

Trends Affecting Tourism in Protected Areas

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Abstract: This paper discusses 16 important trends that are predicted to affect the planning and management of parks and protected areas in the medium term. While there are many trends visible, the ones chosen are mostly likely to require a management response. There are both challenges and opportunities for tourism-related benefits in parks and protected areas.

Introduction

Park use and park management are reflections of societies' ideas and culture. Decisions in the past led to the present conditions, which in, turn lead to the future. Preparing for the future requires the manager to consider the past, the current conditions and possible challenges and opportunities that could occur. When thoughtfully considering the future, managers are better prepared to deal with the possible issues, questions, problems and opportunities that could arise (Eagles & McCool 2002).

Parks and protected areas are based on societal approval. Personal benefits obtained from visitation are the key element in societal acceptance and the approval of parks and their management. Park visitation is a *virtuous circle* of visitation, the gaining of positive benefits from the visit, the development of appreciation of the park and its resources, the long-term development of positive attitudes and further visitation (Figure 1). Therefore, park tourism is fundamental to the development of societal approval and interest in parks.

The base of park tourism is individual people seeking positive psychological, social, and physical

benefits from a park experience. All tourism is dependent upon this search for benefits.

This paper discusses 16 important trends that will influence the planning and management of parks and protected areas in the medium term. While there are many trends visible, the ones chosen will affect the practice of protected area tourism management. The roles of parks and tourism will change in response to changing social needs and environmental conditions. There are both challenges and equally many opportunities for tourism-related benefits in parks and protected areas.

National parks and protected areas exist within a dynamic social and political setting that is sometimes difficult to understand and challenging to predict. This sociopolitical setting influences both their day-to-day management and the long-term planning of parks (Gartner & Lime 2000).

Some trends are beyond the capability of park managers to handle, such as war or revolution. However, there are important trends that require a managerial response. The trends and the managerial actions will influence the societal roles of these areas.

Trend 1: *Park visitation will increase.*

In most park systems in most countries tourism use of parks and protected areas increased robustly over the last 100 years. Further increase can be expected in the current century. As shown by the visitation to the national parks of Costa Rica in Figure 2, a significant amount of this increase in some countries is due to international travellers (Baez 2004). This international element will also continue to be important in Costa Rica and elsewhere.

Trend 2: *Park tourism leads to increased public participation and collaboration.*

Park tourism is essentially about people, their interests, their attempts to gain personal benefits and their personal investment of time and money towards this goal. Citizens increasingly express concern for direct participation in decision-making affecting their lives.

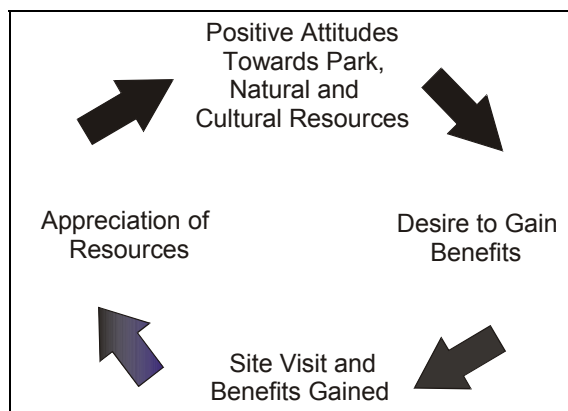


Figure 1. The Virtuous Circle.

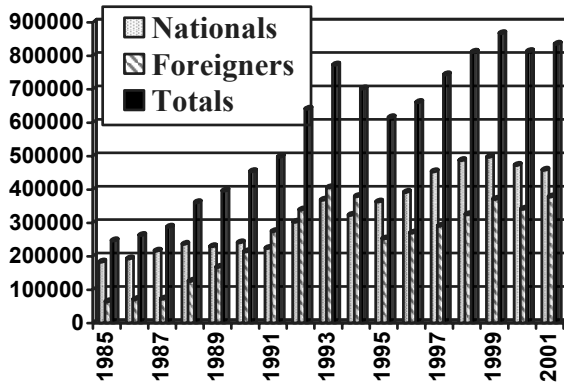


Figure 2. Park Visitation in Costa Rica.

The needs and desires of park visitors combine with the larger trend for increased public participation in government decisions to lead to expanded demands for public participation in parks. Such a trend results from a number of factors including:

- Increasing recognition by park agencies that the needs of park visitors are important;
- Movement towards tourism marketing, ensuring that tourist needs are given higher priority in service planning;
- Moves to build trust between institutions and affected citizens;
- The desire by visitors for inclusive and responsive planning processes;
- A recognition that some planning methods marginalize important values; and,
- A general and widespread interest in democratic management of resources, such as parks.

These factors mean that the planning and management processes used by park agencies must be inclusive of potentially-affected values and interests, provide recognition of the legitimacy of different forms of knowledge, and require planners to have facilitation skills. These factors lead to increased prominence of park visitors and their needs in park management plans and in day-by-day operation.

Trend 3: *Increasing education levels in society lead to demands for increasing sophistication in park management and park services.*

Higher education leads to larger lifetime earnings, a broader view of society, and more desire and opportunity to travel. Globally, the average education attainment is increasing (Figure 3, OECD 2000, OECD 2003) leading to a populace with increased desire, money and opportunity to travel.

Use of national parks is predominately by the higher-educated sectors of society. In addition, highly-education citizens expect information-rich experiences and expect advanced forms of service delivery and management. This is both a challenge and an opportunity for information, interpretation and visitor service planning. Increasing education levels, higher incomes and higher public profiles of many

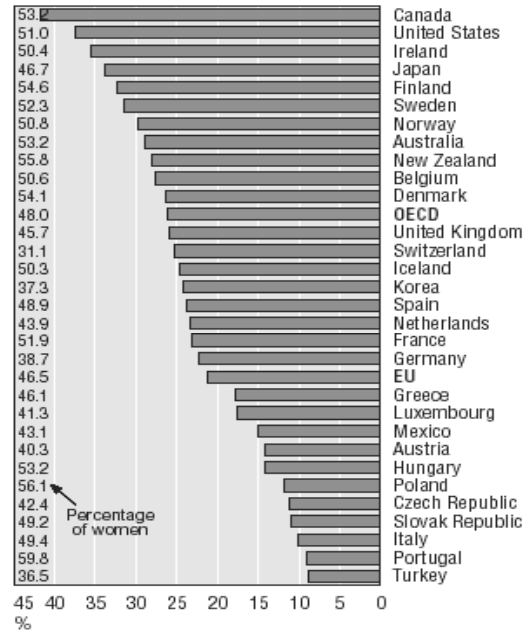


Figure 3. Tertiary Education Levels.

parks should lead to higher use levels in parks and protected areas in the future. As people expand their education, their instincts for continuous learning develop. This leads to travel oriented towards intellectual enrichment, such as ecotourism. This trend leads to park managers seeing more demand for information, interpretation and knowledge about the area and the values it contains. Park information must be adapted to such a sophisticated audience. This involves all aspects of information management; from Internet Web sites to management plan contents, and from resource policy documents to pricing policy. Lifelong learning also means that interpretive services must be sophisticated in terms of what topics are discussed and how that information is delivered to an eager, willing and sophisticated audience.

Since visitors are increasingly knowledgeable about parks, interpretation of all types must cater to their skill and knowledge levels. This requires formal education and training of park staff both in the subject of the interpretive task and also the technology and approaches to dealing with people. Many parks will experience higher levels of use by specialized ecotourism and cultural tourism operators, private individuals providing programs to a niche clientele. This will range from adventure travel experiences for youth through to specialized nature education for retirees.

Trend 4: *A population shift in the developed world towards increasing numbers of older citizens results in significant change in activities, settings and experiences sought by visitors.*

The world population continues to grow and in the developed world the average age increases. An example of this situation is Germany. In 1950, 14.6%

of the population was age 60 or older. Today it is 23%. By 2050 it will be 35.8% (German Federal Statistical Office 2004). There is a similar situation rising in most developed nations. The world's developed nations have significant domestic tourism activities, and are also the generators of a major portion of the foreign visitation of many parks. What happens in these countries will affect park use worldwide. For example, Germany is the world's second biggest tourism spender, behind the USA; so social and travel trends in this country affect tourism income in many countries.

The baby boom generation enters the retirement phase of life in large numbers early in the 21st century (Figure 4). This generation will be the healthiest, wealthiest and most numerous retirement population in history. Tourism marketers know this concept very well and are aggressively moving to fill the developing tourism opportunities. However, park agencies are slow to plan for this important population shift.

As the population ages, there are potentially significant shifts in demands for recreation opportunities as well as changes in the nature of facilities and programs required at national parks and protected areas. For example, as people age there is some evidence that they participate more frequently in appreciative and learning activities and less in more active-expressive kinds of activities (Foot 1990).

Leisure scholars indicate that there are two categories of seniors, well seniors and un-well seniors. The former are fit, healthy and capable of travel. The later have a disability that negatively affects daily activities. A national survey in Canada found that the onset of a major disability on average occurs at age 73, suggesting that the age break between these two groups occurs at this age.

And as people age their needs increase for supplementary facilities such as wheelchair ramps, trails with lesser grades and other disabled access help. In tune with their changing interests, interpretive programs, particularly those dealing with cultural heritage, may change in demand and form. Older people are much less likely to camp, and much more likely to seek accommodation such as lodges, and hotels.

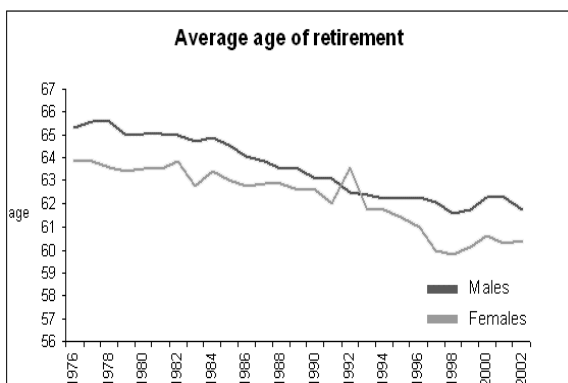


Figure 4. Retirement in Canada.

The rate of camping starts to decline rapidly as people enter their forties. Since most parks have a scarcity of roofed accommodation, this trend could reduce park use by older citizens and create a larger market for private accommodation providers near the park.

People in their healthy, early senior years will participate in large amounts of travel. Some of this travel involves nature-based travel, with national parks and private ecolodges frequently selected as choice destinations. With appropriate levels of infrastructure, services and accommodation, parks have a lucrative group of potential visitors. This group has the money to purchase park services, programs and products. Managers could benefit from abundant levels of volunteer effort from many highly skilled people. The possibilities for donations of money are high.

Conversely, without appropriate services, programs, and infrastructure these seniors will spend their talents, money and time elsewhere. It is a management decision whether or not to cater to the rapidly emerging market of seniors' tourism. Even if parks decide not to provide directly for these people, some use will occur indirectly, through a third party. Private ecolodges and tour operators are entering this seniors market aggressively, and some will bring their clients to parks and protected areas.

An example of a park that is well-situated to cater to the aging population market is Krueger National Park in South Africa (Figure 5). This park is a major international tourist destination. In addition, there are dozens of private ecolodges situated on the fringes of the park. Kruger has a full range of activity and accommodation options that cater to all ages. The well-equipped bush camps provide excellent accommodation and services to park visitors, and are especially attractive to older visitors who desire roofed accommodation, excellent interpretive programs, and a range of food services. The private ecolodges cater to an upscale market. These public and private establishments provide a unique blend of opportunities from the very modest camping mode to the very expensive upscale ecolodges.



Figure 5. Kruger National Park Rondovels.

The rapid and successful development of ecolodges is a reflection of the private sector providing services to this market (Figure 6). Ecolodges are often complementary to parks and protected areas, providing compatible land uses around the parks and compatible recreation services. Many private ecolodges in Costa Rica are located adjacent to national parks. These reserves provide effective and complementary landscape conservation measures to the park and tap a high-income market not fully served by existing park programs. South Africa is aggressively moving towards the encouragement of the development of upscale ecolodges within national parks.



Figure 6. Maya Mountain Lodge, Belize.

Trend 5: *Increased accessibility of information technology means that potential, current and past visitors will be better informed and knowledgeable about what leisure opportunities exist, the current state of management and the consequences of management actions.*

The Internet is a revolutionary two-way means of communication. It allows institutions to communicate with clients and it allows clients to communicate with institutions. It leads to greatly increased access to information and knowledge of and by park visitors. It provides an inexpensive avenue for groups, ranging from tourism companies to environmental groups, to provide information about parks and lobby for their positions on park management policy.

This has several consequences for park planning and management. First, it means that potential visitors can more easily become aware of the various recreation opportunities and alternative destinations available both locally and globally. Potential visitors can have more certainty about conditions and facilities available within an area. Second, increased accessibility of knowledge and easier communication routes mean that visitors and others interested in protected area planning issues can provide more informed input into decision-making processes. Third, the widespread availability of Internet and

digital communications means that it is easier for people to communicate across national boundaries and to organize themselves into activist groups promoting one cause or another. Fourth, the Internet is an inexpensive method of providing information.

The Internet allows many groups, such as tourism suppliers, environmental groups, and local community groups, to provide copious levels of information about parks and protected areas. It may be challenging for park managers to know what is being said about their park and to ensure that it is accurate and appropriately represents park policy. At present, in some poorer countries, third-party interests provide virtually all the park information to tourists. This loss of ability to be the gatekeepers of resource information, policy and management information can have profound impacts on the job facing park managers.

An analysis of the tourism content of park agency Web sites showed a large variability in usefulness and completeness. Generally, park managers show a lack of understanding of the needs of park visitors and therefore develop Web sites that do not fully provide the types and levels of information that are most appropriate (Murphy et al. 2004).

The consequences of information technology are profound for park managers. Generally, park managers must develop increased capacity in this area.

Trend 6: *Increasing availability of information technology profoundly influences park visitation.*

Advances in information technology are rapidly moving towards the situation where park visitors can obtain access to digital information on parks in real time any place on the earth's surface. The use of Geographical Position Systems (GPS) allows visitors to accurately locate their position in parks. Wireless communication allows access by hand-held devices to Internet-based information and databases and allows visitors to transmit information from their field location to data analysis devices. This leads to online, real-time, global communication by visitors in all areas, including those that are remote.

The implications are profound and can only be dimly perceived. One simple example can show the potential. A park visitor interested in birds hears an interesting bird song deep in a nature reserve. He records the bird sound on a hand-held device that also records the specific location. This information is digitally communicated via wireless technology to a remote computer that compares this sound to a database of bird sounds and provides species-level identification. After the record is placed into a central database, the visitor's hand-held device is told that this is the 5th record for this rare bird species in this location. Such an example shows the potential for park visitors to become major contributors to the science of natural resources. It also shows the profound implications for park use as park visitors have real-time access to global information technology and databases while travelling through parks.

Other examples abound. Prebooking of recreation opportunities becomes easier and more effective with Internet-based systems. For example, Ontario Provincial Parks manage 300,000 campsite reservations annually, with 45% occurring with an Internet booking system, and 55% through telephone contact with an agent. The Internet volume is rapidly increasing, and the telephone contact decreasing. With advanced booking of services, managers know months in advance the size and distribution of their future recreation programs.

Online feedback allows managers to have rapid assessment of the current situation in programs. Remote censusing of visitor transportation equipment allows managers to know the number and distribution of visitors. Wildlife cams allow park visitors to keep informed of the situation in the park that they enjoyed at some time in the past. Virtual Friends Groups allow people all over the world to participate in park activities.

The implications of rapid advances in information technology will be profound. They offer tremendous opportunities for managers with insight and initiative.

Trend 7: *Advances in the technology of travel and reductions in costs result in increased demand for park and protected area opportunities distant from one's residence.*

Over the last 100 years increased use of inexpensive light oil, development of advanced transportation equipment and higher levels of economic attainment resulted in massive increases in international travel. Such travel is expected to grow further in the early 21st century, thereby increasing the demand for national parks and protected areas distant from visitors' residences. The volume of air travel is expected to increase over the the first 10 years of the 21st century as new airplane technologies come online reducing the price of the travel. By making travel more affordable more people can visit foreign destinations. This trend means that park and protected area managers must communicate with people with different languages and cultural backgrounds, as well as differences in custom and tradition. Many managers will be faced with visitors from very different cultural backgrounds from the current visitors. This will bring many challenges in information provision, safety, health provision, and supervision.

Technological advances in motorized recreation equipment such as snowmobiles, motorcycles, all-terrain vehicles (ATVs), jet boats and helicopters combined with GPS navigation technology allow more people to reach even the most remote wilderness areas and wild waterways. Such use will provide increased challenge to park managers. After 2010 the emerging gap between global oil supply and demand will cause large price increases in energy. The impacts of this are discussed in Trend 16.

Trend 8: *The increase in park area, number of parks, and park visitation exceeds the capability of many park management institutions.*

Globally, the public and many environmental groups demand new park creation. Most park systems experience increasing visitor numbers. Simultaneously, the public resists demands for increasing taxes. The growing area to manage, the increasing level of visitation, and the decreasing tax-based budgets negatively affect the institutional capacity of most agencies to manage their park lands.

One result of inadequate funding is the lack of personnel adequately trained to deal with park tourism management, long-range planning, and the new technology required to deal with increasing demand. In many park agencies these trends lead to crisis levels of managerial effectiveness. Fortunately, approaches are being found to deal with these issues.

There is concern that many government agency legislative mandates are not appropriate for these challenges. For example, centralized government agencies are notoriously poor in reacting to rapidly changing circumstances. The financial limitation of government agency structures also means that park tourism is often poorly served. These limitations lead to the adoption of a more flexible and interactive management structure in many park systems, such as the parastatal form of administration.

Trend 9: *Park management shifts gradually from government agency structures, with centralized financial control, to parastatal forms, with flexible financial management.*

There is increasing utilization of management structures beyond the government agency model for many park tourism functions. In some places this means contracting some park operations to private profit-making corporations, thereby replacing government employees and publicly-funded services. In other places, it means transferring some management functions to NGOs, such as park Friends Groups. In still others, it means restructuring the park agency into a corporate organization with a management structure similar to a private corporation. This later form of management, the parastatal, typically functions like a private corporation within government. It has wide abilities to earn income, retain income, hire staff, and set prices. It may have an appointed Board of Directors.

Some criticize this later approach because of the possibility of motivation driven more by income generation than one of public service or environmental protection. However, its financial and managerial effectiveness often outweighs these concerns.

Parastatal forms of park management now occur in many countries. Examples include South African National Parks, the Kenya Wildlife Service, Parks Canada and Ontario Parks. In each of these examples, this form of management has proven to be robust, flexible and effective with park tourism man-

agement. This form of management is much more client-focused, as the park visitor is seen as a benefit to the park and the agency.

Trend 10: *Park management funding increasingly shifts from government grants to park tourism fees and charges. This results in higher levels of visitor focus in management.*

Many people argue that the protection of natural and cultural resources benefit all and therefore should be paid for by societal taxes. Others argue that park visitation benefits those who use these sites and therefore these beneficiaries should pay for the corresponding costs. The conciliation of these two views results in a combination of tax-based government grants and tourist fees and charges in the provision of many park budgets. Limitations in the tax-based grants put increased emphasis on the use of fees and charges on tourists to provide the revenue necessary to fund park operations, the user pay approach.

Government policies in several countries now require the park agencies to collect increasing amounts of the budget from tourist fees and charges. For example, Parks Canada has a multiyear plan for increasing park income. The Government of Canada recognizes that it is not possible for national parks to earn all their financial needs from earned income. Therefore, the ultimate goal is to have a budget composed of income derived from both government allocations and earned income.

In some countries with strong competition for tax revenue, such as Tanzania, Kenya and South Africa, the parks do not receive government funding for operation. All operational budget income comes from fees and charges (Figure 7, Tanapa 2001). During the last few years of the 1990s and leading in the 2000s, the Government of South Africa required the national parks to earn their entire budget from fees and charges as virtually all tax-based government income was removed. SANParks was successful in this effort. In addition, the number of visitors increased as the services provided more carefully matched tourist demand.

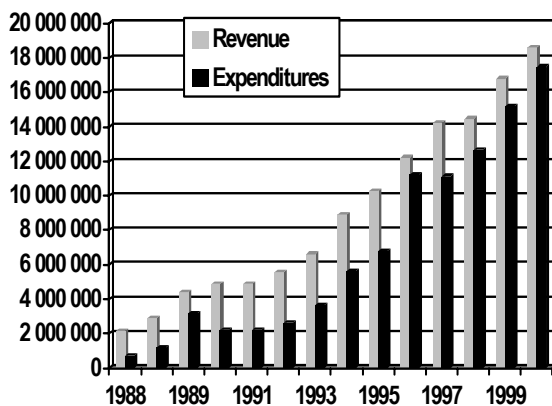


Figure 7. Tanzania National Park Finance.

Parks have many potential sources of tourism-based income, including: entrance fees, recreation services fees, special events and special services, accommodation, equipment rental, food sales (restaurant and store), parking, merchandise sales (equipment, clothing, books, information, supplies), contractual agreements with concessionaires, licensing of intellectual property, and cross-product marketing (Eagles 2002). All of these sources are used by some park agencies, but very few park agencies use the entire range. Park agencies have the potential to utilize a much wider range of income sources than is typically used.

The trend for increased use of fee revenue leads to several implications for park management and the services delivered to visitors. One important implication is higher levels of charges for park services. This may keep some people from enjoying parks because of high cost. However, there is little evidence of this trend as park use figures often show increases and strong willingness-to-pay. Another implication is that the only benefits flowing from a park are those for which a charge exists. A third implication is that only services and opportunities that will break even between income and expenses will be provided.

If park operations are funded entirely out of ongoing revenue from park visitors, the budget must stay in tune with projected revenues. If management costs increase, there is the need to increase revenues or cut costs. In some cases the increased revenue may come from promotional campaigns designed to increase visitation, which in some cases may lead to adverse visitor impacts. In other cases, better pricing policy, the collection of fees from visitation formerly ignored, and higher fees associated with higher service levels provide revenue that is sufficient to cover operating expenses. Increased fees also can raise expectations on the part of visitors about the quantity and quality of services that will be delivered. Evidence from several Canadian and Australian parks systems shows that increases in fees are associated with higher use levels in parks as visitors utilize new, more efficient, and better-targeted services. Therefore, park visitors increase use as park management better serves their needs.

Parks with income derived from park visitation are more client-oriented, than parks utilizing government grants. Such parks are much more concerned about the visitor's length of stay, the visitor's satisfaction with the programs and services, the visitor's recreational needs and the visitor's opinions about park management (Moos 2002).

Trend 11: *Parks and park agencies develop increased sophistication in their understanding and management of park visitation and tourism.*

Park visitor management has often been a hit-or-miss activity. Over time managers experimented with services and retained those that appeared to function properly. Additionally, much park tourism had a

take-it or leave-it style. The visitor had to accept what was offered or go elsewhere.

Competition in park tourism, higher profiles of visitors in management, increasing demands for increased income and an increased scientific understanding of human-environmental interactions all lead to a more professional approach to visitor management.

One very important change is the move to service quality goals and measurement. Many park agencies now understand that park visitors have service needs and that quality is important. Increased measurement of visitor satisfaction with the services provided leads to better understanding of the visitor. Parks Canada may be the first park agency in the world to have a service quality standard as a goal. Each unit in the system, both national parks and national historic sites, is expected to achieve a standardized level of service quality. Any services that do not reach the standard are reviewed for change. Finland has a sophisticated customer management system, including service quality goals and advanced levels of public use measurement (Leivo 2002).

Park managers are typically well behind the private sector in developing a sophisticated understanding of clients' expectations and the level of fulfillment of those expectations. In the future, park managers must become more professional in their approach to using more sophisticated and effective methods of tourism management.

As databases about socioeconomic conditions become more widely accessible, park management has more information about potential visitors, the expectations the people bring with them, the life styles that different people live, the services they desire and their residence. This means that park and protected area managers can provide more tailored programs and recreational opportunities. They can deliver information ahead of the visit that will help form appropriate expectations on the part of visitors. Park managers may be able to influence where people visit. They may be able to design management programs that can fine tune visitor impacts and visitation patterns. Universities will be expected to increase their offerings in park tourism planning and management.

Trend 12: *Foreign aid and grants from NGOs increasingly fund biodiversity conservation and sustainable tourism development in developing nations in order to develop sustainable development that provides both conservation and economic benefit.*

Conservation and tourism are global and international concerns. Accordingly, park management often has an international focus.

In many countries the conservation demands are larger than the capacity of the government. The realization of this fact leads to bilateral aid, such as the Global Environment Facility, providing critical conservation funding. For example, in August 2002 there

was agreement by representatives of 32 governments to contribute US \$2.92 billion to fund GEF operations over the next four years. This money is to be applied through GEF grants for important conservation initiatives and sustainable development in countries with high biodiversity.

In some cases NGOs will continue to expand their roles in terms of funding and technical assistance and also direct management of parks and protected areas. For example, the Belize Audubon Society does park management. The Monteverde Cloud Forest Reserve in Costa Rica is a very important conservation reserve that is owned and managed by a several NGOs. At Monteverde these NGOs have a strong international focus and a strong element of involvement by concerned and committed reserve visitors.

Trend 13: *Park tourism may be damaged by war and civil unrest, especially in Africa and parts of Asia.*

Tourism is very sensitive to reports of war, civil unrest and personal danger. Park management often ceases to exist in time of conflict. The Bwindi Impenetrable Forest National Park in Uganda was a site of military activity against national park visitors in the year 2000. This action killed many people and damaged a promising ecotourism industry, which has still not recovered. The terrorist bombing in Bali in 2002 damaged the tourism flow in much of Southeast Asia for several years. The terrorist bombing of a resort in Kenya in 2003 severely damaged the important Kenyan tourist economy as visitation dropped precipitously. The bombing in Kenya also badly damaged the tourism flows to neighbouring Tanzania.

Park managers can do little to effectively deal with dramatic and well-publicized incidents. However, they can do a lot to prepare for news reports that over emphasize the dangers. They can prepare public relations material in anticipation of negative news, news that is not accurate or news that provides too general a picture. Tourism can be restored after use levels drop due to publicity of civil unrest or war. Managers should understand this fact and prepare contingency plans for both real and media-created crisis in consumer confidence.

Trend 14: *The world's international travel will be strongly affected by decreasing supplies of oil and gas and large increases in energy cost in the second decade of the 21st century.*

The world's prosperity in the 20th century was largely due to the abundant and inexpensive energy available from oil and natural gas. Inexpensive energy led to widespread travel. However, the earth's supply of oil and gas is finite. As easily accessed oil fields become exhausted, more remote, deeper, and harder to access supplies must be found (Campbell & Laherre 1998). Figure 8 shows that the global production of oil and gas will peak between 2010 and 2020 (Campbell 2003).

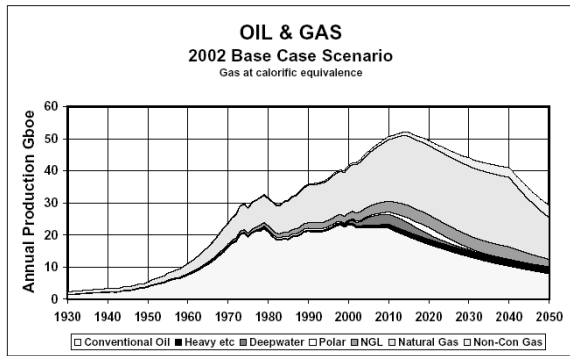


Figure 8. Global Supply of Oil and Gas.

Once over the peak of production, major economic and social changes will occur. One is rapid movement to other energy sources such as coal, nuclear energy, and renewable energy. Another is much higher energy cost. When energy costs increase, there will be changes in global consumption, economic and travel patterns. The implications for park tourism are considerable. Overall, long-distance travel may start to decline in volume. Conversely, some domestic travel volume may increase with local trips substituted for longer voyages. Decreased economic vitality of many societies will result in severe pressures on many parks and protected areas as people seek the resources, such as the oil, gas, timber, and hydro-electric potential found in those parks.

As the world moves out of the era of abundant and cheap oil and gas, the impacts on park and protected area management in general and on park tourism specifically will be profound. The increase in energy prices resulting from the divergence of the oil and gas supply and demand will be the most significant trend affecting park tourism in the first 25 years of the 21st century.

Trend 15: *Global climate change will affect many parks and much park tourism.*

Global climate change will be one the most important environmental issues affecting parks and tourism in the 21st century. According to the Intergovernmental Panel on Climate Change (2001) it is likely there will be:

- Higher maximum temperatures and more hot days over nearly all land areas;
- Higher minimum temperatures, fewer cold days and frost days over nearly all land areas;
- Reduced diurnal temperature range over most land areas;
- Increased heat index over land areas;
- More intense precipitation events;
- Increased summer continental drying and associated risk of drought in continental interiors;
- Increase in tropical cyclone peak wind intensities;
- Increase in tropical cyclone mean and peak precipitation intensities;
- Increase in ocean levels;

- A gradation of change according to latitude, with the changes becoming larger, moving from the equator towards the poles, and specifically,
- Much higher temperatures in higher latitudes, with arctic ecosystems affected strongly.

The implications are so large and profound that it is difficult to provide a succinct summary. However, a few trends are obvious. Globally, the climate will warm. The increase will be highest in the higher latitudes. Much warming in Arctic environments has already occurred and more will occur.

Global climate change may reduce the ability of some parks to accept tourism through intense heat, drought, and rising ocean level. It may increase the ability of parks in the temperate latitudes to accept tourism, with longer operating seasons occur due to warmer spring and fall periods. Longer and more ambient summer temperatures and less summer ice in the Canadian Arctic are already leading to increased cruise ship tourism.

Some of the impacts will be counterintuitive. Researchers note that in the Great Lakes area of North America winter warming results in less ice on the lakes. Wind moving over the resultant open water picks up moisture resulting in increased snowfalls in downwind areas. Therefore, warmer winters in this area lead to increased snowfall, with the concurrent impacts on travel and on snow-based recreation activities.

Increased tropical cyclone wind and precipitation intensity may cause severe damage to some parks, resulting in lowered attractiveness of visitation and lowered abilities to accept visitation. Regional impacts may be considerable. For example, increased drought and heat in the southern and central USA in the summer months may stimulate migration of people northward, both permanently and seasonally, increasing park visitation in the northern USA and Canada. Similar shifts could occur in Europe.

The implications of global climate change will be large and profound. All park planners and managers must consider these trends to their fullest extent. Some of the impacts can be dealt with under current management scenarios. Others will require entirely new approaches.

Trend 16: *Parks further develop as cultural icons.*

Parks will continue their traditional roles of providing opportunities for people to better understand cultural and natural heritage. Parks often become icons for various communities. Some become symbols of national identity. Most communities develop higher levels of appreciation over time as the cultural significance grows.

As parks become international symbols, there is stronger international pressure on management policies. International designations, such as Ramsar Wetland, World Heritage, and Biosphere Reserve, lead to higher levels of tourism as people recognize the sites as being globally significant, symbols of

quality, and a well-recognized brand. Therefore, national parks and national wildlife refuges take on the stature of international parks and international wildlife refuges. Such a trend is a natural outgrowth of the global ecosystem concept of ecology and the global travel phenomenon.

Conclusion

The changes resulting from these trends are difficult to predict precisely. This uncertainty can lead to anxiety and even stalemate action, as people, including park managers, are confused about appropriate courses of action to initiate. While the future is difficult to predict, preparation is necessary. This preparation can be founded on understanding of management systems, the role of people, the social, political and economic forces affecting travel and the principles of ecosystem processes. Such a foundation must be coupled with intelligent responsiveness.

The chief resistance to preparing for change will be the complexity of the trends and their synergistic relationships. Many managers will be incapable or unwilling to consider the range of responses necessary to deal with the dramatic changes discussed in this paper. However, it is essential that long-range planning be done. The survival of many park systems, cultural sites and their associated tourism industries depend upon such planning.

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