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# Nature-based tourism in Tatra National Park Challenges and opportunities

Dr. Edward H. Huijbens

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Tel: (+354) 460-8930  
Fax: (+354) 460-8919  
e-mail: edward@unak.is  
Web: www.rmfi.is

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Author: Edward H. Huijbens

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Challenges and opportunities

Edward H. Huijbens

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# Nature-based tourism in Tatra National Park

## Challenges and opportunities

### Introduction

The Tatrzński Park Narodowy (The Tatra National Park – TNP) was founded in 1954 by a special decree of the Polish Socialist government around what was by that time a well known destination of tourists in Poland and the surrounding countries. The park, which covers, 21.000 ha is one of Poland’s 23 national parks, but what makes it different is the fact that it covers the country’s most mountainous terrain, the Polish part of the Tatra mountains (see figure 1). The number of visitors to the park is great but annually around 2.5 million visitors pay entrance at the 14 gates to the park, but in addition two entry points to the park do not charge fees and groups in the park for research or educational purposes, locals and those entering from the Slovakian side do not pay. This immense and most likely underestimated number of people, visit mainly in the summer months and during weekends resulting in great pressure on the parks 250 km of trails and paths. In the context of this visitor intensity in such a small area the challenges and opportunities for nature-based tourism are set.



**Figure 1:** Basic map of Tatra National Park.

*Source:* Adapted from Czochoński & Szydarowski, 2000: 216

This report deals with challenges and opportunities the area faces in terms of its nature-based tourism potential. The report is made as part of a larger project aiming to identify in addition to the nature-based potential, the socio-cultural dynamics and the politico-economic environment of the park's operations. The project is funded by the Fundusz Stypendialny i Szkoleniowy (FSS), under the terms of *New challenges in tourism education – tourism dysfunctions in areas culturally diversified and with high natural values, tourism activity of disabled tourists*. The FSS support is hereby gratefully acknowledged.

The report will proceed in three parts. The first part, following this introduction, will generate an understanding of nature-based tourism formulated under the terms of sustainable tourism and tourism dysfunctions as set out in various scholarly works on the subject. The second part will contextualise this understanding in the Tatra National Park (TNP) based on field work undertaken in the park during the autumn 2009. During this time three treks were made at selected locations in the park and observations noted, pictures taken and interviews conducted with key members of the TNP staff. In addition; the park's service provision and information dissemination strategies were explored and other researchers approached. In addition the region's service hub, the town of Zakopane was explored. The last part will draw out the conclusion in terms of key challenges and opportunities the TNP faces in terms of managing its nature-based tourism potential.

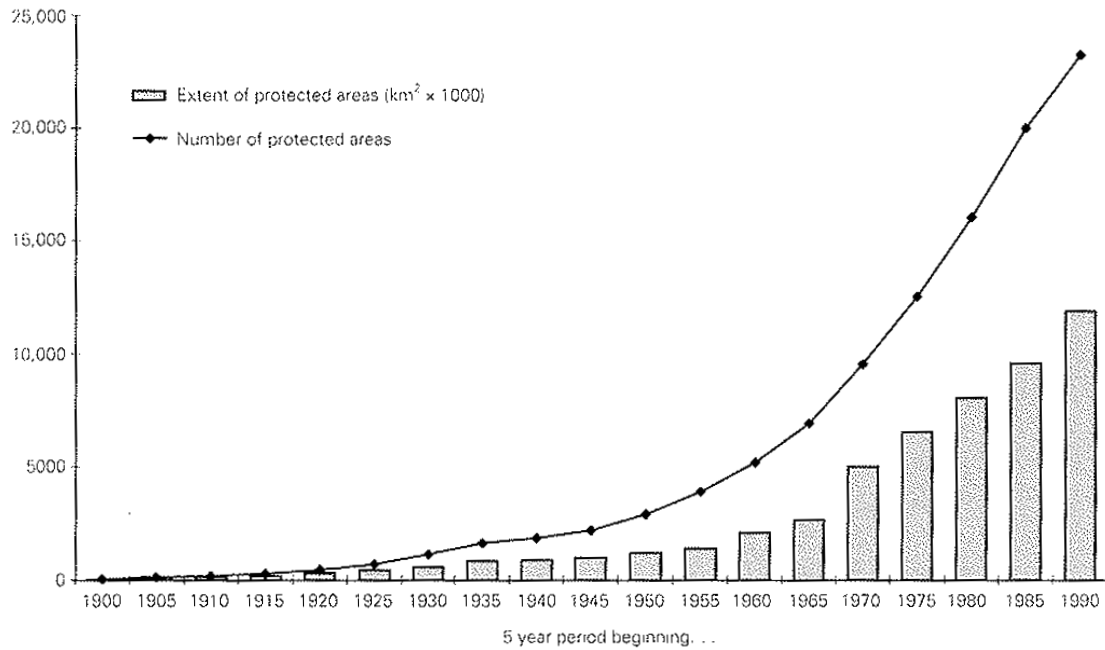
The main findings of this report are that tourists visiting the park are seen more as an annoyance than actually beneficial. The argument being promoted here is that tourism can be directly beneficial to the park or at least can be managed to limit or curtail negative impacts, through an active engagement with the tourist. The method lies in appealing to the visitor's good sense and incorporate their varying needs in trail and site development, catering to more niche markets. These are more committed tourists, more demanding on active interpretation and education, but also contribute more in terms of money and positive publicity for the park. The latter can directly benefit park managers in gaining a voice when it comes to dealing with centralised government decisions.



## **Nature-based tourism**

Tourism is by now well recognised as one of the world's largest and fastest growing industries. It indirectly generates about 11% of the European Union's GDP and provides for about 12% of the labour force. In 2004, the World Travel and Tourism Council (WTTC) forecasts that worldwide tourism demand will increase by up to six percent (WTO, 2006; WTTC, 2006). One of the segments of tourism proclaimed to be outpacing other sectors in growth is that of nature-based tourism. Basically, nature-based tourism is threefold. It includes tourism in natural settings, tourism focusing on elements of the natural environment and tourist developed to conserve or protect natural environments (Hall & Boyd, 2005: 3; see also Buckley, Weaver & Pickering, 2008). The combination of nature and tourism through nature-based tourism leads to nature being defined in relative, often perceptive terms and in terms of accessibility and infrastructure.

On the most general level, nature-based tourism springs from growing interest and concern with the environment. Concerns about the environment are not new. Industrial development over the last century has had great impact on the environment resulting in deforestation, desertification and species extinction on a global scale. Whilst this environmental change comes under scrutiny, the valuing and appreciation of natural and pristine areas has grown and people more and more see the necessity of holding on to that which is unspoiled by industrial development (for overview see: Akama, 1996). The demand for pristine areas is best demonstrated with the global rise in the designation of protected areas (see figure 2 below). In Europe, the European Union highlighted tourism as one topic under the Environment Action Programme into which environmental issues should be integrated.



**Figure 2:** Growth of protected areas world-wide in terms of numbers and km<sup>2</sup>.  
 Source: Eagles & McCool, 2000: 21.

With growing environmental concern, conceptual and methodological advances have been made in coming to terms with people’s relation to their environment. In the context of protected areas and national parks, their varying values need to be understood. The total value of a protected area lies in the combination of use values and non-use values. The latter has two facets, the existence value and bequest value, i.e. protection of something for the future. The former is more multifaceted and involves direct, indirect and optional values. The direct uses are those that come, visit and experience, the indirect use is in taking pictures and enjoying scenery without going there and lastly there is always the option to use it another time. With the combination of use and non-use values the below discussion can be framed around the notion of sustainability (referring to non-use values) and its relation to nature-based tourism (the use values).

***Nature-based tourism and sustainable development***

... nature-based tourism needs to be seen within the broader natural, socio-cultural, political and economic systems within which it is embedded and which determine its development (Hall & Boyd, 2005: 4).

Thus underpinning the growing demand for nature-based tourism in most recent times is not only a recognition of the value of pristine areas, but also an awareness of the necessity to maintain them as such for future generations. This future-oriented concern is most clearly stated in the Brundtland report (WCED, 1987) and today is known as sustainability and responsibility towards the environment and local cultures. But the marriage between nature-based tourism and sustainability is in no ways an easy one. Saarinen (2006) explicates the founding principles of sustainability and its discursive heritage in tourism. In sum he states:

In spite of the contested nature and narrow focus in practice, the political argumentation and justification of sustainable tourism are often derived implicitly or explicitly from the idea and rhetoric of sustainable development as a holistic, future-oriented, and socially equal global-scale process. This has resulted in a conceptual confusion, criticism and a need to understand how the limits of growth could be defined and set in tourism (Saarinen, 2006: 1125).

He goes on to clarify the claimed conceptual confusion with reference to the basic tenets of sustainability and antecedents in the tourism debate. These are summed in table 1 below:

**Table 1:** The basic tenets and antecedents of sustainability in tourism.

*Source:* Based on Saarinen, 2006.

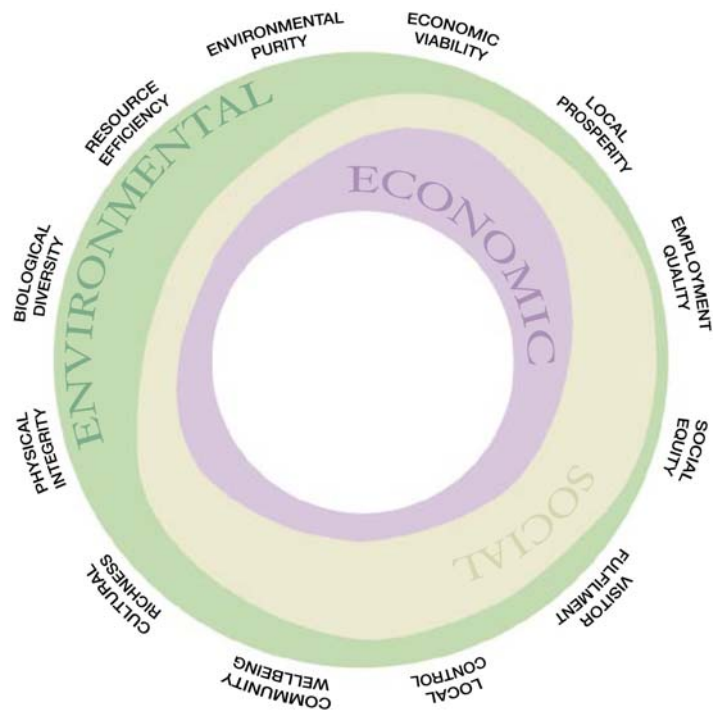
<b>Founding concept</b>	<b>Description</b>	<b>Used</b>
Resource based ideas	The objective measurement of tourists a region can take built on a static notion of destinations as somehow original and authentic.	Density, erosion, disturbance, crowding, social carrying capacity and authenticity studies.
Activity based ideas	Focusing on the needs of tourism as an economic activity involving a relativistic approach to destinations allowing for their change and development.	Studies of tourism areas life cycles.
Community based ideas	In order to navigate the divide in the two approaches above a negotiation and participation process is here advocated, implicitly evoking the need for understanding the politics of tourism.	Participant planning approaches through a host of methods.

The first founding concept outlined in table 1 above, can be traced back late 19<sup>th</sup> century livestock management studies. The second to the basic outline of Butler (1980), and the last to the rise of the sustainability rhetoric in the 1990s, although all three have been formulated under the terms of sustainability studies in methods and epistemologies. The main challenge for industry professionals has been putting sustainable development theory into practice and preventing the industry from eroding the very qualities of the destination that attract visitors. As Saarinen (2006: 1134) claims:

... the mission and value of academic studies concerning the limits of growth may be seen to lie in evaluating and providing perspectives on the sustainable and ethical use of nature and culture in both global and local development processes.

As a result varying formulations of sustainability have been developing in the last three decades, especially in regional tourism of Europe, but also within tourism worldwide. But on the global scale the World Tourism Organisation (WTO) developed sustainability criteria in areas that are pristine and wild and the intention is to preserve as such.

The WTO collaborated with the United Nations Environment Programme (UNEP) as the latter proclaimed the “International Year of Ecotourism” in 2002 and elaborated “Principles on the Implementation of Sustainable Tourism”. In addition, a specific task force on sustainable tourism was installed in the context of the Marrakech Process following the Johannesburg World Summit on Sustainable Development in 2002. The frame developed is to be found in the UNWTO’s guide for policy maker on *How to make tourism more sustainable* (UNEP & WTO, 2005). The below figure draws together and shows the relation between the three pillars of sustainability and related aspects of each.



**Figure 3:** The 12 aims and three pillars of sustainability.

Source: UNEP & WTO, 2005: 20.

The three pillars of sustainability revolve around the economy, the social and the environment, the aims that need to be heeded for each are listed in table 2 below:

**Table 2:** The aims for sustainable tourism development.

Source: UNEP & WTO, 2005

<b>Economy</b>	<b>Society</b>	<b>Environment</b>
<b>Economic viability</b> To ensure the viability and competitiveness of destinations and companies in tourism to make sure that they are profitable in the long term.	<b>Visitor fulfilment</b> To provide a safe and pleasurable experience that will fulfil tourists' expectations and is accessible to all.	<b>Physical integrity</b> To maintain and build the quality of landscapes, both in rural and urban setting and avoid the ecological and visual pollution of the environment.
<b>Local prosperity</b> To maximise the economic benefits of tourism to the local community include the proportion of tourism expenditure left in the area.	<b>Local control</b> To get local communities involved through increasing skills and empowerment in planning and decision making in planning and managing tourism.	<b>Biological diversity</b> To support and protect nature, natural habitats and wildlife and minimise all impact on them.
<b>Employment quality</b> To increase the number and quality of jobs in the local community derived from tourism, including amount of pay, work environment and non-discriminatory employment opportunities.	<b>Community wellbeing</b> To maintain and build local community wellbeing including social infrastructure, resource access, comfort and environmental quality and avoid social corruption and exploitation.	<b>Resource efficiency</b> Minimise the use of rare and non-renewable resources in the development and operation of tourism.

<b>Social equity</b> To ensure the fair and equal distribution of the social and economic benefits derived from tourism.	<b>Cultural richness</b> To maintain and build heritage, original culture, customs and the uniqueness of the host community.	<b>Environmental purity</b> Minimise the pollution of air, water, land as well as waste on behalf of tourists and tourism companies.
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The above points and explanations refer to what is at stake in terms of sustainability and tourism on the most general level. As Black & Crabtree (2007) state:

Sustainable tourism is thus not a niche market segment, but an ‘ideal’ that balances the environmental, economic and sociocultural aspects to guarantee long-term sustainability that can (and many say should) apply to all forms of tourism in all types of destinations – including both the mass tourism and special interest segments (p. 2).

For nature-based tourism sustainability has been translated into the idea of ecotourism.

### *Ecotourism*

One of the more lauded manifestations of sustainable nature-based tourism, and thus most easily hijacked for “green-washing purposes”, has been framed under the terms of ecotourism. Gössling & Hultman (2006) sum a few definitions of ecotourism as:

... tourism that is environmentally and socially benign, contributing both to local economies and the conservation of protected areas, while educating the traveller about local nature and culture (p. 1)

The tourist is thus one “with a profound interest in nature-based forms of tourism” (*ibid*: 1). Black & Crabtree (2007) state that the term originates in 1987 (see: Ceballos-Lascuráin, 1987) and consists of a focus on:

- Natural areas
- Environmental sustainability
- Interpretation and education
- Returns to the environment
- Returns to the local communities
- Cultural sensitivity

Undoubtedly most ecotourism of note occurs within areas of high conservation value and implicit in the above points, and thus the adoption of the term, is a promise of a “better and

greener world with proclaimed benefits for both the environment and the community” (Black & Crabtree, 2007: 11).

Black & Crabtree (2007) further segment ecotourism into hard and soft ecotourism inspired by Weaver’s (2005) discussion of ecotourism being ‘minimalist’ or ‘comprehensive’. But fundamentally ecotourism, as really any kind of tourism, is a consumptive activity as explained with reference to nature-based tourism, more generally above. In this way through ecotourism “[e]cology is framed as an economic resource within global circuits of capital accumulation” (Gössling & Hultman, 2006: 6). Not surprisingly, under the terms of the “experience economy” (Pine II & Gilmore, 1999), ecotourism marketing “is presently emphasizing sensual experiences rather than specific places” (Gössling & Hultman, 2006: 6).

With this recognition Wheeler (2005) goes so far as to state:

We are, I contend, driven (riven?) by short-term, selfish self-interest, any vestiges of genuine philanthropy subsumed, and consumed, by vested, material, immediate concerns” (p. 271).

Not wanting to delve further into human nature, what I believe Wheeler (2005) is drawing attention to is the fact that we travel for a host of more or less self-centred reasons. The draw of a natural (be that as it may) is for the individual fundamentally about an escape from the humdrums of the everyday and the urban environment (Cohen & Taylor, 1992; Wang, 2008). What this results in as that managing people that come mainly to get away from their everyday and into what is perceived to be the natural environment cannot be premised in any sensible fashion upon notions such as ecotourism or sustainable tourism.

Ecotourism thus may not be easily regulated at all as guidelines are not to be set as rules or mandates. The challenge may lie in simply trying to address people for who they are. Most people are reasoned and trying to appeal to their good senses in order to protect what they evidently seek is what needs to guide the management decisions. With nature-based tourism as a guiding light, certain driving forces for management can be identified.

... nature-based tourism, which almost by definition, tends to be very small scale, often highly seasonal, and fails to attract the large numbers of tourists characterised by mass pleasure tourism (Hall & Boyd, 2005: 10).

Additionally;

No type of tourism can be sustainable in the absence of appropriate planning, monitoring, evaluation, and management; and sustainable nature-based tourism or ecotourism development can only be achieved when the behavior of destination managers, stakeholders, and tourists is ecologically, economically, and ethically responsible (Deng, King & Bauer, 2002: 424).

These concerns throw the issue of management into perspective.

### *Management*

What I hope to have stated clearly in the discussion above about both sustainable nature-based tourism and its subset, ecotourism, is the need to paying heed to the politics of tourism under the terms of consumptive practices of tourists. Moreover if nature-based tourism is to be sustainable, long and rigorous timeframes for planning and thinking are needed. The context of this report is the already set up management structure of a national park. These are primarily set up in order to preserve fauna and flora for their own sake and that of future generations of people. But herein a fundamental difficulty resides about the actual purpose of a park, is it for people or the wildlife. If tourism is there and allowed and local communities benefit or even depend on the park, the park must cater to both. The proposed framework is sustainable nature-based tourism.

In order to ensure the development of sustainable nature-based tourism within a setting that is the national park, tourism “should be explicitly managed, directed and controlled (Eagles & McCool, 2000: 72). To support their view they point out that the first US National Park Director, Stephen T. Mather and the first Commissioner of the Canadian Dominion Parks Branch, James Harkin both:

... actively pursued a policy of tourism promotion and development, primarily as a political strategy to gain public support and, therefore, needed government appropriations to fund park management (p. 73).

Behrens, Bednar-Friedl & Getzner (2009) argue very much in the same way for an Alpine setting in Europe, where they state that visitor attractions can directly benefit conservation and species protection. In this sense soliciting public support is crucial for the park’s wellbeing, but this at the same time leads to all management being rather messy as it has to



involve a host of stakeholders and their value laden visions, and can not only be based on objective measurements of e.g. bio-physical impacts as the resource based ideas of sustainability would stipulate.

The role of science and technical knowledge is limited in situations where goals are contested because the fundamental issue confronting the park is one that centres on different values rather than the 'how to's' needed to solve a particular problem (Eagles & McCool, 2000: 78, see also Shafer & Choi, 2006: 627).

Such considerations [as entailing also social and human capital] of nature-based tourism development require as much and understanding of the development of human and social capital as it will knowledge of the physical environment and individual species and their respective tolerance to visitor impact (Hall & Boyd, 2005: 14).

In this fundamentally messy situation where the visions and goals of the park, often based on an analysis of cause and effects in the park's nature, conflict with that of other stakeholders. These conflicts can be termed dysfunctions following Dłużewska (2008). Eagles & McCool (2000), on the other hand draw on Thompson & Tuden (1987) to explain four planning situations. The first is where there is social and scientific agreement, on goals for the former and cause-effect relationships for the latter, the planning situation is tame. In the second instance where social agreement on goals is in disagreement with the scientific agreement on cause and effect relations the planning situation is what they terms 'wicked'. In the third instance, where there is disagreement between scientists on cause and effect relations, but a social agreement on goals the planning situation is a mystery. Lastly, where there is no agreement neither on goals nor the nature of cause and effect relations one is confronted with a messy planning situation. They claim that most planning situations in national parks are messy and suggest the planning emphasis should be as a result focused on learning and consensus building or:

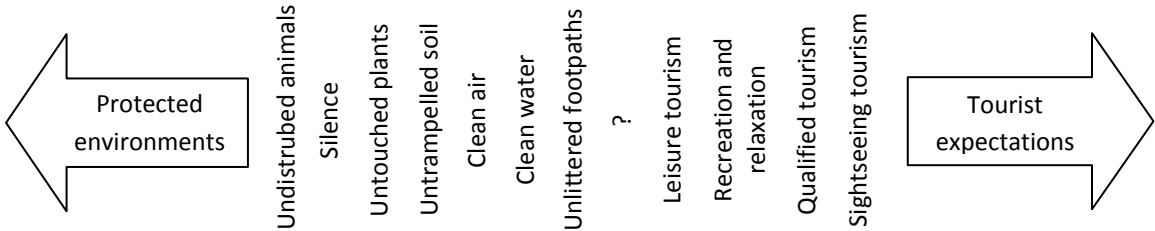
In such messy situations, planning processes emphasize dialogue, mutual learning and consensus building over scientific expertise, technical information and expert opinion (Eagles & McCool, 2000: 81).

So the question is for the management of a national park that receives people "not *if* the public will be involved, but *how*" (Eagles & McCool, 2000: 85; see also Spenceley, 2008). Moreover, how do companies basing their services on the nature-based tourism attraction be integrated into the management structure and collaborate to the benefit of the resource,

the visitor and their business interest. Huybers & Bennett (2003 and 2003a) suggest a quasi independent collaborative framework for companies and argue that this can benefit conservation and environmental protection.

Emerging from the above is thus a twofold management question, one about how the quality of the visitor’s experience can be enhanced and second, how visitor impacts can be managed to acceptable levels and desirable outcomes. Both of these questions emerge from sustainable nature-base tourism being a fundamentally consumptive activity. But as nature is on the receiving end, that which belongs to us all being so firmly placed “within a commercial logic [which] raises urgent issues of democracy and access to nature” (Gössling & Hultman, 2006: 7). All of us have the right to experience nature and gain access to it through a national park. Herein lie a national park’s key challenges, but as argued above, also its potential to further develop in management and use.

The management of TNP has primarily focused on the protection of flora and fauna and to many the presence of tourism is intrusive. The analysis by various researchers in the park has thus focused on tourism impacts. For the purposes of this report the general context of the interplay between nature and tourism has been set by Baścik & Pociask-Karteczka (2006) who set up a continuum reproduced here below as figure 4.

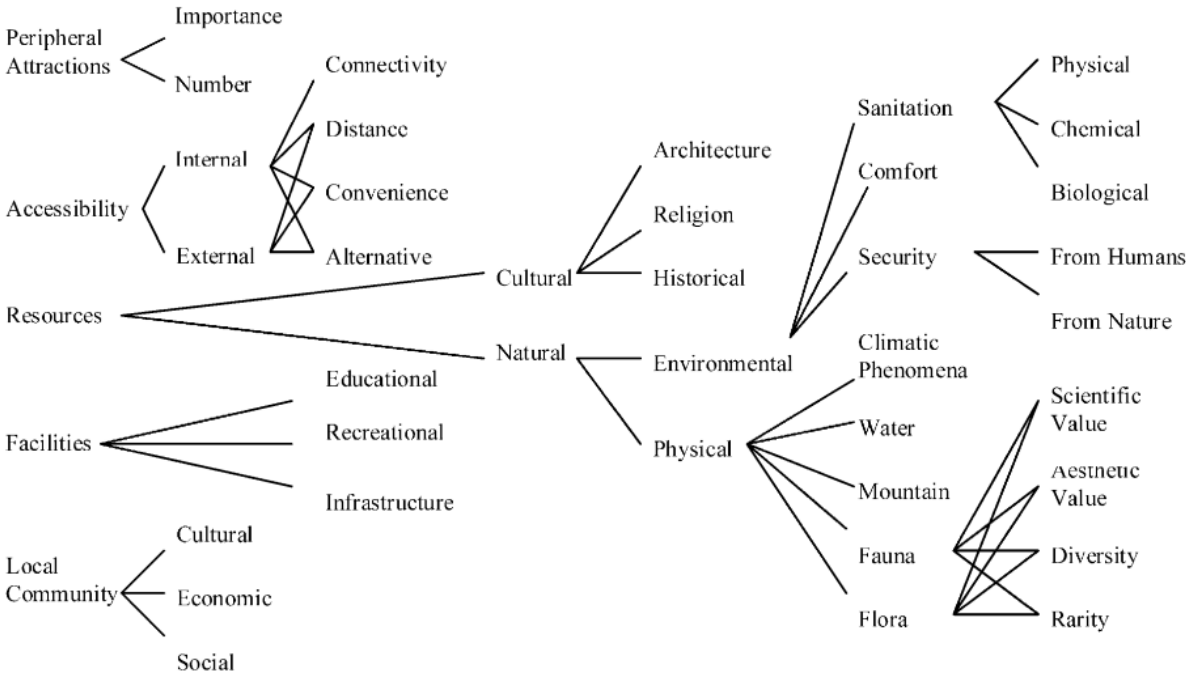


**Figure 4:** General nature – tourism dynamics in TNP.  
*Source:* Adapted from Baścik & Pociask-Karteczka, 2006: 106

As summed in figure 4 what tourists expect has to be seen in the context of the environment. The continuum above thus in many ways reflects what Eagles & McCool (2000) state:

While the consequences of tourism use of national parks are somewhat related to use levels, more influential are factors such as visitor behaviour, type of tourism development, season of use, management approaches and biophysical characteristics (p. 82).

What needs to be taken into consideration are thus the biophysical attributes, the managerial attributes and social setting attributes if one is to understand the dynamics of national park’s management. These need to be framed under the terms of efficiency, effectiveness, efficacy and equity (Eagles & McCool, 2000). Priskin (2001) demonstrates how these park management issues need to be built on an assessment of the natural resource for the purposes of tourism. She proposes that a thorough resource inventory of natural attractions needs be done in order to identify the tourism potential. But as such an inventory like this will always be subject to value-laden opinions and for that Deng, King & Bauer (2002) propose an evaluation and rating scheme, helping to identify the resources most prevalent for tourism purposes “seek[ing] to achieve an improved equilibrium between potential tourist interest and destination attributes viewed from an ecological perspective” (p. 434). Figure 5 below sums their concerns.



**Figure 5:** Natural attractions and their relations to tourism and management issues.  
 Source: Deng, King & Bauer, 2002: 429

***Nature-based tourism in Iceland***

As a point of comparison, before delving into the details of the case study in Tatra National Park, here a short outline of nature-based tourism in Iceland will be sketched, with focus on the recently established Vatnajökull National Park (VNP). Some basic facts about Iceland

need to be outlined before proceeding. The country is an island in the N. Atlantic covering 103.000 km<sup>2</sup>, with a population of 320.000 in 2009. Just over two thirds of that population lives in and around the capital Reykjavík on the SW corner, the rest is distributed along the coastline in towns, villages and rural areas, leaving the interior of the island void of habitation and infrastructure. The main focus of the park is the icecap Vatnajökull, whence the name of the national park originates occupies vast highlands in the Southeast comprising 8.300km<sup>2</sup>. The total area of the national park is 13.600km<sup>2</sup>, making it Europe's biggest national park with almost all of it in uninhabited highland interiors. The biggest town bordering the park is Höfn with 2.000 inhabitants, whilst the second, the villages Kirkjubæjarklaustur has around 200 inhabitants.

Tourism in Iceland, as in much of Scandinavia, is "built on natural assets and nature-based recreational activities" (Gössling & Hultman, 2006: 4). The below summary of the operations, challenges and opportunities of the newly established park is based on a number of informal interviews with key stakeholders and the park's website: <http://www.vatnajokulsthjodgardur.is>.

The Vatnajökull National Park (VNP) was founded in June 2008 around one of the key natural asset of Iceland, the Vatnajökull icecap. Its objectives are twofold; to protect and conserve nature and to fight rural population decline endemic to the region it belongs to. In the latter objective it is explicitly stated that tourism is to be part and parcel to this objective. In the objectives statement it is emphasised that combining rural population development and nature conservation the park adheres to the principals of sustainability.

The nature of the park is simply astounding as the icecap covers some of the most volcanically active parts of Iceland, giving the fundament for Iceland's strap line, the land of ice and fire (echoed in Edwards, 2009 when she gives an overview of the park). Within the ice cap lie at least four active central volcanoes, including the Bárðarbunga volcano (2.000 metres above sealevel (mas)), and the Grímsvötn volcano (1.719mas), both set with deep ice-filled calderas. Grímsvötn is a very powerful geothermal area and the caldera holds a warm subglacial lake. Its water level rises due to ice melting until the lake is partly emptied in a glacier outburst flood (jökulhlaup). These huge, periodical floods enter glacial rivers with

a discharge of 3,000–8.000m<sup>3</sup> per second. Jökulhlaups accompanying volcanic eruptions have a still larger discharge, up to 40.000 m<sup>3</sup>/s. Several other magnificent natural phenomena are to be seen in the national park, such as Dettifoss, Iceland's biggest waterfall, panoramic highlands and natural hot springs and baths. All in all the national park is famed for the way in which geo-morphological processes are clearly visible with the continual struggle between fire and ice the most prominent.

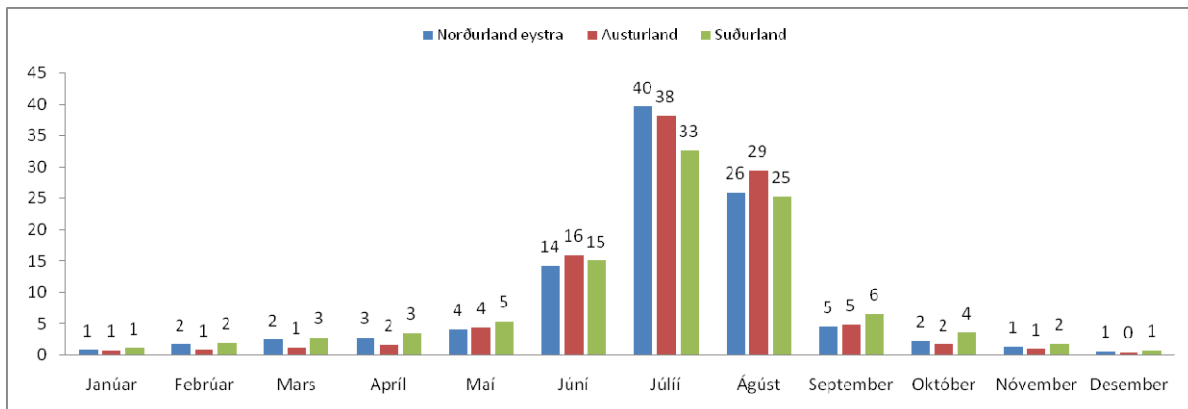
The management structure of the park is quite complex as the park is separated into four distinct geographical regions named after the Cardinal directions. Each of these regions has a board of directors with representatives from the municipalities in the region, tourism and recreation associations and nature conservation associations. Each of these boards names one representative to the general board of the national park which is presided over by the chairman of the national park separately appointed by the minister of the environment along with her deputy. National associations of nature conservation and tourism and recreation have members on the general board. The general board of the national park defines its task as six fold:

1. Strategic planning for the park
2. Management of the creation of a nature conservation plan for the park other regulations
3. Running the park, getting funds and allocating them for projects
4. Co-ordinate the operations of each region
5. Monitoring the implementation of regulations and nature conservation
6. Collaboration with municipalities, institutions and stakeholders on park issues

In each of the geographic sub regions of the park visitor centres have been set up that give a broad overview of the history and nature of the park particular to that region. All year staff work in these centre but during the summer months wardens cater to the needs of tourism and visitors in the park. Complicating the management structure of the park is the fact that most of it lies in the uninhabited highland interior. This area is mostly considered commons, but as yet the government in agreement with landowners has not drawn a definite demarcation of what belongs to the commons and what is private land. In addition with all the glacial water and geothermal energy in the area, one of the major land-use stakeholders

is the National Power Company, wanting to develop many fluvial outlets and hot springs into either hydro- or geo thermal energy utilities. But to fulfil the ambitions of the park management tourism is what is supposed to sustain the park.

Tourism in the national park is popular in summer with registered 430.000 overnights in 2008 for the whole year, mostly in summer, but growing also in winter.



**Figure 6:** Overnights in percentages for the regions of the Vatnajökull National Park.  
 Source: Statistics Iceland 2009

As obvious from figure 5 above the park suffers from pronounced seasonality with most of the visitors coming in the summer. The total number of overnights in Iceland was 2.716.472 in 2008, so the regions of the park received around 16% thereof. Of this total number of overnights, Icelanders account for 29% with the rest stemming from the 502.000 visitors that came to Iceland in 2008.

Access to the park is in no way controlled and there are no defined entry points or fees collected, although the idea has been floated (see: Reynisdottir *et.al* 2008). The management of the vast terrain the park covers is certainly too much for the handful of wardens that are hired each year for the summer. The population in regions adjacent to the park is very sparse and thus all service infrastructure is very rudimentary, with many studies indicating place-bound pressures pin-pointed through studies of carrying capacity (see: Anna Dóra Sæþórsdóttir *et.al* 2003; Ólafsdóttir & Runnström 2009).

To sum, the key challenges of the park lie in its complicated management structure, the power of the energy company, the sparse population and seasonal tourism. But this park has

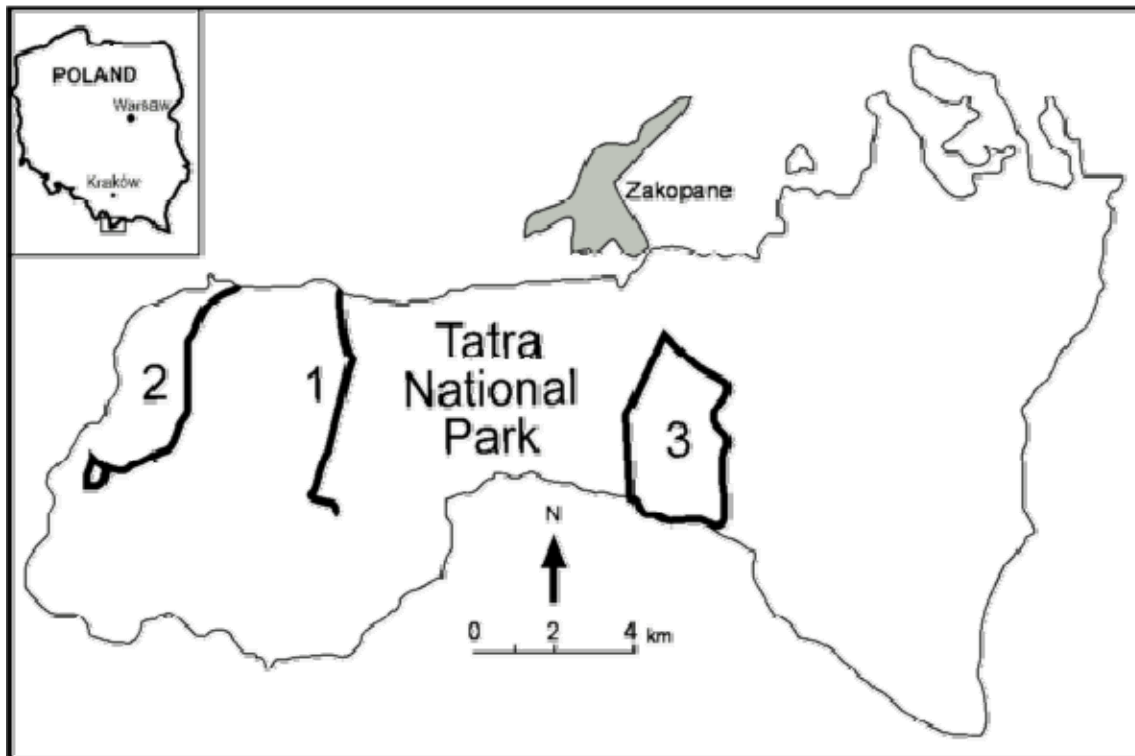
all the potential to become one of the world's major attractions as in it one finds an amazing agglomeration of disparate geological phenomena.

## **Tatra National Park**

In order to gauge nature-based tourism potential and challenges in the Tatra National Park field work was undertaken in the park and surrounding area during the autumn 2009. During this time three treks were made at selected locations in the park and observations noted, pictures taken and interviews conducted with key members of the TNP staff. In addition; the park's service provision and information dissemination strategies, both in the park and neighbouring towns were explored and other researchers working in the field approached, but in TNP about 160 research projects were being carried out in autumn 2009. Below the field work findings will be presented structured around the three treks undertaken and a visit to Zakopane, after introducing the key issues identified by the national park staff in a short meeting at the outset of the field work.

In the below what needs to be borne in mind is the fact that the fieldwork was short and only meant to identify visible challenges and opportunities. The outcome thus in no way pretends to give policy guidelines or management frameworks, for that a much more detailed study is needed (see e.g. Shafer & Choi, 2006).





**Figure 7:** The three treks done as part of field work in Tatra National Park.

Source: Adapted from Czochoński & Szydarowski, 2000: 216

### ***Key management issues of Tatra National Park***

The TNP employs almost 100 full time staff in addition to volunteers that till now mainly contribute work in the summer months. The staff is divided into five sections, each dealing with specific aspects of the park's management. The greatest numbers of staff are employed dealing with nature conservation and the monitoring of flora and fauna in the park. Another division takes care of social services in the park, the third deals with finance and book-keeping the fourth with fund raising and lastly there are the park rangers, who have the policing power in the park. The park rangers can fine people for not following the rules for up to 1.000 PLN and even more, although in that case the charge would have to be tried at the municipal courts. Almost all of the cost with the staff and park management comes from Poland's national budget and the park's management is subject to centralised decision making. Money raised on site via e.g. entrance fees goes directly to the state and is thence redistributed. This represent one of the key problems for management as the park directors cannot direct funding gathered for their own purposes or to deal with park relevant issues. No plans are in place for additional or *in situ* fund raising although the vice director of the park did mention the possibility of raising funds from timber harvesting in the park.

The idea to harvest timber in the national park opens on to one of the key managements struggles within the park. In it, 30% of the land is owned formally by local people via a land owners association and they claim a stake in more as the government, when establishing the park, bought land without ever actually paying. The fact that local people own land in the park gives them recently recognised utilisation rights and in some of the most popular sites of the park active harvesting of timber with heavy machinery takes place. With locals claiming stake in the park's land, antagonisms abound between the locals and park management, resulting in many going and doing what they please in the park, such as hunting and resource harvesting, albeit on a small scale. According to the park's rules, dictated by government law, nothing is allowed in the park except take pictures and walk the trails. But for the tourist walking these trails and witnessing the industrialised timber harvesting, grazing of local's livestock (allowed in 1981) and numerous people collecting berries and other resources it is hard to feel that this is a national park.

Another general management conflict emerges between the park and those running businesses close to the park or in it to service the visitors. All service provision in the park is owned by the government in one way or another, the local municipality also employs people to provide mostly transport services, but they pay the park for the permission. Privately owned businesses operate on the perimeter of the park selling food and providing transport to the park entry points. This three tiered service provision management structure means that different views about how nature should be used in the park abound, but the power gradient from the central government to these interests is very steep in favour of the former. A case in point is the cable car to the Kasprowy peak, which will be dealt with further below.

At the outset of the fieldwork interviews were done with key members of each division apart from the park rangers. These identified key management issues at the forefront in their daily operations and these are summarised in table 3 below not prioritised in any way.

**Table 3:** Key management issues identified by park staff.

Key issue	Explication
Waste management	<p>All waste management is outsourced but this entails:</p> <ul style="list-style-type: none"> <li>• Doing away with 850-1.000m<sup>3</sup> of refuse cleaned day and night from the park's main trails</li> <li>• Managing 80.000 L of chemical toilet waste</li> </ul>
Trail renewal	<p>Every year 10km of the 250km of trails in the park are renewed. Where this is done is based upon an analysis of user intensity.</p>
Animal monitoring	<p>In collaboration with the science academy in Kraków, animals are monitored with GPS marking. Their main aim and challenge is to limit the encounters animals will have with park guests. For this reason trails are often closed without explanation if animals frequent it.</p>
Volunteers	<p>There is limited use of voluntary work in the park and the staff fear both that they might take their work and that they do not have the right motivation. Noticeable was that wrong markings and bad craftsmanship on trails was always attributed to volunteers.</p>
<p>“The most important thing is to communicate to people different information”</p>	<p>As the quote clearly states the importance of disseminating information to visitors is crucial to the staff. Big and detailed signposts are at entry points that emphasise that one should stay on the trails, beware of animals and be aware of safety issues.</p> <p>The park staff see it as their responsibility to especially inform/train:</p> <ul style="list-style-type: none"> <li>• Businesses in the park,</li> <li>• Rangers,</li> <li>• Guides, but all organized groups are required to have one.</li> </ul>
Education	<p>Tied to the above information dissemination, the main strategy of the park in this respect are visitor centres that show films and have fixed and temporary interpretative boards on display in town. These are not to be found inside the park, only in the centre and are geared towards groups of e.g. school children.</p>

What emerges very clearly from interviewing staff and resident scientists is their keen interest in protecting wildlife and flora. They see this as the primary role of the national park and generally consider tourists to be a nuisance. Both groups demonstrate a lack of interest and knowledge in service provision for tourists and see tourism in general as involving exploitative behaviour in the natural environment. This attitude must be considered

remarkable as it shows ignorance of the 'big white elephant in the room', people in their millions visit the park and for a host of reasons, many of which can be successfully integrated in to the park's management scheme for the benefit of the park as will be further outlined in the conclusion. This is not to say that the management of tourist flows in the park is not a key concern of the staff, it most certainly is and a case in point is the active collaboration with staff from Yellowstone national park in US, but during the latter half of the week of fieldwork US park rangers were being taken around the park. But what is being argued here is that the preoccupation with flow management can be complemented with an eye on how these visitors can directly benefit the park.

The exact number of people visiting the park each year is difficult to estimate. Baścik, Czubernat & Pociask-Karteczka (2007) estimate that 2.5 million visit the park annually and they argue that this number is stagnant since 1999 (see also: Baścik & Pociask-Karteczka, 2006). Baścik *et.al* (2007) base their findings on the sale of entrance tickets and estimate an additional 26% not represented in the sales figures. In order to get closer to an actual figure the park staff, in collaboration with their Slovakian colleagues, did a detailed count in the summer of 2004 to be repeated every five years thereafter. Czubernat & Marchlewski (XXXX) detail the method and findings of the 2004 count. In the summer of 2009 this count was done again, but this time complemented with a survey amongst those visiting in order to get an idea of the visitor profile. The findings of this survey will prove to be very important in establishing the potential of tourism in the region. In addition to this intensive counting, automated counters have been set up on specific trails in order to estimate traffic through them. Czochoński & Szydarowski (2000: 208) state that compared to other mountain regions in Europe the number of hikers on the trails of TNP far exceeds that of other similar areas in e.g. Austria and France. Czochoński & Szydarowski (2000) establish a four part typological classification of the 250 km of trails in the park according to the intensity and type of use, but on a more general note tourism in the TNP can be classified into four categories:

1. People coming for easy treks
2. People coming for mountain treks and climbing
3. People coming for religious purposes
4. Mass tourism staying mainly in Zakopane and surrounding areas

Obviously the key concern for nature-based tourism is the immense number of people visiting the park and using the trails. Below the first two categories of tourists will be dealt with via a description of three treks done in the park. The last category will thereafter be dealt with, but the third category emerges through some of the following discussion.

### *Kościeliska Valley*

The first trek was through one of the most popular and accessible areas of the national park (see figure 7 above, number 1). According to Baścik *et.al* (2007) the Kościeliska valley is one of the four most popular sites in the TNP, receiving 71% of the number of annual visitors. Baścik & Pociask-Karteczka (2006) trace the history of visitation to the valley back to the 16<sup>th</sup> Century. They argue that for tourism purposes the valley is discovered in the latter half of the 19<sup>th</sup> Century with the growth of Zakopane and surrounding area. In post-war Poland, with travel abroad limited and labour rights prominent (e.g. holiday rights) there was a boom in visitor numbers. Since then a certain equilibrium seems to have been established and increase in visitation was in sync with population growth. After the collapse of the Socialist government in 1989 a minor decline was noticed as Polish now travelled abroad, but numbers soon rebounded, this time with people from neighbouring countries, filling the ranks of those Polish now travelling abroad. As off 1995 the number is stagnant having reached what Baścik & Pociask-Karteczka (2006) claim a critical level with infrastructure not coping with more in the high season. In order to estimate this critical number Czochoński & Szydarowski (2000) show that the average traffic on the trail is 360 persons both ways pr. hour, with a maximum of 650, representing the second most intensely used trail in TNP.

The field work trek started after a short ride on the bus from the town of Zakopane. These small busses provide for the main means of transport to the entry points of the national park, but individual cars are not allowed near the park in order to stave off congestion. These busses (see figure 8 below) take up 20 passengers and go from the centre of Zakopane, the bus and rail station and other neighbouring villages, with select stops to the various entry points of the park. They are privately owned and operated and queue up much like taxis in the centre and at the entry points.



**Figure 8:** Bus services around the TNP. On the left a queue at Kuźnice on the right the bus stop on ul. Kościeliska in Zakopane.

*Source:* E. Huijbens, September 2009

The trek itself started from the mouth of the valley, but at that point all vehicle traffic was generally forbidden. Those allowed vehicle access were staff of the national park and locals owning property or land in the valley. In addition there are those employed by the municipality catering to tourists, but they only used horse drawn carriages for up to six people. Bicycles and baby trams were allowed. The trek wound its way up the valley through three narrow gorges that separated clearings where grassy meadows preceded the pine forest further up the surrounding hills. The gorges provided for easy close up encounters with the area's dolomite bedrock and the way in which vegetation grapples with the rock (figure 9).



**Figure 9:** The first gorge in Kościeliska valley.

*Source:* E. Huijbens, September 2009



In the valley numerous cultural remains are to be seen, with impact on the natural environment. As Baścik & Pociask-Karteczka (2006) detail, the valley was a site of iron-ore and mineral processing along with farming till the late 19<sup>th</sup> Century. Evidence of this is to be seen in every clearing of the valley, both in remains on the ground and religious sites (places of worship) marking points of industrial history with shrines to the relevant patron saint (see figure 10 below). The presence of the religious shrines and the history of religion in the region is one of the reasons many of the visiting tourists are actually on pilgrimages, but this issue will be further dealt with below with focus on the Chochołowska valley.



**Figure 10:** On the left, outlet for smoked traditional sheep cheese (Oscypki) in d. Kościeliska. The right, one of many religious sites, this one in Chochołowska valley.

*Source:* E. Huijbens, September 2009

Some of the houses and buildings are traditional sheep herders' huts, but as off 1981 traditional grazing was allowed in the valley clearings after being banned with the establishment of the national park in 1954. Many of these buildings are not be disturbed, changed or demolished (see figure 11 below).



**Figure 11:** On the left, listed building in d. Chochołowska. The right, the designating plaque.  
*Source:* E. Huijbens, September 2009

At the end of the main trail of the Kościeliska valley was a hospice that served food, provided toilets and different levels of overnight accommodation. From the hospice trails became more difficult as they ascended the mountains to the south. The field work trek ended at Smreczyński lake.

On that path one of the major challenges of trail maintenance in the park emerged. The trail in the valley is more like a road with cars and carriages mingled with people on foot. This road is surfaced with stones and is for many too hard to walk on. This results in trails forming on the side of the road, trails that can easily become severely eroded once the vegetative cover is breached (see figure 12 below).



**Figure 12:** The road in Kościeliska valley and trails forming on the side (see arrow).  
*Source:* E. Huijbens, September 2009



Once beyond the hospice in the valley the dominant surfacing rock laid on the path is dolomite and these prove to be very slippery in wet conditions. When these are laid as surfacing in the way shown in figure 13 below, people will avoid them and trample soil and vegetation around the path, trampling that can eventually lead to severe erosion if water runs through these secondary paths. The solution to this problem seems to be to arrange the surfacing horizontally in steps like is shown on the right side of figure 13 below, but this demands surface run-off drainage for the steps that will move material to the sides without damage to the path or the environment.



**Figure 13:** Left, stone surfacing that is slippery when wet. Right, the possible solutions.

*Source:* E. Huijbens, September 2009

Dotting the trail were chemical toilets with handicapped access, neatly decorated waste baskets and picnic tables for rest and relaxation. Once at the end the hospice had all the services one could need, but if one intended to go further all this service infrastructure is not to be found anymore, but then access is getting harder as well. This first stretch provided for a relaxed and easy stroll up the valley which many people did even with their infants. Nonetheless some key challenges emerged to be listed below with potential opportunities for the park thereafter listed.

### Challenges

One of the most obvious challenges to emerge here was one of path management. Both in terms of surfacing and direction for people, so that they stay on the paths. Here a key compounding factor is the sheer number of people that will be using the trails and one can

well imagine a certain 'domino effect' with unforeseeable consequences once one person alternates their use, leaving visible traces.

With this sheer number of people another issue emerges and that is waste management as already identified by the TNP staff. The litter that accumulates and the waste water that 360-650 person per hour can generate is naturally immense and to these with facilities and litter bins is no easy task, let alone doing away with what accumulates at collection points. Although there is a number of bins and toilets, people none the less seem to assume that litter is picked from the side of the road and leave it, even leaving faeces as they found the chemical toilets to unpleasant to use. The predominant litter noticeable was of three types. One were beer cans, the second Kleenexes and paper towels and the third were cigarette butts.

Another challenge that can be indentified stemming from the Kościeliska valley, is the issue of transport for people visiting the national park. Even though private cars are banned and most traffic comes via the small busses, congestion is an everyday reality of the park. This aspect not only has to do with congestion, but also business practices of the park. Private businesses and entrepreneurs have direct interest in getting the most people to the park and they simply drop them off at the entry-points where they become the "park's problem" so to speak.

### Opportunities

In order to address the above mentioned challenges they can be inflected as opportunities and here tentative ideas that could be of use are presented.

The path management issues are obviously a continual challenge but the opportunity exists to channel funds raised as entrance fees more directly into path maintenance. This would require an agreement between park authorities and the centralised government for the former to control entry fees and have the opportunity to channel a certain proportion of them into their own projects. Then there could be a fund set up as a type of 'emergency response' fund that could move in and fix paths, trails and their surroundings that are being subject to damage. This damage is very rarely foreseeable as indicated with the idea of the domino effect of users. For this reason a quicker response mechanism seems to be needed.

As to the opportunities for waste management the three most prominent litter items to be found can each be addressed in separate ways. Kleenexes are sold in every small shop and kiosk at the entry points to the park. These could be substituted for handkerchiefs, plain or even bearing insignia from the park, thus becoming potential souvenirs. People do not readily throw away a handkerchief and if Kleenexes are harder to come by they will be less prominent as litter. As for the cigarettes more signage should indicate that people should be aware of the litter filter tips actually constitute. Also at the entry points sign post can demonstrate to people the way in which cigarettes can be extinguished, retaining the filter and keeping it, e.g. in a bag provided at entry points. These bags could also be for paper towels and Kleenexes if people use those. The third litter item, beer cans, can be more difficult to deal with, but beer and alcohol is sold at entry points and in the hospices in the park. Again an awareness campaign is needed focusing signage at entry point on this problem, but more over it might be considered that nature-based tourism and the consumption of alcohol is not to go hand in hand.

The emphasis in the above on signage and 'soft' measures builds on the underlying principle of trying to appeal to people's good sense. The key is to indicate to people that there is a problem and identify ways in which people can easily and effortlessly tackle that problem, but also try to plug the source of the problem where possible. What could also help in this direction is offering services of more active interpretation in the park. This entails that at entry points guides would be available to take groups of varying sizes the walks and trails they would like to take, or fix the guiding to certain parts of the trails. This would mean that visitors are always under the watchful gaze of the guide, but also and more importantly they would have access to interpretation and commentary otherwise not available, which could enhance their experience and concomitantly respect for the park.

The last challenge indentified above entails the opportunity of managing traffic in a more efficient way. Naturally all transport solutions are expensive but nonetheless if a rail system on the park perimeter would be built it could channel the flow of people in a much more efficient way. The idea entails a monorail or rail line that would start at the train/bus station in Zakopane and travel both directions along the northern border of the park, with stops at

each of the entry points. The rail link would be frequent and cheap, but would also require people to leave their cars at a depot near the train/bus station. The opportunity lies in setting up a park and ride scheme for the park.

### *Chochołowska Valley*

The second trek was through the accessible Chochołowska Valley on the way to Grześ mountain top and view point via the valley's hospice and service centre (see figure 7 above, number 2). Here Czochoński & Szydarowski (2000) claim that the average traffic on the trail is 200 persons both ways pr. hour, with a maximum of 320, representing the fourth most intensely used trail in TNP. Again after a short bus ride from Zakopane the trek starts but this time the first leg is taken by a tractor train (see figure 14) till the paved road ended. Thereafter bikes could be rented or a ride in one of the horse drawn carriages done as in Kościeliska valley. Thereafter the trail could only be done on foot to the hospice.



**Figure 14:** The tractor train at the entrance to the Chochołowska valley.

*Source:* E. Huijbens, September 2009

The trek after the hospice involved considerable climbing and a difficult path along the Polish-Slovakian border to the Grześ mountain top.

The first thing that strikes the visiting tourist in Chochołowska valley is the intense harvesting of timber with heavy machinery. On the trail to the hospice tractors and large trucks operate (see figure 15 below) and in the hillside tracks of denuded land could be seen cutting horizontally into the forest cover.





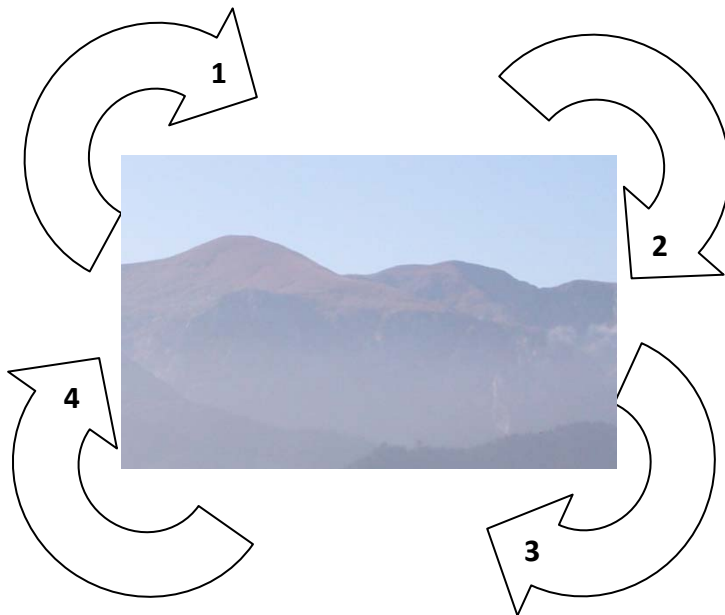
**Figure 15:** Timber lorry in the Chochołowska valley.  
*Source:* E. Huijbens, September 2009

The forest trail to the hospice is thus a road that can be easily used by bikes, carriages and car of all sizes as can be seen in figure 15 above. But, as could also be observed in the Kościeliska valley, communal trails would form at the side of the road with some going behind rocks or trees, obviously created by those that could not stand the smell and hygiene of the chemical toilets provided at regular intervals or simply could not wait until the next one (figure 16).



**Figure 16:** Toilet trail in the Kościeliska valley and what awaits at the end (to the right).  
*Source:* E. Huijbens, September 2009

After the hospice the trek ascended above the tree line at 1.550 metres above sea level. There patches of dwarf mountain pine start to dominate and the underlying bedrock is metamorphic. A specific dynamic relationship between nature and tourism can here be observed (see figure 17 below).



**Figure 17:** Nature – tourism dynamics in the West Tatra mountains.

The above figure is taken from Liliowe pass to the West and is to be set in contrast with figure 25 below, but Liliowe and Świnica passes represent the border between the West and East Tatra mountains. The underlying bedrock of the West Tatra is dolomite and metamorphic rock that are more susceptible to weathering than is the granite of the East Tatra. The nature – tourism dynamic unfolds as:

1. The dolomite/metamorphic bedrock of the West Tatra weathers easily resulting in the smooth shapes of the mountains and their relatively low altitude.
2. This geomorphology results in ease of accessibility to most parts, i.e. more tourists resulting in great pressure on the paths and the environment dominated by delicate sub-Alpine flora.
3. The paths themselves are on loose material or on the subalpine flora resulting in accelerated erosion processes.
4. With more tourist traffic and bedrock plus fauna more susceptible to weathering the impact on the natural environment is very visible in the West Tatra.

This very visible impact can clearly be seen on paths in the West Tatra mountains. In figure 18 below this impact can be seen and the possible role of the sub-alpine flora to counter these impacts.



**Figure 18:** Path erosion near Grześ mountain top (arrows), lower half of picture shows the role of the dwarf mountain pine in enclosing the path.

*Source:* E. Huijbens, September 2009

The tree line in the national park, especially on in the West Tatra mountains represent a change in the management issues of nature-based tourism in the TNP. The trees do not enclose the paths anymore and people can with more ease create new path depending on the condition of the prevailing path.

Above the tree line the complex interplay of physical, chemical and mechanical erosion gets more pronounced and exaggerated by tourist. The myriad of processes at work in path erosion are not to be explained here in the context of this report, but suffice it to say that they are very place-specific and have to do with the interplay of slope, angle, vegetation cover, granulation and bedrock crystalline structure. On the Slovakian side park authorities are active in planting trees and re-vegetating slopes denuded by centuries of livestock grazing and this does help in directing traffic as both the forest and the dwarf mountain pine



enclose the paths. This difference in management styles can be clearly appreciated from figure 19 below.



**Figure 19:** The Polish-Slovakian border and the difference in vegetation management.

*Source:* E. Huijbens, September 2009

As indicated above in the opportunities indentified in the context of the Kościeliska valley signage and information can also be helpful when it comes to directing traffic and helping to keep the park clean. The current use of signage by the TNP was clearly to be noticed in the Chochołowska valley. A selection is shown in figure 20 below.





**Figure 20:** Some information signs from Chochołowska valley trek.  
 Source: E. Huijbens, September 2009

The sign on the left in figure 20 above warns travellers about bears in the woods and tells what one should and should not do. The sign in the upper right hand corner bans people to tread further in order to protect the flora as does the lower right sign, but that sign simply warns that there are snakes in the grass, although the aim is to protect the grass more than the people (obviously some do not mind as can be seen in the picture). The general policy of the TNP is to close paths and direct traffic for the benefit of the natural environment but then not really telling why these are being closed as it is thought that this would make people curious. The snail warning sign on the lower left is thus representative of the park management style when it comes to signage and information.

Further challenges and opportunities for the TNP emerging from the Chochołowska valley are summarised below.

## Challenges

To begin with it can be stated that all the challenges outlined in terms of the Kościeliska valley are to be seen here. So what is to be added here are challenges that have to do with altitude and accessibility. The first has to do with vegetation management.

As could be clearly seen in figure 19 above there are different management styles on each side of the border. The benefit of the Slovakian approach is that forests and vegetation, especially low lying bushes and shrubs have a role to play when it comes to channelling people along paths and trails. With trails going above the tree line at 1.500 mas, forestry becomes a challenge and how to plant and what to plant if that policy is adopted in order to frame paths. Additionally what needs to be borne in mind is that with altitude all natural erosion processes are accelerated, but in return fewer people are able to get to these altitudes as the paths are often difficult and the climb is too much for many. Waste management and setting up of facilities is as a consequence also very hard resulting in litter and 'behind the bush toilets' to be found very frequently.

## Opportunities

In the Chochołowska valley sites of worship and religion were prominent, but one stood out in particular and that is the route John Paul II used when having his 'chance' encounters with Lech Wałęsa, the leader of Solidarity – the non-communist labour union founded in 1980. These encounters and their talks in Chochołowska valley proved to be a turning point for the struggle of Eastern European countries against their Communist regimes. All this history so abounds in the valley, both this story and sites that have stories relating to various patron saints that protected the inhabitants of the valley in former times. These stories are not really visible and not much is made of those. You have to know what to come for if you are going to visit these sites and herein lies an opportunity to make an attraction and enhance visitor experience to the benefit of the park. There are other stories that relate to former land-uses and inhabitation that more could be made of within the park, but the museum in Zakopane does indeed justice to many of them.

Another opportunity is the active reclamation of vegetation in the hills and mountains of the area. Planting the dwarf mountain pine will frame paths and compel people to stay on them. This does help in directing traffic.

### *Kasprowy Wierch and the Gąsienicowa valley*

The third and last trek also started with a light touch, but this time a cable car (see figure 21 below) was used to ascend the Kasprowy peak at 1.987 mas from Kuźnice at 1.014 mas. Thereafter a trek along the mountain ridge to the Świnica pass was done, but the pass represents the border between the East and West Tatra mountains with Liliowe pass. From the pass we descended into the Gąsienicowy valley to the hospice at the bottom, via the Czarny Staw Gąsienicowy (the Black Lake of Gąsienicowa valley).



**Figure 21:** The cable car to Kasprowy peak. On the right, the end station and the peak, the cable car can be seen entering on the left side of the building.

*Source:* E. Huijbens, September 2009

The first issue to emerge here is the service provided by the government owned cable car company (Polskie Koleje Linowe) getting many people with ease to the delicate nature of the high mountains. The popularity of the cable car is immense and queues to the ticket office could be seen from early in the morning till closure in the evening, but in the high season the wait can be up to four hours to get a ticket, unless you have pre-bought them. The price of the ticket is 45 PLN and the cable car can hold 100 people. Park regulations allow only 50 people to be on each ride in the summer period, so the result is that every 20 minutes all through the day, 50 people are delivered to the Kasprowy peak (see figure 22).





**Figure 22:** Groups of people emerging from the terminus of the cable car at Kasprowy peak.  
*Source:* E. Huijbens, September 2009

The attractions on the peak are mainly two. Firstly it is the magnificent view to be had to the surrounding mountains and lowlands, but then also Poland's first meteorological observatory built on the peak in 1937, representing also the country's most elevated one. In the observatory a visitor information centre has been established.



**Figure 23:** The observatory on the left (the upper building above the cable car terminus) and in it a visitor centre (on the right).

*Source:* E. Huijbens, September 2009

The pressure on the surrounding paths is great and when the cable car company renovated the by then 70 year old line in 2007, EU regulations and regulations resulting from the park partaking in Natura 2000 stipulated that the company needed to make sure that receptive facilities at the top were in order. For this purpose the paths surrounding the terminus are well paved as can be seen in figure 22 above, but once further along the ridges towards Liliowe pass the effect of tourism initiation and acceleration of the natural weathering processes can be observed. To prevent this, various types of barriers have been put in place

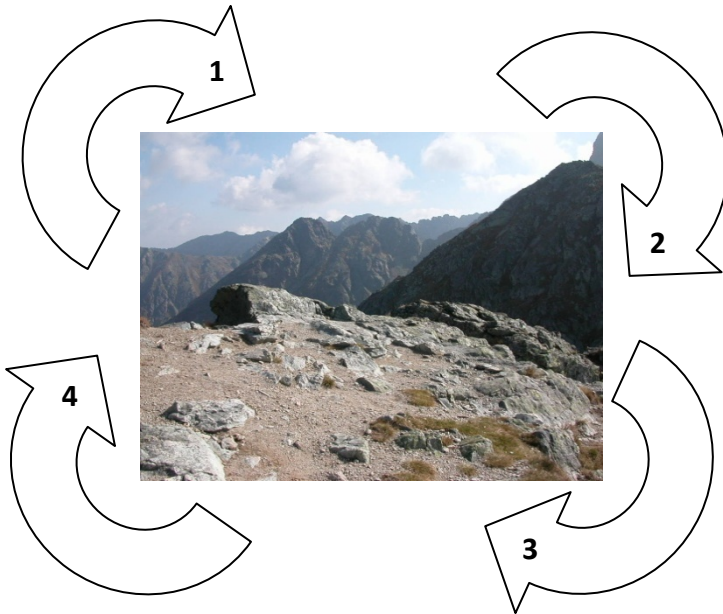
in order to direct people onto the better surfaced trails (see figure 24 below). The ridge pathways in the TNP are 80km of the 250km of trails on the Polish side, so the initiated and accelerated erosion processes caused by mass-tourism that the cable line can provide for poses a serious challenge for the management of these trails.



**Figure 24:** Methods of directing people near Kasprowy peak.

*Source:* E. Huijbens, September 2009

Getting a glimpse of the East Tatra mountains and the high altitude path allows for an inflection on figure 17 from the Liliowe pass creating a complete picture of the nature – tourism dynamics on the most general level in the Tatra mountains.



**Figure 25:** Nature – tourism dynamics in the East Tatra mountains.

Again in figure 25, as in figure 17, the underlying bedrock is the foundation upon which the process unfolds.

1. The granite bedrock of the East Tatra is more resistant to weathering meaning the East part is higher and its peaks and ridges have sharper contours.
2. This geomorphology results in fewer people managing the steep paths and high mountains, i.e. fewer tourists are there resulting in less pressure on the paths and the environment.
3. The paths themselves are on the granite rock, more often than not winding their way through rocky terrain with the only visible impact that the lichen are worn off the rocks on the path.
4. With less traffic and the more resistant bedrock tourism impact on the natural environment is not very visible in the East Tatra.

The interplay between the geomorphology and tourism here stands in sharp contrast to the situation in the West Tatra. Here trails can be more easily managed, but due to their nature they are none the less quite dangerous. Many people also manage to get up there thanks to the cable car and with trails to peaks being merely one-person wide, the wait to get to the peak can be up to an hour as on-coming traffic passes by.



Once descending into the lower reaches of the Tatra mountains these narrow trails can be experienced. The below figure 26 is taken from the Mały Kościelec to the Czarny Staw Gąsienicowy and gives an idea of the winding downward trail and how narrow it is, going e.g. through the rubble circled in the figure. The figure also reveals another management challenge, but in a similar fashion as at the ridge trails near Kasprowy Wierch, the ease of access brings great pressure to the paths. The figure clearly shows the network of communal trails forming along the beach of the Black lake and the number of visitors on a Wednesday in the off-season. In Morskie Oko this problem is even more pronounced, but there Czochoński & Szydarowski (2000) show that the average traffic on the trail is 450 persons both ways pr. hour, with a maximum of 960, representing the most intensely used trail in TNP.



**Figure 26:** The narrow footpath (circled) further the amount of people at the Czarny Staw Gąsienicowy (the Black Lake of Gąsienicowa valley).

*Source:* E. Huijbens, September 2009

The number of people on these trails is one of the key concerns of the park management as this means that animal life gets into close contact with people with animals often getting accustomed to them. On the trail from Czarny Staw Gąsienicowy, the most famous example of this occurred when a bear was getting so used to and fond of the tourists that for safety she was transported to the zoo. Sadly there the bear died, but had by then become known to the Polish public as Magda.

## Challenges

At the ridge evidence of mass tourism impact on the natural environment was very evident. Two factors compound the issue at this site. One is the ease of access via the cable car, allowing up to 50 people every 20 minutes onto the ridge all day long through the summer period. The second is the high altitude resulting in very delicate sub alpine flora and pronounced wreathing processes. The immense pressure the cable car provides for is of-course the fundamental challenge and the curtailing of number using only half the carrying capacity of the car is indeed a step towards management of traffic, but it seems more is needed.

Related to the amount of people being able to come to the high Tatras another challenge emerges and that is directing people. Most of the people seem to be coming up to ascend some of the peak along the high Tatra ridge. The narrow and often dangerous paths in the high mountains and the great number of people often result in queuing for up to an hour in high season to get to difficult peaks and up steep paths. If these treks could be extended and people directed more to alternate routes and paths from the cable car, this could help. But from the cable car another aspect emerges.

The owner of the cable car is the Polskie Koleje Linowe, a government ministry subsidiary based in Warsaw. It has its own management structure and on site manager that directly benefit from the number of people that will be using the car, but the park does not derive benefit. The park management sits in another ministry and thus inter-ministerial conflicts emerge and also challenges related to the quasi private ownership structure, with cable car managers seemingly getting direct benefits. Another facet of the service infrastructure of the TNP are the hospices dotting the park and have already been mentioned. These provide services, information, accommodation and food to the traveller at a maximum price set by the government renting the proprietor the establishment for these purposes. Again here private entities and individuals seem to be able to gain from good governmental relations in getting a hospice deal.



## Opportunities

The key opportunity arising from the above challenges is the marking and making of alternate routes around the high mountains, especially steering people to the lowlands. The park has very active monitoring and research schemes for the park's wildlife and thus great amount of knowledge should reside within the park as to where what animals can be seen, be it birds or land animals. These could be mapped, sites marked and made visible and people pointed to the best sites where they can wait to see the animals, at a safe distance from viewpoints or shelters.

Another aspect is the mountains' geology and geomorphology. Again sites of special interest could be marked and made visible with interpretative signage and themed or specialised maps. These could be from the miniscule undulations in the rocks or small fluvial processes to the larger vistas of tectonic upheavals. With the latter in mind more viewpoints should be defined and their signage should interpret what is to be seen to which direction in order to enhance people's experience. The information is all there through the work of the park staff and resident researchers. The result that should be aimed for has been framed under the term geo-tourism (see: Newsome, 2006).

Related to the above about creating specialised trails for wildlife or landscape watching and viewing is that these can cater to specific market segments that often are willing to spend more and have a keener interest in preserving nature for its own sake. Thus the specialised trails could be set up as niche market attractions and not publicly advertised, but rather sold to specific groups that will then be led on specific sites and trails. This should help in alleviating some of the congestion that can form in the high mountains and also limit traffic.

## Zakopane

Zakopane is the service hub of the Polish Tatra mountains, but as can be seen on the map produced in figure 1 above, the town is really at the end of the road and a drive to the town from Kraków is like driving towards a bottle neck, but the traffic to the town via route 47 of the E77 is quite intense.

About 30% of those that come to the Polish Tatra mountains will only stay in Zakopane. They will see the architecture, visit museums, enjoy local cuisine, shop in the street markets named mountain (góral) markets and generally have a relaxing time as plan B in figure 27 below indicates.



**Figure 27:** Once in Zakopane there are two options of activities. From a T-shirt on sale.  
*Source:* E. Huijbens, September 2009

The attractions are numerous but the town is famed for its Zakopane style architecture attributed to the late 19<sup>th</sup> Century architect Stanisław Witkiewicz. His designs (see figure 28 below) are an inflection on local building traditions, but with superfluous embellishments in many ways representing the trends of 19<sup>th</sup> Century Romanticism. During that time the Tatra mountains presented an irresistible allure to poets, painters and writers in central Europe.



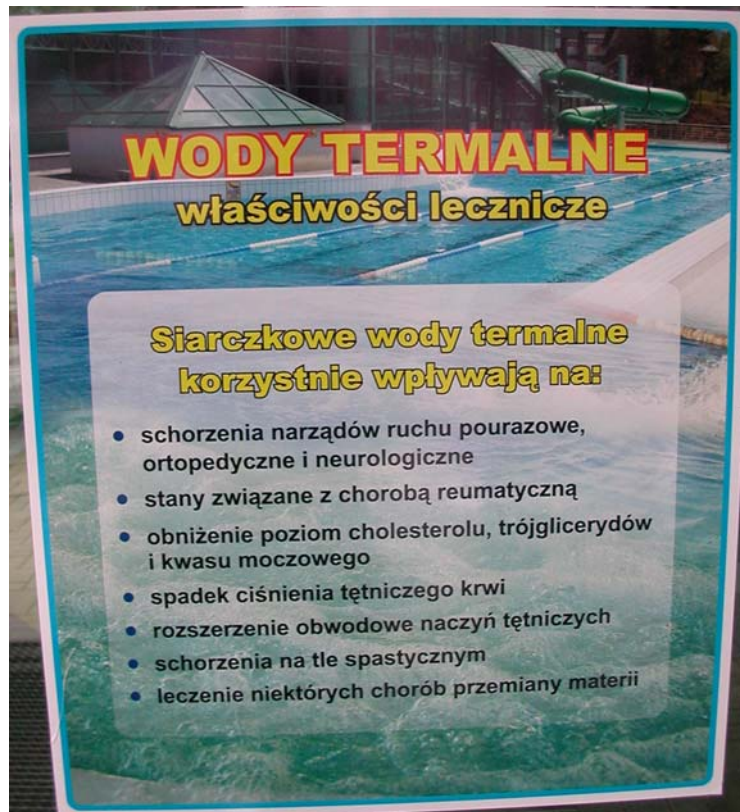


**Figure 28:** Zakopane architecture, high-street and traditional information dissemination.  
*Source:* E. Huijbens, September 2009

Many of these writers, painters and poets, along with Stanisław himself, tourists can learn about in museums in town and e.g. through an architectural trail that is in place for the town and the region as a whole. A very popular destination for many visiting Zakopane is as well the cemetery on ul. Kościeliska where many of these prominent figures of 19<sup>th</sup> and early 20<sup>th</sup> Century lie buried.

This focus on the cultural attractions of Zakopane is not to imply that the 70% of tourists that come to the area somehow merely pass through the town on their way to the mountains. These will also make use of the town and others like it for rest and relaxation and overnight accommodation. The numerous guesthouses and hotels in town not to mention a wide variety of restaurants all cater to the needs of the mountaineer as well as the fun-seeking tourist. The town is also the focal point for information dissemination of the trails and opportunities in the TNP (see figure 28 above). One of the key manifestations of the role the town and its services play in catering to nature-based tourism in the region is the burgeoning of aqua parks in the region. *Tratralandia* in neighbouring Slovakia offers “wellness paradise” in the context of “the largest round the year fun area”, quoting from their brochure. In neighbouring Poprad there is *AquaCity* advertising “fantasticá zábava počas celého dňa s pestrým programom priamo pod vysokými tatrami” in their brochure. The geothermal baths of *Bukowina* meticulously detail in their promotion the chemical properties and the geo-thermal nature of their water and how this is to benefit health. Then

there is the *Termy Podholańskie* near Zakopane advertising itself as a Spa and Wellness facility. Lastly there is the *AquaPark* in Zakopane but as you enter you are immediately made aware of the benefits of hot water for stiff muscles and joints, presumably after an arduous trek in the mountains (see figure 29 below).



**Figure 29:** The generally claimed health benefits of geothermal water, at the entrance to AquaPark in Zakopane.

Source: E. Huijbens, September 2009

Indicative of the popularity of these spas and aqua parks is the fact that in the guesthouse the only brochures to be found were from the above mentioned parks, apart from one from a nearby restaurant. In addition to spa facilities there are Rehabilitation clinics and chiropractors to be found in the villages and many adverts for this are to be seen in the streets.

As mentioned in the introduction tourism in the region is highly seasonal, but not only meaning that most come during the summer months, but also that people from all over Poland will come there for the weekend as well. The change of character of Zakopane in the weekend is dramatic. Suddenly everything is full, restaurants, services, accommodation,



banks, internet, everything is full and one has to wait to be served whilst through the week, at least in the off-season this was not the case.

One of the key attractions of the region lies outside the national park and to the North of the town Zakopane. This is the Gubałówka which is a mass tourism playground where everything is allowed. The areas is explicitly designed to cater for the fun loving tourist that is exercising option B of figure 27, but would like to have claimed that they saw the mountains. A steep tram line will take you to the top of Gubałówka where viewpoints await with endless rows of small retail outlets with souvenirs line all walkways. In open areas amusement facilities have been set up renting quad bikes and motorcycles, which along with cars will be driving amongst the retail stalls. Adventure, climbing and rope parks are there catering to people of all ages. In three different places there are ski lifts that in summer will take the weary back down into town (figure 30).



**Figure 30:** Left, shopping stall on Gubałówka. Right, ski lift in summer.

*Source:* E. Huijbens, September 2009

Gubałówka is mainly a site though for the elderly. They can make a small hike up or down from the hill or take the tram. But generally those not fit for a hike in the national park will be coming here, enjoying a touch of the view and having some fun.

What is mainly to be seen in the stalls for sale are stuffed animals, predominantly sheep, marked Zakopane or Tatra. Along with the sheep is the typical sheep herder and mountain people instrument the Ciupaga. This is a waist-high cane with a small axe on top that has multiple purposes. In all old pictures from the region and the mountains in particular, every man could be seen carrying one. In the hospices around the TNP most of these pictures were

of members in the area's mountain search and rescue brigade, the TOPR (Tatrańskie Ochotnicze Pogotowie Ratunkowe). The Ciupaga thus is indicative of another facet of the story of man's relation to the mountains and dealings with its nature, a story that more than cheap souvenirs can be made of.

### Challenges

Zakopane and Gubałówka represent a whole other side of tourism to the Tatra mountains. Neither belongs to the national park and are thus exposed fully to market entrepreneurialism. This results in a veritable plethora of service offerings each clamouring for your attention in a bazaar like setting on the Gubałówka ridge. Everything is allowed, no holds barred and thus mingling with a crowd of strolling senior citizens are teens on motorbikes racing, locals in the cars, kids climbing and middle aged men drinking. The melange of action and noise with the congestion of people on the narrow street has prompted neighbouring locals to stave off tourists with signposts stating where private property boundaries lie.

The challenges lie thus in managing this crowd, where no management framework exists like the one in the national park. The results are striking for nature and the environment with downtrodden, litter strewn path criss-crossing the forest along the tramline and markings from motorised traffic outside paved roads and on road shoulder. The area thus stands in sharp contrast to the nature-based tourism potential of the TNP and is faced with the challenge of meeting the needs of those that have been there and maybe want a little rest and relaxation with a healthy dose of fun and good food.

### Opportunities

The key opportunity for the town in relation to the TNP is to tie the cultural history with the nature of the park. In the town there are numerous museums and sites of interest that many refer in one way or another to the dealings of people living there with the nature of the mountains. Sites and trails in the national park that relate to this cultural history could be promoted and thus would open a whole new avenue of experience for the visitor. Two examples will be made here below.

One obvious example is the story of TOPR that have been active in the mountains for over a hundred years. Their history, sites of major events and disasters, challenging sites and their means and methods of rescuing are all candidates for marked destinations that could form a coherent trail of varying themes. Again as in the case of the geo-trails, animal trails and view trails outlined above active interpretation can make a world of difference. Meeting a rescue worker who tells of the TOPR and even giving demonstrations and explanations in the uses of the Ciupaga, in old times and today. One example already exists of making the TOPR history visible and that is a stone with markings on it lodged in rubble away from the path on the way from the Black Lake. Most certainly more could be made of that stone and the history behind it.

The second example I would like to draw forth is the history of the 19<sup>th</sup> Century Romantics that came to the mountains to paint them or get inspired by them in one way or another. These artists are in many ways still present to day and through their works the sites that inspired them could be made “visitable” to use the words of Dicks (2004). Again here trails and sites could be marked and interpreted as sites of interest as it was here that one artist or another was inspired to write or paint a specific artwork that could be outlined and specified.

What these two examples are meant to indicate is a way in which the town of Zakopane, the population and its culture can be linked in mutually beneficial ways to the national park. Thus a bridge could be formed between cultural tourism and nature-based tourism that will enhance product development and service delivery of both.

## **Challenges and opportunities – in sum**

Here below the challenges and opportunities of the park will be summarised in relation to the above theorisation on nature-based tourism. In the end some concluding points will be made. Generally the challenges and opportunities of Tatra National Park can be summed through figure 5 based on Deng, King & Bauer (2002: 429). Referring to that figure starting from left to right the key opportunities lie in drawing forth and integrating into the management of the park its peripheral attractions in terms of nature, wildlife and culture of the neighbouring communities. The focus is thus on building education/interpretation facilities and infrastructure that caters to wildlife watching and landscape gazing, with emphasis on convenient accessibility. The resources of the park are abundant and with both diversity and rarity laden with both scientific and aesthetic values. The challenges on the other hand are environmental and have to do with physical sanitation and security from nature.

The challenges to emerge from the above specifically have to do with trail maintenance and waste management. These are not new challenges and a host of technical solutions are being developed around the world to deal with these issues. The fundamental point of departure here is with the tourist and as stated in the introduction, tourism is a consumptive activity that at its heart is a selfish one. This needs to be taken into account and thus management schemes and solutions can incorporate the tourist appealing to their good sense and making obvious the benefits of good practice both personally and for the good of the resource. Thus it was suggested that pictograms could be designed and placed at entry points which direct people on how to “Help keep Tatra clean”. Simple methods of extinguishing cigarettes and doing away with the butt in a bag provided. Sell souvenir handkerchiefs at a premium and doing away with Kleenexes and even considering limitation on alcohol consumption in the park or on certain trails and sites. When it comes to trail management the planting of trees and shrubs to frame the trails could be of importance and benefit, although that does entail a certain “interfering with nature” but then again the whole area has been subjected to grazing and human land-use for centuries and interfering for nature’s sake in this case would do more good than harm. An important aspect of



keeping the forest cover dense for tourism purposes is that in the forest you can find solitude, which so many people seek as the reason for many is an escape from the everyday.

The TNP faces the obvious challenge of catering to nature-based tourism that is premised upon the individual experience of nature, the feeling of solitude and oneness with the natural world. But this challenge at the same time sets the tone for the opportunities the park has. The number of wooded trails and the amount of research into the flora and fauna of the park opens up to a host of opportunities in the form of niche tourism products that at the same time can benefit the park directly and enhance its status, reputation and world-wide recognition, the benefits of which could open to a host of future potential.

The point that needs to be recognised is that people in their millions visit the park for a host of reasons. The argument is that many of these can be successfully integrated in to the park's management scheme for the benefit of the park. As stated, nature-based tourism is threefold. It includes tourism in natural settings, tourism focusing on elements of the natural environment and tourist developed to conserve or protect natural environments. In the TNP tourism can contribute to all these aspects of nature-based tourism but at the same time challenge them. Basically the TNP is a natural setting and thus the focus is on nature-based tourism. As set out above the focus on natural elements can be brought to the fore by trail and site demarcation with active or site-bound (e.g. signage) interpretation. With catering to these specific elements niche market tourism can be catered for that can both passively and actively contribute to the conservation of nature. One aspect here of is that the product could go so far as make tourists science volunteers, i.e. help in doing the science involved in the daily operations of the park but at the same time opening prospects for product innovation in nature-based tourism.

Fundamental to this is following Priskin (2001) as she demonstrates how park management issues need to be built on an assessment of the natural resource for the purposes of tourism. She proposes that a thorough resource inventory of natural attractions needs be done in order to identify the tourism potential. It is hereby suggested that fundamental to the development of the above mentioned trails and sites that could complement the

experiences to be had at TNP is a mapping of the resources of TNP with an eye on those products and potentials named above.

All of the above challenges and opportunities are though cast in a rather awkward light with the influence and presence of locals in the park. A consensus must be reached with local people as to what the park is to stand for and that is in my view the primary challenge if the park and its management.

Finally as a point of comparison a sharp contrast can be drawn between the management of the VNP in Iceland and TNP. Although the management of TNP is centralised in Warsaw it leads to a much more decisive policy making than in the decentralised management structure of the VNP. In the latter's case although potentially more democratic, it makes all consensus building nigh on impossible for any management decisions. In the end these do manifest as centralised decisions with the sub-regional boards feeling rather inept. Thus an explicit centralised structure might be better. In terms of resources and man power there is a world of difference between the two parks and naturally for the proper management of VNP, its boundaries and land ownership should be sorted to begin with. This is not a problem in TNP and thus management of challenges and opportunities has all the potential to yield fruitful results for the TNP.

### Conclusions

In conclusion; it seems, albeit based on a very short visit and only a handful of very informal interviews, that the TNP management is not all too keen on tourism and views those visiting the park as more an annoyance than actually beneficial. The argument being promoted above is that tourism can be directly beneficial to the park or at least can be managed to limit or curtail negative impacts, through an active engagement with the tourist. The method lies in appealing to the visitor's good sense and incorporate their varying needs in trail and site development, catering to more niche markets. These are more committed tourists, more demanding on active interpretation and education, but also contribute more in terms of money and positive publicity for the park. The latter can directly benefit park managers in gaining a voice when it comes to dealing with centralised government decisions.

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### Key websites

The Tartra National Park site: [www.tpn.pl](http://www.tpn.pl)

The town of Zakopane site: [www.visitzakopane.pl](http://www.visitzakopane.pl)

Maps and nature of TNP: [www.geoportaltatry.pl](http://www.geoportaltatry.pl)

The mountain search and rescue brigade: [www.topr.pl](http://www.topr.pl)



**ICELANDIC TOURISM  
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