitoring programmes; however, in practice research objectives conflict with creating a sustainable community-based monitoring programme. This is evident in the Taiwan example. The Shih-Pan Trail Monitoring Programme was designed to serve sustainable tourism and trail management (especially tourist safety and maintenance), which were the predominant concerns of the local community and forest management agency staff. The CBM-T programme channelled these concerns into motivation for partnership, with community participants sustaining monitoring efforts.

In some cases the data collection designed for community conservancies may be applicable to a broader scientific and/or policy community. For instance, the wildlife monitoring data generated from Namibia's Event Book System has been utilized by national and international (e.g. CITES) decision makers (Stuart-Hill et al., 2005). Additionally, Stuart-Hill et al. (2005) explain that data are gathered annually in a central location and can be digitized or the use of scientists in national analysis and reporting. Without making research the goal in the design of this monitoring programme, some data are still applicable for the use of researchers to further promote the protection of Namibia's natural resources.

Governance and equitable benefits

Establishing governance is essential in order for communities to receive the socioeconomic benefits they earn through participation in monitoring programmes. In analyzing the case of Namibia's Event Book System, Collomb et al. (2010) determined that several communities were not receiving these benefits. Nevertheless, the researchers were able to establish a set of governance and socioeconomic indicators to track horizontal accountability, arguing that, *"availability of data in*

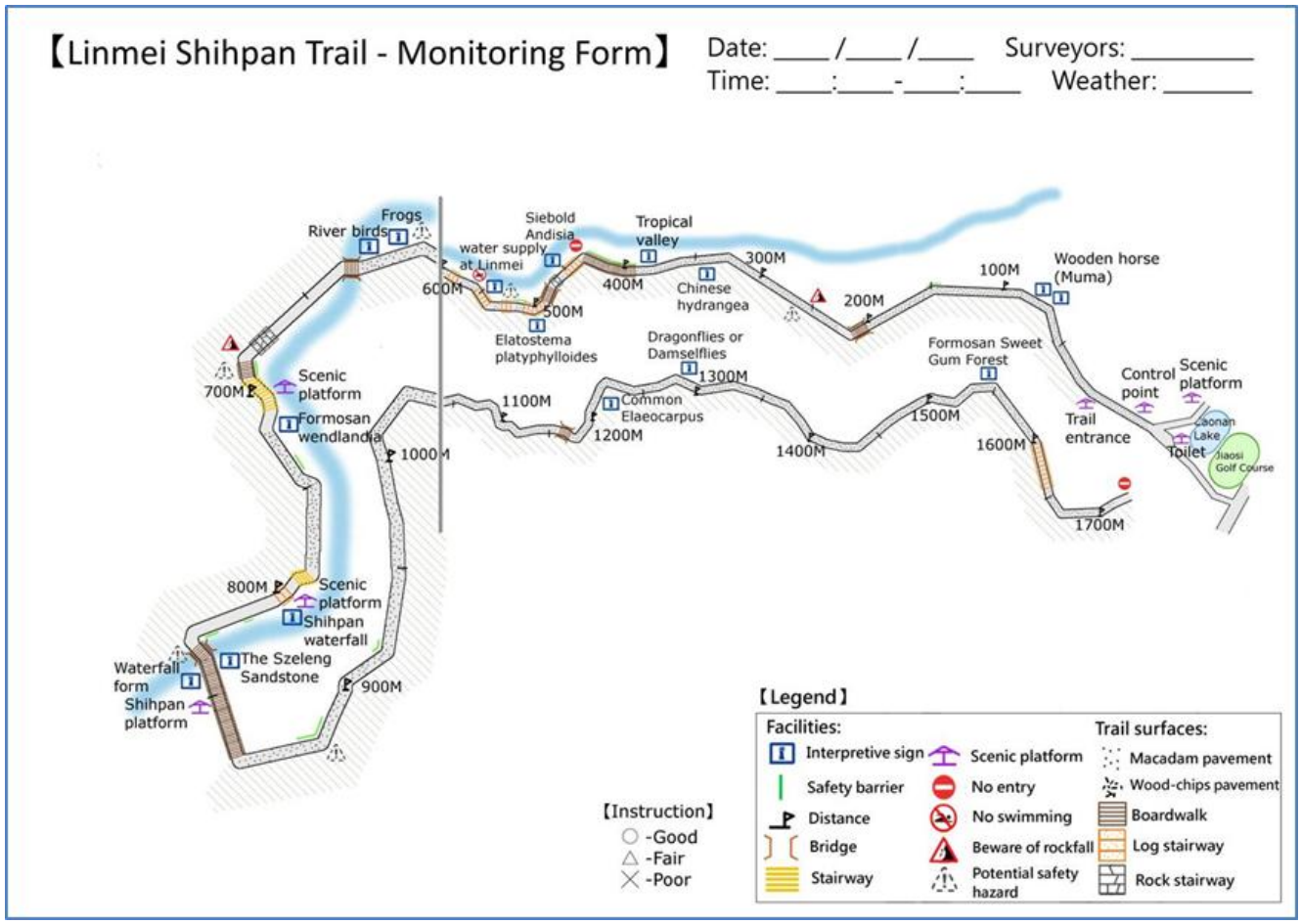


Figure 1. A quick-scan monitoring form for Shih-Pan Trail (translated version from Chinese) (Source: The authors)

CBNRM communities should lead to accountable leaders." (Collomb et al., 2010, p.304). Boudreaux and Nelson (2011, p.23) also came to the conclusion that Namibian communities had the potential to 'prosper and flourish' even more if the government would devolve additional rights to conservancies.

TWO ILLUSTRATIVE EXAMPLES

Two programmes from Table 1 are described in detail below to further illustrate the goals, design, implementation, outcomes and lessons learned from CBM-T programmes in each monitoring approach. The first example describes an infrastructure-based monitoring programme of a scenic tourist trail, while the second example describes a networked ecosystem-based monitoring programme of wildlife resources.

TAIWAN ROC: COMMUNITY BASED MONITORING OF THE SHIH-PAN TRAIL

Shih-Pan Trail is a major tourist attraction located near Linmei Village, a small rural community of 1,500 inhabitants in northeastern Taiwan. The trail opened in 2005 and quickly became a popular hiking route in the region, attracting more than 300,000 visitors annually from different regions of Taiwan and generating significant economic benefits to the community (Lu et al., 2011). The 1.7 km trail falls within the jurisdiction of a public forest where the management agency (Forestry Bureau) has limited resources for management or monitoring. A partnership was formed between the agency and the village to facilitate the basic upkeep of the trail through community participation (Lu et al., 2011). Monitoring trail conditions and visitor use was later conceived as a tool to protect the resource base and sustain the tourism economy. The goals of the Shih-Pan Trail monitoring programme focus on natural resource management and extend to civic engagement.

A trail-monitoring programme was developed and pilot tested in 2008 with technical assistance from an academic team, which included the second and third authors. Focus group meetings were conducted with the key stakeholders-

the community residents and the Forestry Bureau staff—to determine the design and specific indicator measures (Picture 1). The trail monitoring protocol selected consists of fixed-point and dynamic-event monitoring with a field form developed for each component. Fixed points are infrastructure (e.g., signs, benches) with a known location and their condition is assessed. Dynamic events are incidents of pre-defined problems (e.g., trail erosion, trailside stability) that can emerge anywhere along the trail corridor. These incidents were mapped using a low-cost GPS unit and assessed using the field form.

The Linmei trail monitoring programme was implemented at two levels with different frequency. The routine, quick-scan monitoring was carried out on a weekly basis by the local community (specifically staff from the Linmei Community Association). This routine level of monitoring entails only marking of fixed features with a problem condition and dynamic problem events on an annotated paper trail map (Figure 1). At the detailed level, staff from the government agency performed monitoring procedures that include semi-quantitative assessment of each fixed feature and GPS mapping of dynamic events. Data from both monitoring levels were sent to the agency staff for compilation and summary. The academic team provides standing support of this monitoring partnership.

A number of positive outcomes have resulted from this monitoring programme since its inception in 2009 (Lu et al., 2011). The Linmei community was supportive of the trail monitoring programme and their volunteers were capable of collecting useful data. However, keeping up with the schedule for routine monitoring has been a key challenge. The government agency was able to conduct the detailed monitoring though they had the same challenge of keeping up the schedule. Agency staff was impressed by the usefulness and quality of data collected by community participants. This programme was temporarily suspended due to typhoon damage to the area and has been reinstated. The current implementation only includes the quick-scan monitoring level.

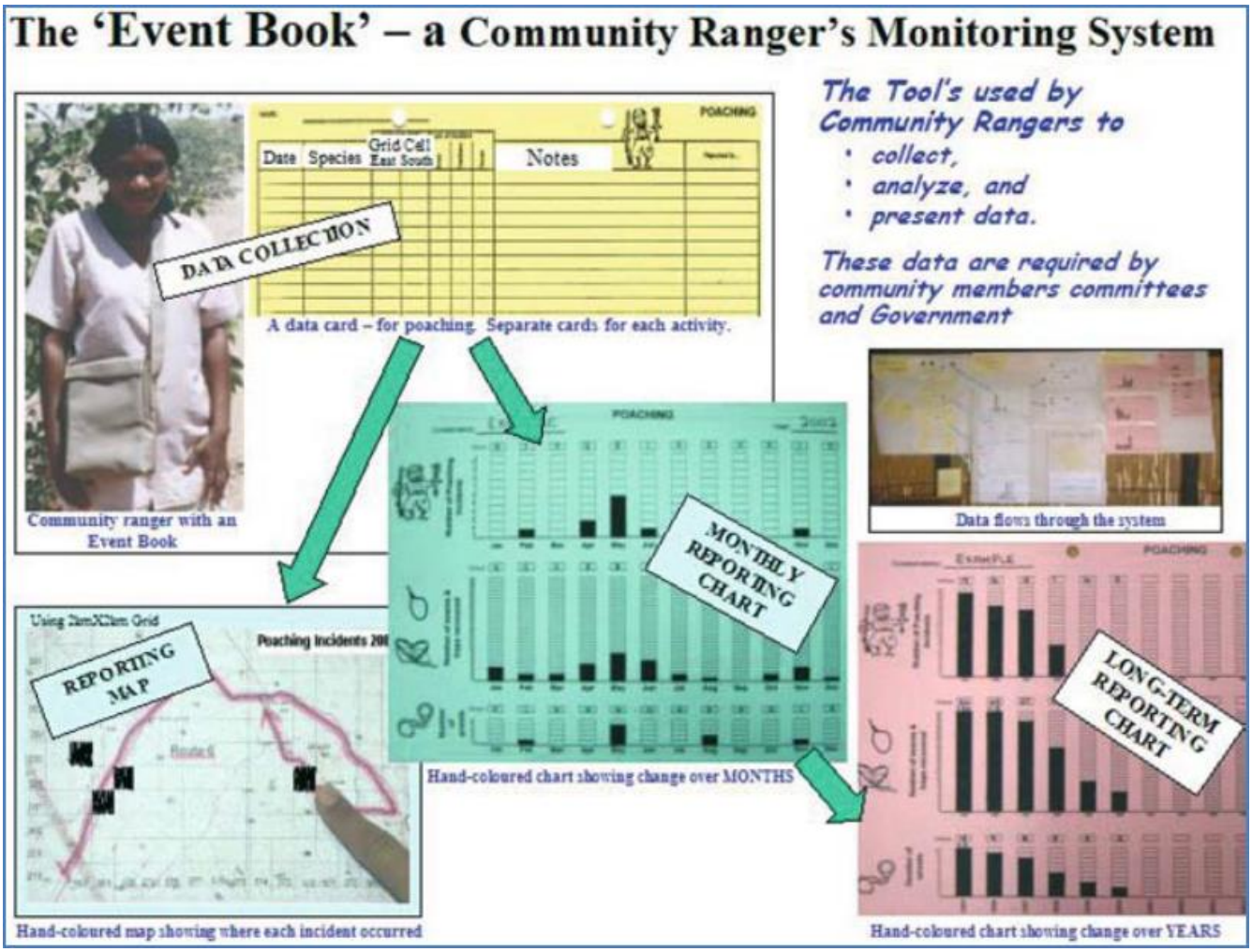
This programme demonstrates several of the lessons learned from the literature review. Much of the success of this programme can be attributed to the existence of an active community association (Linmei Community Association) and this association's interest in the tourism resource. Additionally, the involvement of stakeholders across multiple levels of organization (community members, academic team, and government) may contribute towards the programme's success. Community members were involved in the design and implementation phases of the programme, building a sense of partnership and cooperation with other stakeholders. This programme focuses on natural resource management, rather than mixing management and research.

NAMIBIA: COMMUNITY-BASED NATURAL RESOURCE MONITORING: THE EVENT BOOK SYSTEM

Community-based natural resource management (CBNRM) in Namibia began in the 1960s, when communities were given the right to manage and derive benefits from wildlife (Jones & Murphree, 2001). By the 1980s poaching had led predators to attack livestock, devastating communities, which relied on these animals as a means of income. In 1983, conservationists began to recruit poachers to become game guards to protect game species and report illegal poaching. When Namibia gained independence from South Africa in 1990, new tourism opportunities (i.e. wildlife viewing) brought another form of economic motivation to communities for preserving their wildlife, leading to the creation of over 50 communal conservancies (Boudreaux & Nelson, 2011). The goals of the Event Book System focus natural resource management and extend to civic engagement.

As a part of the CBNRM programme established in Namibia in 1996, a monitoring programme called the 'Event Book System' was implemented in 2000 (Stuart-Hill et al., 2005). This system is a network of management-oriented monitoring programmes in which the community decides what to monitor, scientists provide support only in the design phase and when help is requested from the conservancy, and all data collection and analysis is carried out locally by conservancy members. A kit is provided, by the technical support team, to local conservancy members with colour-coded data collection sheets based on the monitoring topic (Picture 2). The data are collected, analyzed and reported both monthly and annually (Picture 3). Data are collected in paper form to maintain simplicity and accessibility for all conservancies (Stuart-Hill et al., 2005).

Monitoring programmes within the Event Book System have individualized goals with a standard reporting method. The system is a joint effort between government, NGOs, and rural communities, and is based on the principles of adaptive management (Martin, 2003). All data are collected annually, belong to the Ministry of

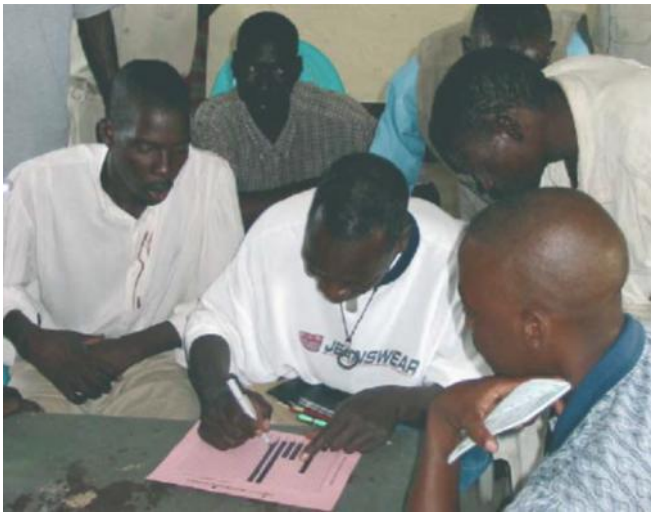


Picture 2: Example of 'Event Book' data collection materials and reporting tools used by community rangers on communal rangelands in Namibia. This example shows monitoring of poaching. Source: Stuart-Hill et al., 2005

Environment and Tourism and are used in decision making for natural resource management.

A number of positive outcomes have resulted from this programme. Annual reports from conservancies, now a major component of the national CBNRM Monitoring and Evaluation system, has influenced government, donor agencies, and supporting NGOs' decisions on technical support provisions (Stuart-Hill et al., 2005). Twenty-one of the sixty-four registered conservancies in Namibia gain enough income from tourism, trophy hunting, and handicrafts to cover their costs (Langlois, 2011). Money has even been returned to the community for other important causes, funding schools, HIV/AIDS care, and infrastructure for water and electricity. Due to the success of the programme, the Ministry of Environment and Tourism requested that a similar system (the Incident Book) be applied in six national parks in Namibia (Stuart-Hill et al., 2005). However, weaknesses of CBNRM in Namibia include incomplete transfer of management and use rights as well as land tenure insecurity concerns (Boudreaux & Nelson, 2011). Though the Event Book system and CBNRM in Namibia provide many benefits to the community, country, and natural resources, there are still issues to work out in order to achieve equitable benefits to all stakeholders.

The Event Book System demonstrates strength through involvement of multiple levels of stakeholders–communities, local conservancy members, scientists, Namibian government and NGOs. Community bonds and knowledge of the resource existed before the programme was introduced, but interest in the resource was redirected from poaching to protecting. The programme goals clearly separate management from research. However, governance and inequitable benefits are a point of weakness in this programme.



Picture 3: Committee chairman of a Namibia communal area conservancy completing long-term 'Event Book' trend charts. Source: Stuart-Hill et al., 2005

DISCUSSION AND CONCLUSION

Through an extensive literature search and review of CBM-T programmes, categories were established regarding the goals (natural resource management, natural resource research, and civic engagement) and approaches (infrastructure- and ecosystem-based) for a group of CBM-T programmes with varying locations, biomes, and spatial scales. For the benefit of those managers who may be interested in the wider-ranging impact of CBM-T programmes, information on resources, which may benefit from the CBM-T programme in addition to tourism, is also included.

From the researcher's perspective, this review covers a body of literature that is different from typical tourism impact research in which impacts are assessed by researchers based on field measurements or perceptions of tourists and community residents (Hall & Lew, 2009). In contrast, the focus of CBM-T is on the sustained participation of community in monitoring, thereby generating local knowledge about the trends of their resource base for tourism. This line of research is underexplored in tourism impact research but it has great potential.

The four lessons learned from CBM literature review offer insights and guidance for protected area managers or communities who may want to develop a tourism-themed programme. Furthermore, the two illustrative examples both suggest that sustainable CBM-T programmes are built with careful consideration of programme goals, involvement of local communities throughout the programme development process, and pursuit of a multi-level partnership. The importance of these same factors in other CBM-T programmes is yet to be examined. The extent to which these factors could be compensated by others, due to community structure and capacity, is another interesting question.

This preliminary assessment has some notable limitations. The literature searches and review are not exhaustive. Since most CBM-T programmes are not academically published, much of the review was based on programmes found through a series of non-academic Internet searches. This type of research limits the results to programmes, which have been published or have an Internet presence, and are written about in English. This limitation is evident in the fact that the majority of programmes reviewed are located in North America and Australia. A more exhaustive search on the global state of CBM-T may involve international colleagues in the search for community-based programmes in their countries. The authors believe that this paper will generate interest in such an endeavour. Fruitful topics of future research also include evaluations of data quality collected by community participants as compared to managers or researchers, a deeper understanding of factors that influence the success or failure of CBM-T programmes, and demonstrations of how CBM-T data substantively contribute to protected area management decisions, and more specifically the assessment of CBD Targets.

In conclusion, the preliminary assessment, classification, and examples of CBM-T programmes presented in this paper provide evidence to support that community-based monitoring has the potential to facilitate the positive role of tourism in achieving multiple Aichi 2011-2020 Targets. CBM-T offers communities the opportunity to become involved in and benefit from the protection of local natural resources through sustainable tourism management. The focus on tourism resources is growing in importance for CBM. This application can result in social and economic returns for the community while increasing biodiversity conservation through improved management of tourism within protected areas from primitive wildernesses to urban natural sites.

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RESUMEN

El turismo puede desempeñar un papel importante en el cumplimiento de múltiples objetivos del Convenio sobre la Diversidad Biológica (CDB). El monitoreo de los recursos e impactos del turismo es fundamental para medir el desempeño del turismo en apoyo de los objetivos del CDB. El monitoreo basado en la comunidad (CBM) ofrece una solución viable en términos de los costos y la duración de los programas de monitoreo, lo que permite la continuación de los planes de monitoreo con un presupuesto reducido al tiempo que se crea un espacio para la acción cívica y la creación de capacidades. Este artículo presenta una evaluación y tipología preliminar de los programas de CBM basados en los recursos derivados del turismo (CBM-T). Con base en una extensa revisión bibliográfica se identificaron veintinueve programas de CBM-T con dos enfoques básicos de monitoreo: uno *basado en infraestructura* centrado en instalaciones turísticas, y otro *basado en los ecosistemas* centrado en los recursos naturales que apoyan la experiencia turística. Estos programas se diferencian además por la escala espacial, los objetivos, el bioma, los recursos que se beneficiaron y la estructura de gobernanza, tal como se refleja en 10 programas representativos. Se utilizaron dos ejemplos concretos –uno sobre el monitoreo de senderos en Taiwán y otro sobre el monitoreo de vida silvestre en Namibia—para ilustrar el diseño y la implementación de cada enfoque de CBM-T. También se analizan las lecciones aprendidas, como por ejemplo, los criterios establecidos para determinar las comunidades con potencial para ejecutar programas sostenibles de CBM-T.

RÉSUMÉ

Le tourisme peut jouer un rôle significatif en contribuant à plusieurs Objectifs de la Convention sur la diversité biologique. Le suivi des ressources et des impacts du tourisme est crucial afin d'évaluer la performance du tourisme pour soutenir la réalisation des Objectifs de la CDB. La surveillance communautaire offre une solution viable pour répondre aux préoccupations liées aux coûts et à la longévité des programmes de surveillance, en permettant aux plans de surveillance d'être maintenus avec un budget inférieur tout en créant un lieu d'engagement civique et de renforcement des capacités. Ce

document offre une évaluation et une typologie mondiale préliminaire des programmes de surveillance communautaire en se focalisant sur les ressources touristiques (appelé 'surveillance communautaire-tourisme'). Vingt-neuf programmes de surveillance communautaire-tourisme, adoptant deux approches de surveillance primaires, ont été identifiés en s'appuyant sur une importante analyse documentaire, notamment une *approche fondée sur l'infrastructure* axée sur les installations touristiques, et une *approche fondée sur les écosystèmes* axée sur les ressources naturelles qui viennent soutenir l'expérience touristique. Ces programmes sont par ailleurs différenciés en fonction de l'échelle spatiale, des objectifs, du biome, des ressources dont ils bénéficient et de la structure de gouvernance, comme l'illustrent les 10 programmes représentatifs. Deux études de cas, l'une sur la surveillance des sentiers à Taiwan et l'autre sur la surveillance de la faune sauvage en Namibie, ont été utilisées pour illustrer la conception et la mise en œuvre de chaque approche de surveillance communautaire-tourisme. Les enseignements tirés, comme les critères pour les communautés possédant un potentiel de mise en œuvre de programmes de surveillance communautaire-tourisme, sont étudiés.

EUROPEAN CHARTER PARKS—A GROWING NETWORK FOR SUSTAINABLE TOURISM DEVELOPMENT IN PROTECTED AREAS

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ABSTRACT

Currently there are 107 protected areas in 13 European countries certified and working under the European Charter for Sustainable Tourism in Protected Areas (ECST). Annually, some 10-15 new candidates strive for the Charter Award Certificate. The Charter methodology has been under continuous development since 2000 including definition of the criteria, harmonisation of the target and action standards, and giving more attention to the benefit opportunities and options of the Charter process. In this development process, the common framework has been the CBD sustainable tourism guidelines and their application in the European context. The other major focus has been in developing benefit indicators. This study analyses how the ECST criteria cover the basic CBD framework expressed in the CBD Aichi Targets, how successfully the sustainable development indicators have been developed, and how they can be used for verifying the system benefits. According to our analyses the ECST methodology strongly supports most of the Aichi Targets, out of 20 Targets, 11 directly and five indirectly. The analyses of key indicators for the social and economic benefits are based on case studies from the European Charter Network, especially in the Baltic Sea Region in Europe.

INTRODUCTION

European national parks and other protected areas management, created the EUROPARC Federation in 1973 to realize strategic visions discussed and recommended in the first United Nations Conference on the Human Environment in Stockholm in 1972 (UNEP, 1972). Since then, the EUROPARC Federation has been actively developing its international membership, which now includes 430 protected areas in 35 countries. EUROPARC members have had an important role in the rapid development of European nature-based tourism during last 20 years. Under the umbrella of EUROPARC Federation, 107 protected areas 13 European countries have become a special sustainable tourism oriented sub-community called the Charter Network. These parks are certified by the European Charter for Sustainable Tourism (ECST). ECST accredited protected area management conduct network meetings, electronic communication and joint international project cooperation activities. (*See*: www.european-charter.org).

From the early 1990's, EUROPARC worked with partners to develop a basic tourism management concept for its member parks, producing a key report and initiative called, *Loving them to death?–Sustainable tourism in Europe's Nature and National Parks* (1993). This work became the IUCN network report, *Parks for Life* (1998), in which 'good practice' cases about biodiversity protection integrated with nature tourism development in European protected areas and landscapes were presented. In 2000, the EUROPARC Federation launched a practical ECST toolbox to benefit its member protected areas management and their tourist customers; this has been updated in EUROPARC, 2010.

The methodology of the ECST was developed to cover co-operation between park administration, local communities and tourism business partners. The basic methodology for the *European Charter Business Partnership* scheme was launched in 2007 (EUROPARC, 2009). The key objective of EUROPARC's tourism development process has been the protection of the natural values of protected areas. This means that maintenance of geodiversity, biodiversity and landscapes are the first priority. This paper demonstrates how ECST methodology contributes to the standards presented in the Convention on Biological Diversity (CBD) guidelines for developing an integrated tourism-biodiversity relationship (CBD, 2004).

OUTLINE AND METHODOLOGY

This paper reports analysis of ECST's effectiveness in contributing to CBD Aichi targets. The key components of the ECST methodology are described and content analysis was used to determine the level of coherence between ECST activities and CBD Aichi Targets. A European CharterNET project report on benefit indicators of ECST performance, based on questionnaires sent to the all of the Charter accredited protected areas, was reviewed (Castro et al., 2008). Critical difficulties in developing such practical indicators are discussed. Finally, three case studies from the Baltic Sea Region in Europe are examined to look at social and economic benefits of the ECST processes and the possibility of launching the Charter Network of protected areas in the northern part of Europe.

THE EUROPEAN CHARTER FOR SUSTAINABLE TOURISM IN PROTECTED AREAS (ECST)

The ECST is a tool and a regional certification system for sustainable tourism development. It has ecological, social and economic dimensions, which help stakeholders to achieve multiple targets for sustainable development. The ECST has a flexible process oriented methodology; it does not have the standardized and fixed target orientation that common eco-labelling methodologies (i.e., EMAS - EU Eco -Management and Audit Scheme), have (EU Commission, 2011).

The basic ECST targets for sustainable tourism in protected areas are defined by 10 Charter Principles (EUROPARC, 2008). These Principles focus on the following strategic item:

1. Connecting stakeholders.
2. Preparing and implementing a sustainable tourism strategy and action plan.
3. Addressing key protected heritage issues, globally and locally.

Picture 1: Charter Meadow Day connecting local community, the protected area staff and tourism business' in Kemeri National Park, Latvia © Aija Pendere

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 ECST methodology aims to realize these strategic objectives derived from the 10 Charter Principles. The ECST 'Charter Toolbox' defines the necessary criteria, minimum standards and monitoring indicators for process and performance. The key objective is strengthening the connection between protected areas, local communities and nature and a connectivity approach is the key methodological activity in the ECST process. Practical implementation of this approach is demonstrated and evaluated through the Baltic case below.

Table 1. ECST process activities that directly support Aichi targets

Aichi target	Supporting ECST process activity
Strategic Goal A: Targets 1 and 4	Produces a common vision and goals in the development strategy in order to maximize the benefits of tourism on biodiversity, ecosystems, and regional development, while minimizing negative impacts. Produces a plan to raise awareness for biodiversity, conservation and sustainable use.
Strategic Goal B: Targets 5, 7 and 10	Produces a plan and zoning solution to reduce pressure on biodiversity and promote sustainable use of protected areas and landscapes. Process includes the collection and assessment of baseline information for the Charter area.
Strategic Goal C: Targets 11 and 12	Produces a plan for the improvement of the status of biodiversity, species and genetic resources within the Charter area. Generates commitments from Charter area stakeholders, including local communities and businesses.
Strategic Goal D: Target 14 and 15	Creates plans to increase ecosystem, service-based benefits for the well-being of visitors and the livelihoods of local communities. Produces plans to control the carbon footprint of visitors in the Charter area. Activates joint actions to implement these plans and mutual commitments with tourist businesses and local communities.
Strategic Goal E: Targets 18 and 19	ECST itself is a knowledge-based tool for sustainable development. Process encourages partnerships. Process includes participatory planning and capacity building.

The Charter process involves several steps, which are taken by park management and park partners. The first step is the creation of a Charter forum by the candidate-protected area, with the cooperation of stakeholders such as the local community, regional political bodies, third sector actors and tourism businesses. The forum then develops a sustainable tourism strategy for the potential Charter area. The protected area and the possible ecological and economical buffer zone, or direct local impact area around the core area, create the Charter area. The protected area; however, is the focus for Charter planning and development. The indirect, regional impact area around the Charter area is also important, especially when monitoring the effects of the Charter area on the wider regional level.

The candidate protected area then makes a resourced action plan for operational performance according to the strategic rules for the five years following Charter certification. An action plan would include activities like energy-saving renovations, waste water purification upgrades, trail construction, increasing the availability of visitor information, protecting vulnerable species from tourism pressure, park safety developments, GPS-guide introduction, foreign language training for rangers, etc.

Strategy and Action plans are produced, which are then reviewed and verified by an external expert. The EUROPARC Federation has organised an expert body, called the Charter Evaluation Committee to evaluate the Charter application and the basic planning documents provided by each candidate-protected area. The Evaluation Committee gives its evaluation to the EUROPARC Council; when the evaluation is positive the park is granted an ECST Charter certificate for five years.

Networking between protected areas and local tourist businesses increased in 2007, when EUROPARC launched the new Charter Partnership Programme (EUROPARC, 2010). Parks now have a standard framework for making mutual commitments and development plans with local businesses that have permanent service points inside or outside the park – where park visitors are their main customers. The tourism businesses have the opportunity to receive international visibility and substantial benefits as a reward for their commitment to partnership and environmental development. To date, 385 local tourist businesses in 23 Charter Areas in France, Great Britain and Spain, have distinguished themselves through Charter partnership.

COMPARISONS OF ECST PERFORMANCE TO CBD TARGETS

The ECST, as a process methodology, was developed to contribute to key international environmental schemes, such as Agenda 21, CBD, COP decisions and CBD´s guidelines on biodiversity and tourism development (United Nations, 1992; CBD, 1992; IUCN, 1998; COP 5, 2000; CBD, 2004). After the COP 10 conference it was necessary to analyse how the ECST process fulfils the Aichi Targets (COP 10, 2010).

Table 2. Results of the pilot project, developing impact indicators for monitoring of Charter performance *(Castro et al., 2008)*

Impact indicator 'Magic Number'	Average per park	Total	n
1. Number of local organisations participating in Charter forum	33	1,300	40
2. Coverage of the Charter area in km^2 • Percentage of Natura 2000 sites	1,030	46,000 50 per cent	45
3. Amount of protected biodiversity values in Charter area • Natura 2000 sites, in km^2 • EU Habitat Directive sites • EU Bird Directive species	 625 18 33	 20,000	32
4. Number of annual visitors using the Charter park services	1.2 million	61 million	50
5. Number of school class visits annually in the Charter park	49	1,315	27
6. Number of inhabitants in the 1.5 hours regional impact area • representing percentage of total population in country	1.7 million 23 per cent	75 million	44
7. Environmental investments in Charter park based on the Action plan during last 3 years (€)	2.9 million	55 million	19
8. Number of businesses co-operating with the Charter park • of which are Charter partner certified	121	2,300 196	19
9. Number of Charter park products (rough estimate)		several hundred	
10. Economic impact of Charter park tourism in regions (method under development, *see* chapter 'Tools for monitoring economic impacts …'). Numbers not available	-	-	-

Note: n=number of parks that answered the question; Nature 2000 is an ecological network of protected areas in the European Union (ec.europa.eu/environment/nature/natura2000/index_en.htm); EU Habitat Directive together with the EU Birds Directive form the cornerstone of EU nature conservation policy (ec.europa.eu/environment/nature/legislation/habitatsdirective/index_en.htm).

EUROPARC´s publication, *Joining Forces* (2009) describes how the ECST is successfully implementing CBD guidelines (2004). The key result from a two-year study describes how local action is delivering global policy through 24 good practise case projects. In this study the ECST process activities derived from the Charter Principles (EUROPARC, 2008) in the process guidelines (EUROPARC, 2010) were analysed and compared to the set of Aichi Targets (Table 1). The content analysis of these two sustainable development models indicates that the ECST based activities, which were planned and later realised by Charter parks and Charter partners, directly support most of the strategic CBD's Aichi Targets.

The Charter also indirectly supports most of the Aichi targets, which are not mentioned in Table 1. ECST produces a Strategy and Action plan that can be adopted by regional and national plans for land use and social development (Strategic Goal A: Target 2). Through effective media communication, ECST may increase political awareness and reorganise the regional and national incentive systems for biodiversity conservation (Strategic Goal A: Target 3) and/or the protection and fair use of genetic resources (Strategic Goal D: Target 16). ECST also helps to raise awareness when higher-level political bodies are developing national policies and action plans for biodiversity conservation, and allocating resources for those actions (Strategic Goal E: Targets 17 and 20).

The ECST process does not cover some of the Aichi Targets because those specific sector themes are not included in sustainable tourism planning. However, protected area managers generally produce other thematic plans, focusing on agriculture, forestry, professional fishing, and genetic conservation as well (Strategic Goal B: Targets 6, 8, and 9; Strategic Goal C: Target 13).

EVIDENCE OF THE POSITIVE EFFECTS OF THE ECST

The ECST monitoring system, defined in Charter principle 10, is under development and therefore, a statistical analysis of the performance of Charter parks is not yet complete. In Charter vocabulary, pilot indicators are called 'Magic Numbers'. They numerically describe some of the key ecological, economic and social outputs of Charter performance during the post-creation five-year period, as well as the socio-geographic dimensions of the effective local or regional Charter impact area.

In 2008, the Sustainable Tourism Working Group of the EUROPARC Federation organised a survey with the Charter parks (n=58). The number of Charter parks that answered each survey question varied, either because the data was not available or they did not have the resources to provide the answer in time. However, the acquired data, especially the average numbers per park, provide an interesting view of the major development tracks

Figure 1. Locations of partners in PARKS & BENEFITS project around the Baltic Sea in Europe

generated by the Charter performance. The 10 Magic Numbers in 2008 are summarized in Table 2 (Castro et al., 2008).

Indicators 2 and 3 specify ecological impacts; 7 to 10 indicate economic impacts and 1, 4, 5 and 6 indicate social impacts. These data provide information about: key resources for development; basic environmental status; customer potential; the status of park business activities; and, the social network. Indicator 6, the number of inhabitants in the region within one and a half hours of the protected area, is more of an indirect indicator of the importance of the Charter area than an indication of the Charter efficiency. The other social development indicators are more valid for measuring the direct gain of social capital through the Charter performance. Economic impact indicator 10 is still in the early pilot stage and the 2008 survey question: '*What is the value adding impact of the Charter park in the regional economy?*' could not be answered. This issue was analysed in more detailed below during an evaluation of some recent studies in the Baltic Sea region of Europe.

This pilot survey on Charter impacts only measured numbers at the beginning of Charter performance or at the one-year point for those protected areas that started ECST performance earlier. Unfortunately, EUROPARC does not have the resources to conduct annual monitoring. If monitoring were done annually, then impact changes would be visible.

PARKS & BENEFITS PROJECT AS A BEST PRACTICE EXAMPLE FOR ECST NETWORKING

The Charter parks network started in the Mediterranean Region and is now relatively widespread in mid- and west-European countries. Until 2009 only three protected areas in the European Baltic Sea Region (BSR) were certified under ECST: Nature Park Insel Usedom in Germany, and Syöte and Koli National Parks in Finland. A BSR project, partly financed by the Regional Development Fund of European Union, *PARKS & BENEFITS*, with 18 partners from six countries in the BSR, was designed to introduce the Charter on a broader scale and with a more systematic approach into the Baltic Sea Region of Europe. This required work from a network of parks, regional authorities, and stakeholders in tourism, environment and universities. The protected areas administrative, research and field units involved as project partners are shown in Figure 1. As a result of the *PARKS & BENEFITS* project, seven protected areas have either started or finalised their Charter accreditation process.

Table 3. Critical steps in the ECST process in Kemeri National Park

Step	Activity
1	General meeting on the Charter to find out if interest existed.
2	Personal interviews with the stakeholders.
3	"Dreaming about the future" – creating the vision of the Kemeri Charter area.
4	Assessing the ways to get there and the current situation (SWOT analyses, covering Charter principles one by one).
5	Immediate reaction to problems and indicated needs – seminars, excursions, research etc.
6	Bringing everything together in a strategy, action plan, presentation and agreement.

Table 4. Local economic impacts of Finnish national

National park	Total income Million €	Total employment effect (person years)	Number of visits in 2009
Koli NP (Charter park)	5.3	70	127,600
Syöte NP (Charter park)	3.0	40	39,700
All NP's (35)	85.7	1,100	1,943,000
Mean/NP	2.4	31	55,500

EUROPARC Federation's Nordic Baltic Section, which is the regional organisation of protected areas in Scandinavian and Baltic countries, has been involved in the project's development. As well, the German Section of the EUROPARC Federation is linking its work with the Charter. It is expected that in the future, even more protected areas in the BSR will start implementing sustainable tourism principles, including the enhancement of cooperation with tourist businesses.

Analyses were carried out on possible target groups for tourism in and around protected areas as well as on tourism brands and logos. Accessibility for sustainable means of transport and protected areas accessibility for disabled people were other focuses of the project; some pilot-investments in specific visitor infrastructure were made.

Tourism in natural areas always includes the risk of excessively strong ecological or social pressures. The *PARKS & BENEFITS* project provided guidance on the carrying capacity of protected areas in order to deal with those risks (Brandt & Holmes, 2011). Carrying capacity is systematically derived from the standards provided by the Natura2000-system of the EU. A new pragmatic approach analysing the main social conflicts—conflict-types, levels on which conflicts are dealt with, related indicators and standards, ways of conflict-management—has been undertaken.

The project developed minimum standards regarding visitor monitoring (Sommer, 2011) and provided resources for pilot investments into visitor counting techniques. The *PARKS & BENEFITS* project communicated the mutual benefits of protected areas for regional development to the public and local and regional politicians as a campaign to raise awareness (*See* www.parksandbenefits.net).

The eight participating parks gained multiple benefits; they were provided with tools, guidance, advice and the financial resources they needed to take major steps forward. The project also transferred and made available best practise management tools and experiences from other parts of the Baltic Sea and Europe to the eight project parks. The Nordic Baltic Section of EUROPARC works to replicate positive results for the benefit of parks in that region. The following section describes a project pilot park as an example.

A LATVIAN EXPERIENCE OF ECST: KEMERI NATIONAL PARK

Kemeri National Park was founded in 1997, covers 381.65 km² and has a capacity of 4,000 inhabitants. It is located approximately 40 km west of Riga, Latvia's capital city, from where the park is easily accessible by train and highways. Kemeri National Park is mainly a wetland area; it has a high diversity of raised and transitional bogs, fens, wet forests, floodplain meadows, shallow coastal lagoon lakes, rivers and seacoast sand dune habitats. Lake Kanieris is one of the six Ramsar sites in Latvia (Balandina, 2011). For centuries, sulphurous mineral water and mud have been used for curative purposes in the Kemeri Charter Area. Resorts have been a famous retreat for people from Riga, the former Soviet Union and other countries.

Before participating in the *PARKS & BENEFITS* project and the ECST, the Kemeri National Park Authority concentrated on creating and implementing a management plan, research and ranger work. There was regular contact with all five municipalities around the park but there was a tourism co-operative in only one municipality and only a few contacts with tourist businesses and small amounts of cooperation with NGOs. Park visitors were registered at the information centre, on nature education excursions and other organized events. Despite the existence of sensitive park issues with tourism, no public discussions on tourism took place.

In 2008 The ECST process was initiated and six steps (Table 3) were carried out to bring all stakeholders and their knowledge together in order to discuss and agree on how sustainable tourism should be developed in the Kemeri Charter area.

After the initial six steps a Tourism Strategy and Action plan was made; this was in addition to the National Park management plan. These plans included the evaluation of tourism, and potential of nature and cultural values. In addition the 'Kemeri Charter Forum' was created, which

Picture 2: Innovative Charter Barefoot Trail in Kemeri National Park, Latvia ***Photo: Viesturs Serdāns***

regularly brought stakeholder groups together. The stakeholder groups were protected areas management, municipalities, tourist businesses, local residents, NGOs and tourist organizations.

Innovative recreation activities and structures were created and realised during the *PARKS & BENEFITS* project in Ķemeri NP, through the cooperation of a local tourism business and the park's managing authority. One of the park's activities, the Charter Meadow Day, provided expert information about protected plant species, common species and local cultural traditions. It was a recipe for success in Ķemeri NP in 2012, and set the right mood for the Midsummer Night festival (Picture 1) and another successful initiative, the Charter Barefoot Trail (Picture 2), which is the first of this kind in the Baltics.

The key to success in Kemeri National Park has been to establish direct and personal contacts between park staff and tourism stakeholders, creating a basis for long-term relationships and cooperation. Strong personal relationships have led to a new approach to nature protection; it is now easier to focus on positive actions—what can be done—rather than focusing on restrictions—what cannot be done. To the Kemeri National Park staff, it is obvious that the acceptance of nature conservation and perhaps even the willingness to actively support biodiversity targets is stronger than before the ECST process started.

TOOLS FOR MONITORING THE ECONOMIC IMPACTS OF TOURISM IN PROTECTED AREAS IN THE BALTIC SEA REGION

The economic demand on protected areas is growing; protected areas create jobs and income flows within their boundaries and in surrounding regions. In all BSR countries, the government allocates budget funding to parks for basic nature tourism recreational infrastructure and private businesses create the tourism services enjoyed by, and paid for by, park visitors.

In Finland, the Finnish Forest Research Institute and Metsähallitus—the state natural heritage services—developed an application for estimating the local economic impact of national parks and other nature recreation areas (Huhtala et al., 2010). The U.S. MGM2 method (Stynes et

al., 2000) served as a basic model for the Finnish application, which largely relies on the Metsähallitus' visitor monitoring system. The application produces comparable economic impact information across areas and over time. It also allows for an annual follow-up on impact measurements.

The number of visits and the average visitor trip expenditure are the key data items of the application. Its focus is on the flow of primary visitor expenditure into the local impact areas of parks and the jobs created by direct tourist services. Regional, secondary impacts are analysed with multiplication coefficients calculated by the national and regional statistical accounting system. Government expenditures on park staff and external park services are not included in the economic impact generated by tourist expenditures.

Finnish ECST Charter awarded national parks Koli and Syöte are included in the economic impact monitoring (Table 4). In the pilot calculations it was not possible to see any differences between impacts in the Charter parks and non-Charter parks. The average impacts are higher in those two Charter parks than in the other national parks, but this cannot be explained by the Charter effect. After several years of monitoring it may become clear whether the ECST certification provides any value to parks and their communities.

Statistics indicate that the economic benefits in the regional and local economy are often largest at remote tourist resorts, which are integrated within national parks and where visitors stay overnight and use multiple services over several days. The semi-urban parks near population centres, where visitors only visit the park for day trips, are not generating as much customer spending.

Another way to monitor the positive socio-economic effects of large scale protected areas (e.g. national parks, biosphere reserves and nature parks) is through the use of a method developed in 2004 by Professor Hubert Job from the University of Würzburg in Germany (Job et al., 2005; Job et al., 2006; Job & Harrer, 2009). The main data collection methods for this application are visitor surveys and interviews that determine visitor numbers and spending related to the protected area and statistical data and information from suppliers.

The eight steps that make up this method have been described by Job et al. (2006) and Scharrenberg and Fieber (2009). They are:

1. Determination of gross turnover (number of visitors multiplied by daily spending).
2. Description of the industries benefiting.
3. Differentiation of sales by market segments.
4. Determination of the net sales (gross sales minus VAT).
5. Determination of direct income effects (net sales multiplied by value added ratio).
6. Determination of indirect income effects (net sales minus direct income effects).
7. Determination of the total income effects.
8. Analysing employment effects.

Within this method, a critical question asked to visitors is, *"what role did the park you visited play in your decision to plan a visit to that region?"* There are five possible responses: no answer, no role, small role, big role and very big role. Only the figures from visitors answering big role and very big role (2004: 43 per cent; 2010: 47 per cent) were taken forward into the further calculation.

One of the protected areas that used this method for the first time was the Müritz National Park in North-Eastern Germany. It was found that tourism created 628 job-equivalents (Job et al., 2006). This is a lot of jobs, especially when considering the fact that this part of Germany is an economically weak region, so the economic value of Müritz National Parks is regionally beneficial. This became an important argument for politicians discussing the role and benefits of national parks in society. The *PARKS & BENEFITS* project made it possible to repeat the analysis in Muritz National Park (Jeschke, 2010) and it was found that tourism created 651 job-equivalents around the park. The German pilot analyses of local economic impacts does not provide value outputs to the ECST methodology yet; although, it provides strong data about the major socio -economic impacts of park tourism on site.

CONCLUSIONS

This paper analysed the principles and activities processed by the European Charter for Sustainable Tourism in Protected Areas (ECST) in protected areas and compared them to the CBD Aichi targets on biodiversity and tourism development. The findings show that the core methodologies of the ECST support the Aichi targets. The CBD's and ECST's guidelines on tourism and biodiversity both define sustainable tourism by three basic approaches:

1. community involvement and participation;
2. community benefit; and
3. environmental preservation.

The ECST process activities directly support 11 and indirectly support five of the 20 Aichi Targets. Four of the Aichi Targets are realised through planning processes other than the sustainable tourism strategy and action plan.

The early focus of ECST was on developing environmental management skills and during the last five years it has also been about developing partnerships and networking. Until now, active development of impact monitoring indicators in the ECST methodology has been weak. The coverage of the Charter network has recently been growing in Northern Europe in the Baltic Sea Region due to project work, which has been partly funded by EU and partly by national environmental authorities.

A Charter pilot project produced a set of impact indicators called the10 Magic Numbers for monitoring ECST performance. Analysis of the indicator content and the use of the indicator numbers suggest that they are insufficient and are poorly used in practice. The need for economic impact tools is evident and several pilot projects to develop them have been conducted around the Baltic Sea Region, for example, the Finnish model and the German model. These models are still in the early stages of development and so when comparing parks against each other in time and space; they still cannot asses the value of the ECST in the regional economy. These innovative developmental steps however, strengthen our scientific base and our understanding of the issues in sustainable tourism development under biodiversity based restrictions.

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RESUMEN

Actualmente, hay 107 áreas protegidas en nueve países europeos que están certificadas y operan conforme a la Carta Europea para un Turismo Sostenible en las Áreas Protegidas (CETS). Cada año, unos 10-15 nuevos candidatos procuran la certificación. La metodología de la certificación ha estado en continuo desarrollo desde 2000, incluyendo la definición de los criterios, la armonización de las normas y acciones óptimas, y una mayor atención a las oportunidades y opciones de beneficio en relación con el proceso de la Carta. El marco común en este proceso de desarrollo han sido las directrices del CDB para un turismo sostenible y su aplicación en el contexto europeo. El otro punto importante ha sido el desarrollo de indicadores de beneficios. Este estudio analiza cómo los criterios de la CETS cubren el marco básico del CDB expresado en las Metas de Aichi del CDB, cuán exitosamente se han desarrollado los indicadores de desarrollo sostenible, y cómo pueden utilizarse para verificar los beneficios del sistema. De acuerdo con nuestros análisis, la metodología de la CETS apoya la mayoría de las 20 Metas de Aichi, 11 directamente y cinco de manera indirecta. El análisis de los indicadores clave en materia de beneficios sociales y económicos se basa en estudios de caso de la Red de la Carta Europea, sobre todo en la región del Mar Báltico en Europa.

RÉSUMÉ

Il existe actuellement 107 aires protégées dans neuf pays européens certifiées et conformes à la Charte européenne du tourisme durable pour les aires protégées (CETD). Tous les ans, entre 10 et 15 nouvelles aires postulent pour obtenir le certificat de la Charte. La méthodologie de la Charte évolue continuellement depuis 2000, notamment la définition des critères et l'harmonisation de la cible et des normes de l'activité, et une attention particulière est portée aux possibilités d'avantages et d'options du processus de la Charte. Dans ce processus évolutif, les directives liées au tourisme durable de la Convention sur la diversité biologique (CDB) et leur application dans le contexte européen ont été prises pour cadre général. Par ailleurs, la Charte concentre son action sur la mise en place d'indicateurs d'avantages. Cette étude analyse dans quelle mesure les critères de la Charte européenne du tourisme durable incluent le cadre basique de la Convention sur la diversité biologique exprimé au travers des Objectifs d'Aichi de la CDB ; elle s'interroge sur le succès des indicateurs de développement durable mis au point ; et enfin évalue comment ceux-ci peuvent être utilisés pour vérifier les avantages du système. Selon nos analyses, la méthodologie de la CETD soutient directement onze et indirectement cinq des vingt Objectifs d'Aichi. Les analyses des principaux indicateurs des avantages socio-économiques sont basées sur des études de cas du Réseau de la Charte européenne, notamment dans la région européenne de la mer Baltique.

USING TOURISM TO CONSERVE THE MIST FORESTS AND MYSTERIOUS CULTURAL HERITAGE OF THE BLUE AND JOHN CROW MOUNTAINS NATIONAL PARK, JAMAICA

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ABSTRACT

The Blue and John Crow Mountains National Park protects internationally significant biodiversity components and rich cultural heritage. Inside the park, two recreation areas are managed, and outside, sustainable community tourism is being developed. Tourism contributes to Aichi Targets by: (1) raising public awareness of the values of biodiversity, (2) engaging local communities in biodiversity awareness-raising and skills training, and (3) facilitating ecologically sustainable, income-generating activities for poverty reduction. Tourism and community engagement activities are part of the effort to reduce threats to forests through unsustainable livelihoods such as slash and burn, shifting agriculture. Community tourism activities have been established in a few communities while others are at various stages of planning. Several community members are now employed as National Park Rangers or otherwise assist in park management. Benefits to biodiversity conservation have been realised through local capacity building for sustainable tourism.

BACKGROUND INFORMATION

The Blue and John Crow Mountains National Park (BJCNMP) protects the largest remaining block of contiguous rainforest in Jamaica (JCDT, 2005). Established in 1993, the 486 km² National Park is of international significance for globally threatened endemic species, with its main mountain ranges cited as two of the 'wholly irreplaceable' key biodiversity areas within the Caribbean Biodiversity Hotspot (CEPF, 2010). Alongside the important natural heritage of the area, BJCNMP is also home to the Windward Maroons. Maroons are indigenous communities of Amerindians and Africans who escaped slavery in the Americas during the 16th to 19th centuries by fighting off attempts at control by colonial powers (Agorsah, 1994). In Jamaica, the Windward Maroons (hereafter referred to as Maroons) used the natural resources of the Blue and John Crow Mountains to wage guerrilla warfare against the British colonial powers, and were eventually granted their sovereignty as a free nation within the island (John et al., 2010). The mountains provided a natural fortress for the Maroons, and as the last resting place of their ancestors, the mountains remain a living monument to the memory of the fallen freedom fighters (John et al., 2010). Today, the Maroons account for less than 1 per cent of Jamaica's population, but their culture is shrouded in mystery and attracts hundreds of visitors to Maroon territories each year.

Annually, about 12,000 Jamaicans visit BJCNMP and the community-based tourism attractions associated with it (JCDT, 2011). In 2011, Jamaica as a whole attracted three million visitors who spent US$2 million or about 5.4 per cent of the Gross Domestic Product (PIOJ, 2011), but less than 15 per cent of these visitors stayed at resort areas near the National Park (JTB, 2010). Tourism in Jamaica is nature-based, but the focus since its inception in the 1950s has been on north coast beach resorts and attractions.

Concerns in the 1980s and 1990s about damage to coral reefs and mangroves led to attempts to improve the environmental sustainability of tourism, including a move to diversify tourism opportunities – a challenge in common with many countries around the world (Commonwealth Secretariat, 2002). Options have expanded to include a variety of other natural and cultural features of the island but the Blue and John Crow Mountains are still mostly undiscovered by both foreigners and Jamaicans.

This paper explores the opportunities that tourism is beginning to provide to poor local communities around the BJCNMP in improved management of the biodiversity of the area. In 2002, three of the four parishes around the park had a poverty rate of between 27–32 per cent in comparison to the national average of 19.7 per cent of people who live below the national poverty line (PIOJ, 2007). Specifically, the park management's approach to building local capacity for sustainable tourism and the response of local communities is described, along with the challenges faced. The process of building local community capacity has taken much longer than anticipated, and the vision of making the park and its environs a new tourist destination in Jamaica is still to be realised. Park management activities have however been successful in raising awareness about the value of biodiversity for tourism, and in the use of these resources to help reduce local poverty.

CULTURAL HISTORY OF BJCNMP

The first inhabitants of Jamaica were the Taino, an Amerindian group living mainly on the coast. In 1509, the Spanish began to settle Jamaica particularly on the north coast. To avoid enslavement, many of the Taino fled to the interior hills of the island; these communities were later strengthened by the integration of Africans who escaped the Spanish slavers from 1513 onwards. It was during this time that the name 'Maroons' from the Spanish 'Cimarron,' or, 'runaways living in the mountain-tops' was introduced to identify this group.

In 1655, the British captured Jamaica from the Spanish, and with the rapid growth of the sugar industry, large numbers of African slaves were imported, but many of them escaped to join the Maroons. The Maroons eventually migrated to the north-east of the island, establishing their capital at 'Great Negro Town,' later to become Nanny Town, which lies deep in the interior forests of the Blue Mountains (Figure 1). From Nanny Town, the Maroons

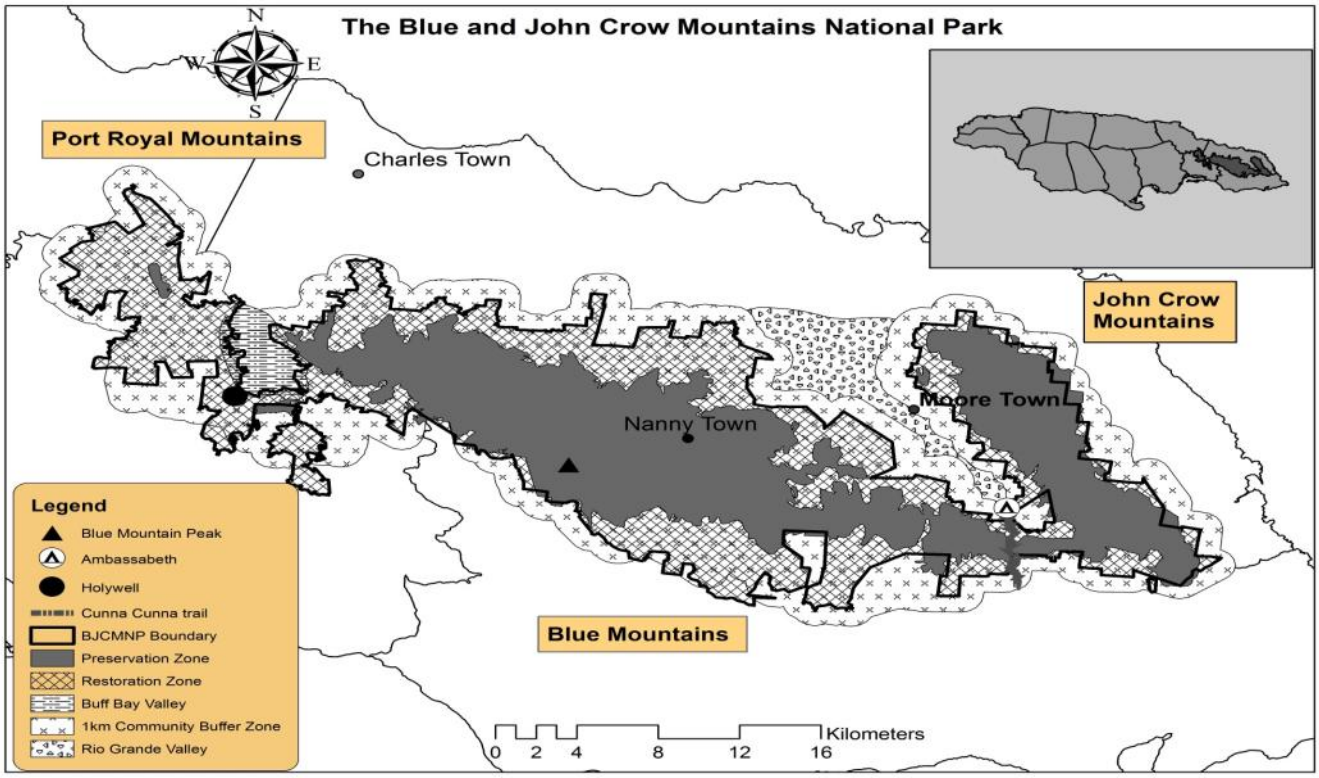

Figure 1. Map showing the Blue and John Crow Mountains National Park

controlled most of the Blue and John Crow Mountains, and all of what today comprises the northern parishes of St. Mary and Portland (Agorsah, 1994).

Much of the mystery that surrounds Maroon culture originates from their clever use of the natural resources found in the BJCNMP. Tools required by the Maroons to wage their highly effective guerrilla warfare against the British were provided by the forest biodiversity and the rugged mountain landscape (Agorsah, 1994; Bilby, 2005). The Windward Maroons were the first of two Jamaican Maroon bands, and the first Maroon free-nation having gained their sovereignty in 1740 on the signing of a Peace Treaty with the English after almost 20 years of continuous warfare (Campbell, 1988).

On attaining freedom, the Maroons moved out of the interior mountains and into the Rio Grande and Buff Bay Valleys, now part of the Park's Community Buffer Zone, which extends 1 km around the BJCNMP boundary. There are two Maroon communities within this Zone, which continue to maintain their rich cultural heritage – the Moore Town and the Charles Town Maroons. Several inhabitants of some of the villages in the upper Rio Grande Valley are considered descendants of the Maroons (Figure 1). The heritage of the Moore Town Maroons, in particular their music, was declared by UNESCO in 2003 as a Masterpiece of the Oral and Intangible Heritage of Humanity (UNESCO, 2004). Visiting certain areas within the Blue and John Crow Mountains can only be done with the consent of the Maroon Colonels, prayers to the ancestors and the presence of a Maroon guide (W. Sterling, personal communication, 24 March, 2010).

Cultural heritage on the southern slopes of the Blue Mountains was influenced by the British, and differs from that of Maroon culture on the northern slopes. In 1728, coffee seedlings were introduced to the island, and the Blue and Port Royal Mountains were extensively chosen for coffee cultivation (Laborie, 1798). The cool, misty conditions of the mountains allowed coffee berries taking longer to ripen, thus developing a superior flavour to other Jamaican grown coffee. The coffee industry boomed in Jamaica from 1790–1834, with a slave labour force, and in 1814, Jamaica accounted for 30 per cent of world coffee exports (Patterson, 1967). The coffee boom led to the pristine forest becoming extensively occupied and cultivated. By the late 1830s, the industry collapsed due to a combination of the emancipation of slaves in 1838, massive soil erosion, a great storm, which destroyed the works and houses on many large plantations and the removal of preferential trade agreements for Jamaica. Coffee cultivation has seen resurgence in the Blue Mountains, and old plantation houses and artefacts are tourist attractions in the area.

The inaccessibility of the interior mountains meant that much of the forest was impenetrable, which suggests that extensive areas of forest were never cut despite the coffee boom (Chai & Tanner, 2010; Shreve, 1914). An official report (Hooper, 1885) on Jamaica's forests highlighted the need for watershed management on the steep slopes of the Blue Mountains. The report spurred the government to retrieve lands that were patented (that is, ownership rights were given) (Delle, 1998). In 1889, much of the Blue Mountains were protected under the *Mountain and River Reserves Law* (1889). Additional land was protected under this and other legislation, until in 1950 all the parcels were consolidated as the *Blue Mountain Forest Reserve* under the *Forest Act* of 1937 and the later establishment of the Forestry Department in 1942. The BJCNMP was designated in 1993, under the *Natural Resources Conservation Authority (NRCA) Act* of 1991 for the protection of biodiversity, ecosystem conservation and recreational and educational opportunities (JCDT, 2005).

MANAGEMENT OF THE BJCNMP

Today, the National Park is managed collaboratively by the Jamaica Conservation and Development Trust (JCDT - a non-government organisation, hereafter referred to as the Trust) and the two government agencies responsible for relevant legislation: the National Environment and Planning Agency (NEPA) through Delegation Instruments signed in 1996 and 2002, and the Forestry Department through a Co-management Agreement in 2000. Management assistance is also provided by the Jamaica National Heritage Trust.

The vision of the BJCNMP is: *"[to be] a native rainforest and home to thriving populations of endemic species, and majestic mountain memorial to the Maroon Freedom Fighters managed through active programmes that conserve natural habitats and intangible heritage by: restoring degraded areas, reducing and mitigating against threats, facilitating the provision of essential ecosystem services, and promoting the revitalization of Maroon traditions, whilst providing quality income-generating, recreational and educational experiences for Jamaicans and foreigners, alike"* (JCDT, 2011).

The mission is: to collaboratively manage the national park for its natural, cultural and recreational values, by striking the right balance between biodiversity conservation and socio-economic development, for the ultimate well-being of the people of Jamaica (JCDT, 2011). Governance of the park is the responsibility of the co-management partners: the Trust, NEPA and the Forestry Department. These organisations meet regularly to review detailed park management reports from the Trust. As the operational manager the Trust seeks to involve local community members in the preparation of the Management Plan and detailed planning for local projects, which are jointly implemented (JCDT 2011).

Management is guided by a 5-year Management Plan (2011 – 2016) approved by the Natural Resources Conservation Authority, which describes programmes for natural heritage conservation, cultural heritage preservation, enforcement and compliance, education and public involvement, recreation and tourism, monitoring and evaluation, governance and administration. Park activities include: reforestation with native, non-lumber trees, control of invasive plant species, school visits, sustainable community development, enforcement patrols, bird monitoring and operation of recreational areas. The core of the National Park is the Preservation Zone and it covers over 70 per cent of the Blue and John Crow Mountain Ranges (Figure 1). Around the Preservation Zone is the Restoration Zone where forest rehabilitation such as invasive species control and reforestation with native species occurs.

Management takes into consideration threats (particularly deforestation and forest degradation) and their root causes, primarily environmentally unsustainable economic activities conducted by community members with low educational attainment and limited income. Slash and burn, shifting agriculture is one such activity, where areas of forest are cleared using fire just outside the park boundary or sometimes deep within the forest to avoid detection by the park rangers (R. Poyser, personal communication, 10 August, 2012). Burning is a low cost clearing method and releases potash providing a quick fertilising stimulus for crops. The topsoil, which is low in nutrients and on steep slopes, is quickly eroded, so farmers moves to another location in two to three years. Small scale agriculture or working on large coffee farms are the main sources of income for people living in the rural communities in BJCNMP Community Buffer Zone. The park's Management Plan identifies the root causes behind inappropriate agricultural practices as inadequate knowledge and capacity to implement more environmentally sustainable practices or other income generating activities.

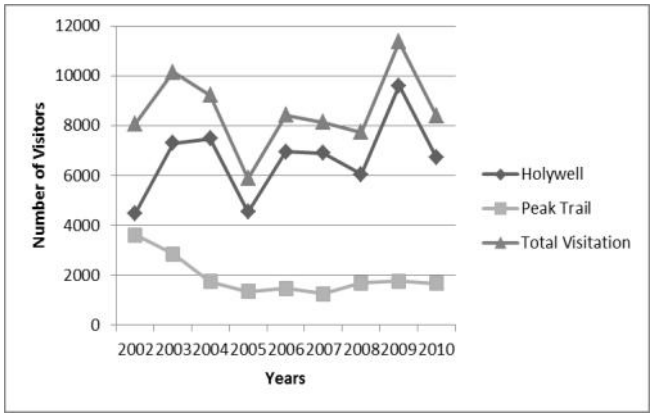

Figure 2. Visitation at the National Park Recreation Areas, Jamaica

NATIONAL PARK RECREATION AND TOURISM PROGRAMME

Since the establishment of the park, efforts have been made to facilitate sustainable development as an alternative to slash and burn farming. The Recreation and Tourism Programme aims to provide and facilitate recreational opportunities for local and international visitors (using ecotourism principles) to generate income and support for the National Park and its surrounding communities (JCDT, 2011). The two main recreational areas within the park are Holywell and the Blue Mountain Peak Trail including Portland Gap (Figure 2). These are under active management and are self-financing, except for capital expenditure.

Holywell is an hour's drive from the capital city of Kingston. The site has large picnic areas, three cabins (accommodating up to 10 people), camp-sites (for up to about 50 campers), a visitors' centre, interpretive signs, one interpretive trail and four other hiking trails. Used mainly by residents of Jamaica on weekends and during holidays, there are about 10,000 visitors per annum (JCDT, 2011). The Blue Mountain Peak Trail is approximately 9.3 km long and takes hikers to the highest point on the island (2,256 m). Portland Gap is the only recreational area along the Peak Trail and is a small site with rustic dormitory-style accommodation for up to 90 people. Ticketed visitors amount to about 2,000 per annum; figures are believed to be higher but are difficult to account for, due to the remoteness of the site and inadequate park personnel.



From left to right: Oatley Mountain Trail BJCMNP © S. Otuokon; Oatley Trail at Holywell © JCDT; Moore Town Maroons © JCDT

Both sites provide opportunities, particularly to residents of Jamaica, to enjoy nature, which is the first step in raising awareness about the value of biodiversity. Visitation records over the past nine years show a slow increase in the number of visitors at Holywell, following declines linked to major storms between 2004 and 2005 (Figure 2), suggesting an increasing appreciation for nature-based recreation. Visitation peaked in 2009 with a special programme for school groups that visit Holywell for educational and interpretive programmes where they participate in a variety of activities. The Kids Discovery Zone at Holywell is a play area designed for three to ten year olds, its focus is learning through fun activities such as games and stimulation of the senses. For example, at the Coney Mound inside the Kids Discovery Zone, children dig in the sand like the endemic Jamaican Hutia (*Geocapromys brownii*), commonly known as the Coney, burrowing underground, and an interpretive sign depicts and describes this animal and its conservation. In addition to raising the awareness of visitors, training local community youth as tour guides for these programmes provides locals with the opportunity to use biodiversity sustainably to generate an income.

To prevent additional developmental from trails, buildings etc, new development inside the BJCNMP boundary is discouraged. Hence, a major focus for local development and poverty reduction strategies has been support for community tourism based on the region's rich natural and cultural heritage. Between designation of the National Park in 1993 and the present time, various approaches to facilitate community-based tourism have been tried with successes, failures and many lessons learned along the way.

The initial community-based tourism approach was to work with community members through the park's three Local Advisory Committees formed in the early 1990s (JCDT, 2005). Two local tour guide companies were established during this period and supported with funding, training and technical assistance (Smith, 1995). However, when support from the National Park management ceased, these community ventures ground to a halt. One challenge faced was the limited willingness on the part of domestic visitors, to pay for tour guides, particularly on the Blue Mountain Peak Trail. Another challenge was that rural community members have low levels of education, no capital for business establishment and limited business, organisational and project management experience. In addition, community members lost interest in the initiative when the available funding changed from grants to low interest loans.

The most successful experience with community-based tourism has been with the Bowden Pen Farmers' Association (hereafter referred to as the Association). They were established in 2000 by a group of farmers in the Upper Rio Grande Valley who had been involved with one of the park's Local Advisory Committees. Notably, park management did not provide assistance to establish a local tour company in this community. This group was motivated by what they learned from park management activities and researchers using the Ranger Station in the community (Bedasse, 2004). Two full-time park rangers were also hired from this community. A key person in the development of community-based tourism in the Upper Rio Grande Valley was the Association's Adviser who is from the local community, has tertiary level education,

management level work experience and was one of the three Community Outreach Officers employed by the National Park in the 1990s. She helped organise the Association and came to an agreement with the group to establish an ecotourism resort – Ambassabeth (Figure 1)— on land she owned (Bedasse, 2004). Association members share in the profits made from operating the resort and tours.

With technical assistance from the park rangers and funding from several sources, Association members restored the heritage trail through the Cunha Cunha Pass. The Trust and the Association enjoy a mutually beneficial relationship. The Trust assists the Association with proposal writing, sustainable agriculture training, tourism/ hospitality training and introduction to agencies. The Association helps design and actively participates in park projects. For example, they have implemented reforestation projects on lands just outside the National Park, planting Water Mahoe (*Hernandia catalpifolia*) the only food plant eaten by caterpillars of the Giant Swallowtail Butterfly (*Papilio homerus*), an endangered species and the largest butterfly in the Americas. These biodiversity conservation activities are helping the National Park achieve its goals, whilst contributing to the visual appeal of the area and the likelihood of seeing the Giant Swallowtail Butterfly, which will enhance the tourism experience.

Another successful community based tourism experience has been the Youth Poverty Alleviation through Tourism and Heritage (PATH) project, funded by the United Nations Educational, Scientific and Cultural Organisation and the Environmental Foundation of Jamaica between 2003 and 2009. The focus was on building awareness about biodiversity conservation and capacity for sustainable tourism amongst youth living around Holywell and the Charles Town Maroons in the Buff Bay Valley. Youth learned how to generate income through sustainable community tourism and ecotourism. They recognise that these forms of tourism depend on showing visitors the biodiversity of the area, which provides an impetus for conservation. This programme yielded four national park rangers, two staff members (one administrative and one part-time assistant education officer) and four tour guides who are on call for educational packages or trail tours.

Based on these experiences, the Trust recognised the need for a 'programmatic' as opposed to an ad-hoc approach to establishing community-based tourism (JCDT, 2011). Through the *Holywell and Rio Grande Valley Commercial Development Project*, funded by the Inter-American Development Bank and implemented by the Trust between 2006 and 2009, a manual for the *Blue Mountains Sustainable Tourism Programme* was prepared. Participatory planning activities targeted communities from around the park's recreational areas and the Rio Grande Valley, along with relevant government agencies and private sector.

The vision of the Blue Mountains Sustainable Tourism Programme is for the park to be: *"a world-class sustainable tourism destination that supports local communities and enhances conservation of the National Park and its environs"* (JCDT, 2012). The hub of the planned destination is the BJCNMP, and along with the park's Community Buffer Zone, these will comprise Jamaica's newest destination. The extending from this hub will be the community-based and private sector owned attractions, festivals and accommodation in the clusters of communities around the hub. The National Park and the support it derives from packages sold, will help ensure the environmental sustainability of the destination, and make it a true ecotourism product. Visitors will be able to spend several days within the destination, travelling from one local community to another for different experiences in diverse locales.

The Programme will be aimed at three main target markets: (1) international, independent travellers, (2) residents of eastern Jamaica and (3) business travellers to the city of Kingston (Heritage Design/USDA Forest Service, 2008). The rationale for the Programme's focus on international tourists is that international tourism continues to grow (UNWTO, 2011), and tourism focusing on natural and/or cultural heritage is the fastest growing segment of international tourism (about 10 per cent of international tourists; UNEP, 2005).

The Blue Mountains Sustainable Tourism Programme has four components:

i) Governance – through establishment of cluster groups (community-based and private sector ventures) and an Advisory Committee, with the Trust as the secretariat.
ii) Operations of the Blue Mountains Sustainable Tourism Coordination and Marketing Office within the secretariat, providing packaging of tours, marketing and booking of the destination and specific tours – locally and internationally.

Charles Town Maron Museum © JCDT

iii) Product development (detailed planning through consultancies, infrastructural improvements, development, training and maintenance of standards) within BJCNMP and in targeted communities around these sites, the Upper Rio Grande Valley and the Maroon communities. Infrastructural improvements are being made to existing structures and there are plans for new construction, such as a cultural centre at Moore Town and new trails at various locations. In addition, there needs to be packaging and organisation of activities to provide experiences related to cuisine, music and other cultural heritage as well as biodiversity.

iv) Environmental management to ensure sustainability.

Funding to fully establish the Programme is the main challenge. A start-up budget of about US$65,000 over a three-year period for personnel, marketing and training has been estimated in addition to US$35,000 for repairs and new construction at six sites (JCDT, 2009a). The Trust has sought funds from several sources without success.

Due to funding constraints and inadequate marketing, there are relatively few foreign visitors to the park under this initiative. A current focus on training and capacity building ensures that community groups are being prepared for increased tourism. The BJCMNP has been nominated for *World Heritage* status (JCDT, 2009), and the Programme is addressing issues that plague development of new business opportunities in rural communities, inadequate marketing and limited capacity (Hayle, 2002; Cooper, 2004)—which aim to increase visitation. Thus far, key achievements of the Blue Mountains Sustainable Tourism Programme include:

- 125 community members received training in tourism, hospitality and National Park awareness with 50 certified TEAM JAMAICA (national basic level tourism certification) and 23 nationally certified Tour Guides between 2006 and 2009 (JCDT, 2010).
- In 2011, with funding from the Forest Conservation Fund, 21 community members from seven communities received business plan training and three communities produced business plans.
- Major grant funding from the Forest Conservation Fund, of US$261,000 to support improvements at Ambassabeth and Cunha Cunha Pass Trail and marketing over a four-year period was approved for Bowden Pen Farmers Association in 2011.
- Funds from the Jamaica Social Investment Fund were approved in 2012 for the Charles Town Maroons in 2012 to improve the Museum and Asafu Yard.

The Blue Mountains Sustainable Tourism Programme is far from being fully established; however, some selling points for the Programme based on the biodiversity and cultural heritage of the area have been developed. At Holywell, visitors can relax and be rejuvenated by the misty atmosphere, while enjoying a cup of coffee, walk the nature trails or learn about the history of old coffee plantations. The trek to the Blue Mountain Peak, is challenging but rewarding, and can be combined with stays in local guesthouses. Visitors can access Ambassabeth in the Rio Grande Valley by hiking the Cunha Cunha Pass Trail (one of Jamaica's oldest trails) whilst keeping an eye out for the Giant Swallowtail Butterfly (Figure 1). From here, they can visit nearby Moore Town to hear the music of the Windward Maroons or visit Nanny Falls where the Maroons disappeared from advancing British troops. In Charles Town, visitors can tour the Maroon Museum, dance to authentic Maroon drumming and hike the Sambo Hill Trail to the lookout where Nanny and her captains planned their assaults on the British.

ACHIEVING AICHI BIODIVERSITY TARGETS

Facilitating the development of sustainable community tourism in the Community Buffer Zone of BJCNMP has contributed to achieving the Aichi Biodiversity Targets (UNEP, 2010), in particular Targets 1, 2 and 5.

Aichi Target, 1 of raising awareness of the value of biodiversity, is being achieved as visitors to the parks recreational areas learn from the interpretive signage and exhibits, listen to the local tour guide or play at the Kids

Discovery Zone. Aichi Target 1 is also about making people aware of the steps they can take to conserve biodiversity and use resources sustainably. This is shown through the way the Maroons used physical components of the environment to win a war, against what might have been considered, a superior army. Through the training provided under the National Park's Recreation and Tourism Programme, local community members are learning how they can make a sustainable living by using some of the same natural features that the Maroons used centuries ago. Further, as this training is associated with business planning, funding and marketing assistance, local community members are better able to put what they have learned into practice. Awareness raising and training alone are insufficient to result in a change in attitudes and practices towards biodiversity. Local capacity must be built over the long term, through mentoring and facilitating project experience in addition to the provision of an enabling environment (Worah, 2002; Cooper, 2004). Further, where community groups self-mobilise, the outcome is more likely to be sustained than when groups are formed for project purposes (Pimbert & Pretty, 1997; Worah, 2002).

Amongst the communities around BJCNMP, the community with the greatest success in achieving Aichi Target 2 - the integration of biodiversity values into local poverty reduction strategies - based on sustainable tourism is the Bowden Pen Farmers' Association. This community has had the longest interaction with park management and it has not establishes short-term community tourism ventures. Rather, community members decided to form an organisation and establish a sustainable tourism programme on their own, having first learned through park outreach about the value of the biodiversity in their community. The community members realised that visitors would be willing to pay for experiences of both natural and cultural heritage and then approached the Trust for assistance. In hindsight, park management should have focused on raising awareness about the value of biodiversity and capacity building for conservation and sustainable use first rather than first moving to establish income-generating ventures. Other communities did not have sufficient understanding of biodiversity conservation, nor the capacity to maintain their sustainable community tourism programmes without significant on-going assistance from park management.

The Association also shows how sustainable tourism can contribute to achieving Aichi Target 5. They are planting a variety of native trees, and in particular the feeding tree for the Giant Swallowtail Butterfly caterpillars. They want to increase the likelihood that their visitors will see this endangered species, and having understood the threats to the species, are taking steps to conserve it by restoring and protecting its forest habitat and food plant. The involvement of local community members enhances the work of the Trust in rehabilitating native forest in the park's Restoration Zone. Further, the Association's tourism activities discourage practices such as slash and burn, shifting agriculture and providing alternative income generation for community members.

LESSONS LEARNED

1. The park's Community Buffer Zone is outside the legal boundary of the park. There are no people living inside the park and management has no jurisdiction over the activities of people outside the boundary, except for general environmental legislation. If biodiversity conservation outside the park's boundaries is weak and environmentally unsustainable practices continue to play a major role in livelihood activities, then there will be a negative impact on the park's ecosystems. Therefore, it is important for park management to find ways to raise awareness amongst local community members and increase their support for the conservation of biodiversity.
2. Management could have focused only on managing the recreational areas within the park; however, working with local communities outside the park helps build goodwill towards the park and its management. The park employs local community members; uses local service providers and trains community members so they can provide new services, e.g., tour guiding. Research in communities around Holywell (the park's main recreation area) showed that community members saw training and education as well as income generating and recreation opportunities as benefits they derived from the site and its management (Otuokon, 2010).
3. Sustainable tourism can provide a means for local community members to generate income (through employment or small business opportunities) in more environmentally friendly ways than current agricultural livelihoods. It can also help promote environmentally sustainable agricultural practices through training and raising local awareness about visitor expectations, for example, landscapes unscathed by fire and sustainable agricultural produce.
4. Community members first exposed to environmental education, including visiting ecology researchers, were

found to have a greater awareness of the value of biodiversity and natural ecosystems, whilst others tended to see the forest as a barrier to development.

5. The benefits from sustainable tourism must be clearly linked to conserving biodiversity – the most successful community groups in the programme have both conservation and tourism projects.
6. Community members with little exposure to the tourism industry need capacity building to help them establish their own businesses and participate successfully in the industry. Skills training, technical assistance and project implementation experience help build local capacity.

CONCLUSION

Critical to the successful use of tourism to achieve Aichi Biodiversity Targets are: (1) the building of local capacity for both biodiversity conservation and sustainable tourism, (2) ensuring that tourism involves and benefits the stakeholders impacting biodiversity and (3) ensuring close linkages between the tourism programme and other park management programmes. If the BJCNMP had a Recreation and Tourism Programme focused only on the park's recreation areas, it would not likely have had the impact it has had on influencing livelihood practices of local community members.

Whilst park management has been promoting and facilitating sustainable community tourism particularly through training, it has encouraged the participation of trainees in other conservation activities such as planting of native tree species and invasive species removal. The Bowden Pen Farmers' Association has recognised the value of biodiversity to their tourism product and therefore have embarked not only on tourism projects, but also more strictly conservation focused projects. As stakeholders clearly see the need to conserve the biodiversity one uses to generate income, they will act as some already have, to reduce the rate of loss of natural habitats outside the protected area.

Based on the experiences and lessons learned, Jamaica Conservation and Development Trust will continue to use sustainable tourism and ecotourism as tools for biodiversity conservation within and around the BJCNMP.

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Shauna-Lee Chai's research interests are in terrestrial conservation issues such as setting priorities for conservation action, ecosystem rehabilitation, invasive species management, assessing conservation effectiveness and secondary forests that re-grow after industrial abandonment. She holds a PhD in Plant Sciences from the University of Cambridge where she was a Gates Scholar. Prior to Cambridge, Shauna-Lee was employed as Conservation Science Officer for the Blue & John Crow Mountains National Park in Jamaica. There she co-authored a management plan for the park, and gained experience working with a wide cross-section of the public on the management of complex conservation issues.

Marlon Beale has been employed to the Jamaica Conservation and Development Trust (JCDT) for five years, initially as a training consultant in 2006 for bird monitoring under the Conservation Programme of the Blue and John Crow Mountain National Park (BJCMNP), and subsequently, as the Conservation Science Officer.

RESUMEN

El Parque Nacional Blue y John Crow Mountains protege componentes de biodiversidad de importancia internacional y de gran riqueza cultural. Dentro del parque se gestionan dos áreas de recreación y en su exterior se está desarrollando el turismo comunitario sostenible. El turismo contribuye a las Metas de Aichi: (1) aumentando la conciencia pública sobre los valores de la biodiversidad; (2) involucrando a las comunidades locales en las actividades de sensibilización en materia de biodiversidad y formación profesional; y (3) facilitando actividades generadoras de ingresos y ecológicamente sostenibles tendientes a reducir la pobreza. El turismo y las actividades comunitarias son parte de los esfuerzos para reducir las amenazas que para los bosques suponen las prácticas no sostenibles como el cultivo migratorio de tipo corte y quema. En algunas comunidades se han establecido actividades turísticas de carácter comunitario, mientras que otras se encuentran en diversas etapas de planificación. Varios miembros de la comunidad se desempeñan ahora como guarda parques o colaboran en la gestión del parque. Los beneficios para la conservación de la biodiversidad se han realizado a través de la creación de capacidad local para el turismo sostenible.

RÉSUMÉ

Le Parc national Blue and John Crow Mountains protège une diversité biologique et un patrimoine culturel d'importance internationale. À l'intérieur du parc, deux zones récréatives sont gérées. À l'extérieur, un tourisme communautaire durable est mis en avant. Le tourisme contribue aux Objectifs d'Aichi en : (a) améliorant la prise de conscience du public sur la valeur de la diversité biologique ; (2) impliquant les communautés locales dans des activités de prise de conscience et de formation professionnelle sur la biodiversité ; et (3) facilitant les activités écologiquement durables et génératrices de revenus afin de réduire la pauvreté. Le tourisme et l'implication des communautés s'inscrivent dans l'effort général pour réduire les menaces qui pèsent sur les forêts au travers de moyens de subsistance non durables comme la culture sur brûlis et l'agriculture itinérante. Des activités de tourisme communautaire ont été mises en place dans quelques communautés, et d'autres sont actuellement en cours de planification. Plusieurs membres des communautés sont aujourd'hui employés comme gardes forestiers au sein du Parc national ou contribuent à la gestion du parc. Les avantages pour la conservation de la diversité biologique se font sentir grâce au renforcement des capacités locales pour un tourisme durable.