

Developing a Visitor Management Framework for WWF's PAN Parks Project – Case Study of a National Park in France

Mylène van der Donk¹, Stuart Cottrell²

¹MSc student, World Leisure Center of Excellence (WICE), Wageningen University, Gen.
Foulkesweg 13, 6703 BJ Wageningen, The Netherlands
Email: Mylene_donk@hotmail.com

²Lecturer, Socio-Spatial Analysis and Recreation and Tourism, Wageningen University, Gen.
Foulkesweg 13, 6703 BJ Wageningen, The Netherlands
Email: stu.cottrell@users.rpv.wau.nl

Abstract: The purpose of this presentation is to discuss the visitor management planning process in progress at the *Parc National du Mercantour* in France. Park administration wishes to achieve World Wildlife Fund for Nature's (WWF) designation as a PAN Park. Details concerning the development of a visitor management framework for WWF's PAN Parks project will be given. Results will reflect practical aspects of Visitor Management Planning and monitoring in protected areas.

INTRODUCTION

WWF is the world's largest and most respected independent conservation organisation. Since 1985, they have invested over US\$ 1,165 million in more than 11,000 projects in 130 countries. Consequently, tourism has been noted as one of the largest and fastest growing industries and has significant environmental, cultural, social and economic impacts, which significantly effect WWF locations. WWF aims on optimisation of the positive impacts whilst minimising, and wherever possible, eliminating the negative impacts. Thus, in 1997 WWF and the Molecaten Group developed the Protected Area Network (PAN Parks) concept as a means to encourage synergy between nature conservation and tourism in Europe's protected areas. The aim of the PAN Parks project is to change tourism from a threat (attracting visitors could lead to negative impacts on nature) into an opportunity by building relationships with nature conservation organisations, travel agencies, the business community and other groups on a local, national and international level (WWF 1999).

In order to become a PAN Park, a park must meet PAN Parks principles (Table 1) and criteria. Mercantour National Park does not yet meet all the criteria, namely a visitor management plan.

PAN Parks principles	
Principle 1:	Protected areas with rich natural heritage
Principle 2:	Nature Management
Principle 3:	Visitor Management Plan
Principle 4:	Sustainable Tourism Development Strategy
Principle 5:	Business Partners
Principle 6:	Sponsors

Table 1: Principles PAN Parks

This presentation will allude to the researcher process of synthesising the literature pertinent to visitor management frameworks to further clarify a

framework for PAN Parks. Secondly, an overview of the visitor management planning process at Mercantour National Park is given. Results of this research will assist park managers in Europe in understanding and applying the concepts of WWF PAN Parks principles and criteria in developing Visitor Management

METHODS

Methods reported here are part of the those conducted as part of an MSc thesis sponsored by WWF to further develop visitor management criteria. The combination of related literature, PAN Parks criteria and structure of the thesis report serve as a form of self-assessment for both WWF and the park setting in France. The literature provides concepts of visitor management along with management recommendations. The PAN Parks criterion provides the organisational guidelines from which to relate and assess the visitor management/framework literature to further clarify the PAN Parks criteria. Results of the comparative analysis, can then be used within a practical setting to identify problems and alternative solutions to deal with visitor management problems

A literature study/content analysis on subjects related to visitor management resulted in a theoretical background for the PAN Parks visitor management principles. Four forms of literature were examined:

1. The visitor management philosophy supported by literature (Borrie et al., 1998; Hall & McArthur; 1993; McCool, 1996).
2. Visitor management frameworks available online, namely The Tioram Castle Conservation Project Scottish Highland, The Nut State Reserve Tasmania, the Norfolk Coast AONB

- UK and the Waitakere City Council Visitor Strategy for the West Coast UK.
3. Visitor management subjects, explained, supported and complemented in the literature (Cole, 1987; Ceballos-Lascurain, 1996; Black, 1998; McArthur, 1998; Giongo et al., 1993, Wight, 1998; Schouten, 1999).
 4. Visitor management strategies including frequently used systems like LAC (Limits of Acceptable Change), CC (Carrying Capacity), VIM (Visitor Impact Management), VERP (Visitor Experience and Resource Protection Programme), ROS (Recreation Opportunity Spectrum), VAMP (Visitor Activity Management Programme) TOMM (Tourism Optimisation Management Model) and VRM (Visitor Risk Management)

Figure 1 depicts graphically the steps involved in this research process.

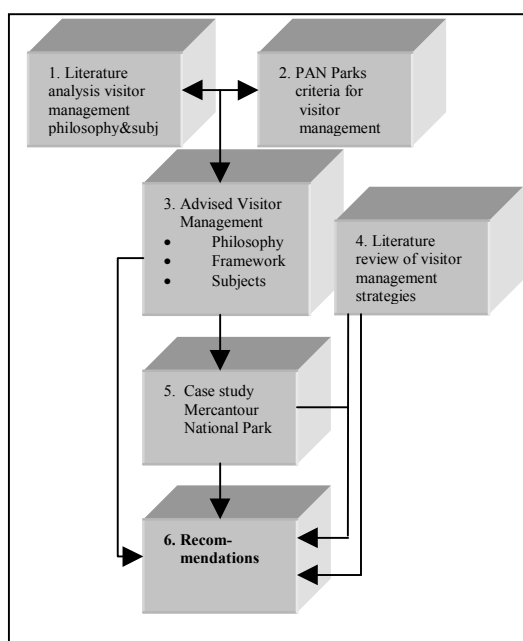


Figure 1: Conceptual map

Based on the analysis of the first three elements (number 1 in figure) eleven-visitor management subjects were identified. For each subject goals and objectives must be formulated in the visitor management plan. The PAN Parks principle about visitor management comprises criteria and indicators for eight of these subjects. Together with the literature background this step provides an overview of the desired situation (number 3 in figure). The PAN Parks' criteria and indicators is the evaluation tool while the literature review serves an explanatory, support and complementary role.

In the analysis of the fourth element (number 4 in figure) the different strategies were compared. Apart from the VRM strategy all systems were compared on basis of applicability, satisfaction of users, and on improvements made from one strategy to another. The VRM system is not included in the

comparison because it deals with different visitor management subjects (different subjects appointed in the analysis of element 1-3). After this analysis only those systems that integrate both the nature oriented and the visitor oriented approach were evaluated against the PAN Parks criteria. The results of this analysis were positive indicating that these systems can be recommended by the PAN Parks organisation to be used for managing the visitor management subjects that PAN Parks sites deal with.

The case study (number 5 in figure) conducted in Mercantour National Park, France, consisted of an evaluation of the visitor management philosophy and visitor management subjects of the park. This step was based on secondary data analysis, informal interviews and personal observations conducted summer 2001. Results provided an overview of the points needed for further VM development and where the park meets the PAN Parks principles and criteria. For recommendations, results from the literature review are used (number 6 in figure).

CONCLUSIONS

The PAN Parks criteria and indicators are not formulated in a uniform or consistent format. Sometimes, a criterion is posed as a question or as an inventory task. How each should be interpreted is not explained and the level to which it should be implemented is not clear (see Appendix A for an overview of the PAN Parks criteria and indicators for visitor management). Literature and case study examples clarify the different visitor management elements (Figure 2) necessary in the present context of visitor management; thus, should be considered as elements of the PAN Parks criteria and indicators as well. In this paper only the suggested additions to the existing PAN Park criteria will be given. The structure of the conclusions is based on the relationship between the elements.

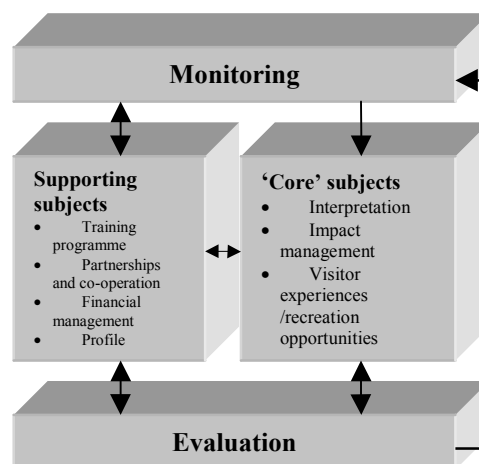


Figure 2: Relationship between the different elements

The ten visitor management elements depicted in Figure 2 (nine bulleted items and 'Monitoring

and Evaluation') are placed in a philosophical context. This context refers to the visitor management philosophy of a park which influences the decision making process. The principles and criteria of WWF are restructured so that these reflect the requirements for the different subjects identified in the literature. Key words that reflect the contents of the criteria and indicators are listed for each subject [Criteria (CR); Indicator (I)].

Visitor management philosophy

The PAN Parks criteria and indicators indirectly refer to WWF's visitor management philosophy. The criteria and indicators are grouped in two: 'Structure and strategy criteria and indicators' and 'indicators for sustainability'.

- Cr. 3.1 Implementation, monitoring and evaluation of effectiveness of visitor management plan
 - I. 3.1.2 Long and short term goals
 - I. 3.1.4 Systematic monitoring and revision
 - I. 3.2.2 Describe measures to avoid negative impact (provide description and map of zoning)
 - I. 3.3.1 Different target groups
 - I. 3.3.7 Partnerships on use, improvement and widening the offer
 - I. 3.3.8 Active role in development sustainable tourism strategy?
 - I. 3.4.1 Segmentation

The literature research clarified the concept of a visitor management philosophy. Secondly, another group of indicators was identified: managerial principles. The research by McCool (1996) on visitor management principles was a valuable addition and support for the PAN Parks philosophy.

Category	Criteria
Managerial	Recognise the considerations of visitor use (eleven principles McCool 1996)
	Ease of implementation; <ul style="list-style-type: none"> • Time consuming • Desired education
	Integration possibilities with other strategies
Structure and strategy	Process oriented structure <ul style="list-style-type: none"> • Analysing and documenting; Identification of problem conditions • Goals and objectives setting • Strategic plan • Financial resources • Monitoring and evaluation of management actions
	Differentiated approach; <ul style="list-style-type: none"> • Different zones • Different target groups
	Pro-active approach vs. re-active approach; Future oriented
Sustainable approach	Cause solving vs. problem solving; Cause solving
	Local involvement integrated in process
	Beyond nature orientation: Social, economic, cultural, environmental, and visitor oriented

Table 2: Overview of visitor management philosophy indicators

Interpretation

Different PAN Parks criteria and indicators are defined for interpretation summarised as follows:

- I. 3.3.2 Interpretation programmes for different target groups
- Cr 3.4 Create understanding and support for conservation goals
 - 3.4.1 Different messages and techniques for target groups
 - 3.4.2 Communication of code of conduct
 - 3.4.3 Visitor centres
 - Cr 3.5, (I 3.5.1, 3.5.2, 3.5.3, 3.5.4)
 - Availability and accessibility of information
 - All year
 - Visitor centre target groups
 - In English and relevant languages

The analysis on this subject resulted a clear distinction that interpretation is more than information provision but reveals concepts, meanings and the interrelationship between natural phenomena. Interpretation educates visitors about the environment and adds to what we hope is a positive experience for visitors in nature (Ceballos-Lascurain,1996). The need for interpretation increases, as visitors demand more environmentally responsive services, products and information. They want to learn and understand their own connections with a broader environment (Black 1998). Hall & McArthur (1998) indicate that objectives of good interpretation are multiple but often fail to reach its full potential (Hall & McArthur (1998); therefore indicating that this subject area needs further clarification and development in protected areas.

Minimising Impacts

For this subject element, PAN Parks principles and criteria are not very descriptive or clear.

- Cr. 3.2 Visitor management safeguards the natural values
 - I. 3.2.1 Carrying Capacity is assessed
 - I. 3.2.2 Measures to avoid negative impact:
 - Zoning: access, allowed activities, time period

The literature review for this subject resulted in additional advisable requirements:

1. Structured analysis of impacts by categorisation (Giongo et al., 1993)
2. Different measures to avoid negative impacts (Cole, 1987; Hall & McArthur, 1993)
3. Decide whether change is a real damage or an inevitable consequence of human use (Wight, 1998; McCool, 1989)
4. Recognise principles of visitor management defined by McCool (1989)
5. Carrying Capacity as an initial concept is somewhat limited in guiding VM planning. Strategy frameworks such LAC, VIM, etc. should be considered as well.

Visitor experience/recreation opportunities; facilities-services-activities

PAN Parks requires high quality nature based experiences to assure visitor satisfaction. In order to realise this visitors should be offered an experience that contains the UNIQUE elements: *Uncommon, Novelty, Inspiring, Quality, Understanding and Emotions* (Schouten 1995). These experiences

should be specified on different target groups (Mill & Morrison, 1992) because not all visitors need the same type of experience.

Mazursky's model of experience explains that visitor satisfaction is dependent on the expectations of the visitor (Mazursky in Beunders and Boers 1996). This concept underlies the strong relationship with the visitor management subject 'Profiling'.

- Cr. 3.3 Wide spectrum of experiences
- I. 3.3.1- Activity services and facilities for different
- 3.3.2-3.3.3 target groups
- I. 3.3.4 opportunities to observe natural features
- I. 3.3.5 Monitoring visitor behaviour and satisfaction
- I. 3.3.6 Visitor oriented facilities (quality)

Risk management

Accidents can happen but some accidents can be prevented. Communication is an important aspect of this element. What are the responsibilities of managers for risk management? This subject needs to be considered further by many parks. In some countries managing risks is a legislative obligation (Parks Canada). Parks Canada has developed a Visitor Risk Management handbook intended to help managers develop a consistent set of guidelines to manage visitor risks (Parks Canada). For parks willing to obtain the PAN Parks certification only one indicator has been defined resulting in two key elements: safety regulations and monitoring.

- I. 3.3.9 Safety regulations concerning activities and the use of facilities
- Monitoring and updating

Monitoring

For all decisions taken in the visitor management process background information is necessary. This type of information is described as the basic input information necessary for developing a visitor management strategy. Information about visitors and the environment form the basis for all different subjects for which goals and objectives must be set for management. Effects of management actions must be monitored as well. A third element is that of monitoring and evaluation of the overall management plan. This is where questions such as "Have the right decisions been taken?"

PAN Parks recognises the importance of monitoring and has included many criteria and indicators about this subject.

- Cr. 3.1 Regular monitoring and updating of all elements of the visitor management plan explicitly mentioned are:
 - I3.1.4,
 - I3.3.5,
 - Effects of visitor management actions
 - I3.3.6,
 - Number of visitors
 - I3.3.9,
 - Type of visitors
 - I3.6.4
 - Use of facilities services and activities
 - Visitor satisfaction
 - Visitor safety regulation
 - Training programme
 - Trends and developments
- Take actions based on obtained information and evaluate progress

Partnerships and co-operation

The definition of the WTO (1998) makes clear that partnerships and co-operation are essential elements of sustainable development. This subject is part of the visitor management philosophy. Partnerships can be established for different subjects of the visitor management elements.

- I3.3.7 *Co-operation with local actors*
- Establishment of relationships
- I3.3.8 Proactive attitude towards sustainable tourism strategy

Training programmes

The need for training programmes varies from park to park. Important is the knowledge managers and/or rangers have on the various subjects of visitor management. For the visitor experience a visitor oriented attitude from personnel, the way in which facilities, services and activities are offered are important to visitor satisfaction. Knowledge of park personnel must be assessed through monitoring/assessment, then training programmes can be developed accordingly.

- Cr. 3.6 Training programme is element of visitor management
- I 3.6.1 Available
- I 3.6.2 Goals, target groups, methods and time schedule
- I 3.6.3 Training need assessment
- I 3.6.4 Monitoring and revision

Financial management

Expenditures and revenues must balance. Visitor management is an ongoing process; thus a line item should be included in the annual budget. Obviously, visitor management subjects vary in priority and importance, therefore, annual budget funds should be allocated accordingly. The sole PAN Parks indicator referring to budget/financial related as an aspect is the availability of resources.

- I3.1.3 Adequate resources for implementation of visitor management plan available

Profile and infrastructure

These two subjects are not included in the PAN Parks criteria. However, these elements appeared in visitor management plans from other national parks

(The Tioram Castle Conservation Project Scottish Highland, The Nut State Reserve Tasmania, the Norfolk Coast AONB UK and the Waitakere City Council Visitor Strategy for the West Coast UK).

Profiling an area is about presenting the park in visitor information; it is about creating an image and expectations. By doing this visitor flows can be controlled (Cole, 1987; Hall & McArthur, 1993, 1998) and appropriate expectations can be created in the minds of the visitor leading to an increase in visitor satisfaction.

The possibilities to increase visitor satisfaction and minimise negative impacts are multiple. Infrastructure can be used as a means to differentiate in service provision which leads to the desired outcomes. For example, making access to problem areas more difficult and/or improve access to alternative locations (Cole 1987) or by encouraging/discouraging use by selective service provision (many signs or the opposite: no signs). Site design, reinforcing areas of known impact, coupled with zoning of experience opportunities are other means as well.

Different strategies have been developed that deal with visitor management subjects described briefly in this paper. Table 3 summarises the various strategies we discussed.

Abbreviation	Strategies
VRM	Visitor Risk Management
CC	Carrying Capacity
LAC	Limits of Acceptable Change
ROS	Recreation Opportunity Spectrum
VIM	Visitor Impact Management (National Parks and Conservation Association)
VERP	Visitor Experience and Resource Protection (National Parks Service)
VAMP	Visitor Activity Management (Parks Canada)
TOMM	Tourism Optimisation Management Model

Table 3: Strategies analysed

In conclusion, we determined that the latest strategies focused on in the literature are all integrated systems that combine ecological and visitor oriented approaches (namely VIM, VAMP, VERP, TOMM). These integrated systems all deal with and/or include some aspects of the PAN Parks criteria that have been formulated for the subjects they deal with (e.g. VRM- criteria about risk management). We conclude that the systems are very similar to each other and any one of them could be suitable for a park to use. Results imply that PAN Parks criteria are not specific enough and by adopting one or a combination of the aforementioned strategy frameworks, a park setting would not only meet the PAN Parks criteria, but develop a more complete visitor management plan as well. Therefore, we advise park management to select any one of the strategies if it needs to improve (or develop) their strategy on the subjects that the strategy deals with specifically.

MERCANTOUR NATIONAL PARK CASE STUDY

Study setting

Mercantour National Park is situated in the department *Alpes Maritimes* in the south of France. The park borders on the east with the *Italian Parco Regionale d'Argentera* with which they are co-operating (see map). Different management policies are jointly executed. The vicinity of the Atlantic Ocean creates a unique climate in an area that has an altitude difference from 490m to 3143m. Because of these characteristics a wide diversity in plant and animal species can be found. Many of these species have a protected status. Apart from natural features a valley in the park possesses the richest ensemble of open-air engravings in Europe.

The park is divided in two different zones: the core zone and the buffer zone. In the core zone activities and behaviour are restricted, the regulations of the park have to be obeyed. In the buffer zone a wide offer of tourist facilities and services can be found. The core zone covers an area of 68.500ha and the buffer zone and area of 136.500ha. In the buffer zone 28 communities can be found (fact sheet 2000). The park is divided in six sectors. These sectors have their own management team located in the area. This research is carried out in core zone of the sector La Vésubie, situated 65km from Nice.

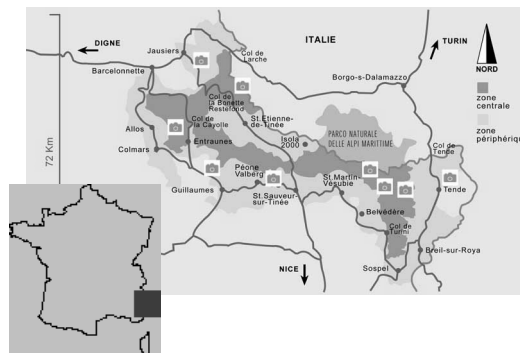


Figure 2: Map of park location

Results

The visitor management practices from the management in La Vésubie have been analysed based on the PAN Parks criteria. Table 4 shows the results. Table 5, presents an overview of the evaluation of the PAN Parks criteria and indicator assessment for the core zone of La Vésubie, sector of Mercantour National Park.

Results of analysis in core zone La Vésubie- Mercantour National Park
<p>Interpretation: Information, education</p> <ul style="list-style-type: none"> The possibilities and opportunities interpretation makes possible are not used optimally. In the visitor centres, in the brochures, and in the park and its entrances this could be further developed. No visitor segmentation is used to differentiate services, facilities and activities. Interpretation does not increase understanding and support Visitor centre is only open in high season which makes information difficult to access (apart from interpretation panels and trails in the park)
<p>Impact management</p> <ul style="list-style-type: none"> no impact assessment or strategy that deals with managing impacts few different measures are used to minimise impacts No limits of acceptable change have been defined (nor Carrying capacity levels), no indicators have been identified
<p>Visitor experience/recreation opportunities</p> <ul style="list-style-type: none"> In core zone visitor experiences are nature based No zoning system is applied Good opportunities to experience wildlife
<p>Risk management</p> <ul style="list-style-type: none"> Mercantour has a non-communicating attitude towards visitor risks
<p>Monitoring</p> <ul style="list-style-type: none"> The input of visitor management is being monitored: Visitor surveys have been conducted this year. These deal with various subjects. National and departmental organisations monitor the existing situation. Rangers monitor while on duty and special research is conducted on specific subjects. No systematic monitoring programme is available for visitor management subjects
<p>Partnerships and co-operation</p> <ul style="list-style-type: none"> The park has an active approach towards co-operation Different partnerships exist
<p>Training programmes</p> <ul style="list-style-type: none"> Training programmes are available for all employees on yearly basis A wide range of topics is offered Training needs are not assessed
<p>Financial management</p> <ul style="list-style-type: none"> The park has different financial resources A yearly budget line item should be allocated for visitor management
<p>Profile</p> <ul style="list-style-type: none"> External-happens from headquarters in Nice, France Has to be communicated with the sector to utilise the opportunities
<p>Infrastructure</p> <ul style="list-style-type: none"> The current situation offers possibilities which need further analysis Infrastructure in the park is very well developed

Table 4: Results analysis La Vésubie- Mercantour National Park

Visitor management subject	Meets PAN Parks criteria	Needs further development
Interpretation		x
Minimising impacts		x
Visitor experience/recreation opportunities		x
Training Programmes	x	
Monitoring		x
Partnerships	x	
Safety		x
Financial management	x	
Profile	x	
Infrastructure		x

Table 5: Analysis results of core zone La Vesubie-Mercantour

The literature that describes the visitor management philosophy, the structure and the different subjects also provides recommendations for managers to consider. When the PAN Parks criteria and the literature study are used to analyse the situation, it pinpoints problem areas and gives examples on how these can be dealt with in the

situation. In essence, this thesis project combining a literature review in accord with PAN Parks criteria and the structure of the thesis itself provides an assessment tool as a form of monitoring. An integration of literature study and the onsite analysis is shown in Table 6.

Visitor management subject that need further development to meet PAN Parks criteria	Strategies that can be used:		Other sources used for visitor management subjects
	VIM VERP VAMP TOMM	VRM	
Interpretation	X		McArthur 1998 Hall, & McArthur 1998 Ceballos-Lascurain 1996 Black 1998
Minimising impacts	X		McCool 1989 Wight 1998 Berle 1990 Giongo et al., 1993 Hall Mc Arthur, 1998
Visitor experience/recreation opportunities	X		Schouten 1995 Cole 1987 McCool 1996
Monitoring	X		McCool 1996
Safety		X	VRM plan Parks Canada

Table 6: Integration of literature and self assessment

REFERENCES

- Beunders N, Boers H, (1996). De andere kant van de vrije tijd. Toerboek BV, Amsterdam.
- Black, R.S. (1998). Ecotourism and Education, <http://lorenz.csu.edu/ecotour/rosy.html>.
- Borrie, W.T., McCool, S.F. and George H. Stankey, (1998). Protected Area Planning Principles and Strategies. In Lindberg, K., Wood, M.E., and Engeldrum, D. (Eds.) (1998). Ecotourism : A guide for Planners and Managers. Volume 2, pp. 133-154. (The Ecotourism Society, North Bennington, VT).
- Ceballos-Lascurain H, (1996). Tourism, ecotourism and protected areas. IUCN The World Conservation Union, Gland.
- Cole D.N. (1987). *Research on soil and Vegetation in Wilderness: A state of knowledge review*, proceedings at the National Wilderness Research Conference, 1985. July 23-26 Fort Collins Colorado. USDA Forest Service, General Technical Report INT-220 Intermount Research Station.
- Giongo F, Bosco-Nizeye J. & Wallace, G. (1993). *A study of visitor management in the world's National Parks and protected areas*, Department of Recreation Resources, Colorado State University: Ft. Collins, CO 80523, CO, USA.
- Graefe, A.R. (1992). Visitor Impacts Management: *An Approach for Assessing Recreational Capacities in Natural Areas*. Paper presented at the International Workshop on Visitor Carrying Capacity Measurement at Historic Sites and Cities and Wilderness Protected Areas in Developing Countries, Belize City, Central America, April 26-27.
- Graefe, A.R., Kuss, F.R. and Vake, J.J. (1991). *Visitor Impact Management*, 2 Vols., National Parks and Conservation Association, Washington.
- Hall C.M. and McArthur S. (1993). *Heritage management in new Zealand and Australia, visitor management, Interpretation and Marketing*. Oxford University Press Auckland.
- Hall C.M. and McArthur S. (1998). *Integrated Heritage Management*. The Stationary Office, British Library Cataloguing.

- Hall, C.M. and Lew, A.A. (1998). *Sustainable Tourism; A geographical perspective* Addison Wesley Longman, New York.
- Hammit WE, Cole DN, (1987). *Wildland recreation, Ecology and management*. John Wiley & sons inc. United States.
- McArthur, S., (1998). *Introducing the Undercapitalised World of Interpretation* in Lindberg, Eplerwood, Engeldrum, *Ecotourism, A guide for planners and managers* Volume 2, p 63, The Ecotourism Society Vermont.
- McCool, S. F. (1989). Limits of acceptable change: Some principles in Toward Serving Visitors and Managing Our Resources: Proceedings of the Visitor Management Strategies Symposium/. University of Waterloo, Ontario, CANADA. Pp. 195-200.
- McCool, S.F. and Stankey, G.H. (1992). *Managing for the sustainable use of protected wildlands: The limits of acceptable change framework*. Paper presented at the IVth World Congress on National Parks and Protected Areas, Caracas, Venezuela February 10-21.
- McCool, S.F. (1996). *Limits of Acceptable Change: A framework for managing National protected areas:experiences from the united states*. Paper presented at the Workshop on Impact Management in marine Parks, Kuala Lumpur Malaysia.
- Mill & Morrison, (1992). *The tourism system, an introductory text*. Prentice Hall International Editions, New Jersey.
- Moccochain, L. (1999). *Les sentiers du secteur Vesubie, Etude sur l'etat general des sentiers du secteur du Vesubie*. Aix-en-Provence.
- Schouten F (1999). Reader with the workshop Management of Heritage Based Tourism Resources, NHTV Breda.
- Shelby, B and Herbelein, T.A. (1984). *A conceptual framework for carrying capacity determination*. Leisure sciences 6(4), 433-451.
- Vaske, J.J., Donnelly, M.P., Doctor, R.M. and Petrucci, J.P. (1994). *Social Carrying Capacity at the Columbia Icefield: Applying the Visitor Impact Management Framework*, Canadian Heritage Parks Canada, Calgary.
- Wight, P.A. (1998). *Tools for sustainability analysis in planning and managing tourism and recreation in the destination*. In: Hall, C.M. and Lew, A.A. *Sustainable Tourism; A geographical perspective* Addison Wesley Longman, New York.
- WTO (1998). Guide for local authorities on developing sustainable tourism.

APPENDIX A. OVERVIEW OF PAN PARKS PRINCIPLE VISITOR MANAGEMENT; CRITERIA AND INDICATORS

Principle 3: Visitor Management

PAN Parks visitor management safeguards the natural values of the area and aims at offering the visitors a high quality nature-based experience.

3.1. Protected area must have a visitor management plan. Implementation, regular monitoring and assessing its effectiveness should be secured. Based on the assessment the management will be adapted and the plan updated.

3.1.1 Do you have a visitor management plan? Provide an English summary and a copy (if available).

3.1.2 Provide information of the plans long- and short-term goals.

3.1.3 Are there adequate resources for the implementation of the visitor management plan?

3.1.4 Are the effects of the visitor management plan's actions being monitored systematically? Can the plan be revised accordingly?

3.2 Visitor management safeguards the natural values of the protected area.

3.2.1 The protected area's ecological carrying capacity is properly assessed/ estimated, making use of the best available method.

3.2.2 Based on ecological carrying capacity, describe the measures to avoid negative impacts by visitors on the protected area. Add description and map of zoning system (or similar system), specifying visitor access, allowed activities and time period of each zone.

3.3 Visitors are offered with a wide spectrum of high quality nature-oriented experiences based on the visitor management plan.

3.3.1 List and specify activities (such as hiking, canoeing, cross-country skiing) for different target groups.

3.3.2 List and specify services (such as education and interpretation programmes) for different target groups.

3.3.3 List and specify facilities (such as observation towers and nature trails) for different target groups.

3.3.4 List opportunities offered to visitors to observe and experience wildlife and other natural features of the protected area.

3.3.5 Indicate how number and type of visitors, their use of activities, facilities and services and the visitor satisfaction are being monitored. Indicate estimations on future trends on development of number and type of visitors.

3.3.6 Based on visitor satisfaction, describe how the quality of the activities, services and facilities are monitored and improved.

3.3.7 Describe existing and planned partnerships with communities and other partners on the use, improvement and widening the offer of nature-oriented expediences.

3.3.8 Does the protected area management play proactive role in setting up and implementing sustainable tourism development strategy (as defined in principle 4)?

3.3.9. Indicate safety regulations concerning activities and the use of facilities and specify how these regulations are monitored and updated.

3.4 Visitor management creates understanding and support for the conservation goals of the protected area.

3.4.1 List target groups that need to understand and support conservation goals of the protected area.

3.4.2 Specify messages and different techniques used for the target groups.

3.4.3 Do you have a code of conduct? Indicate how it is communicated.

3.5 The protected area has a visitor centre, for which clear goals and a policy are being defined within the visitor management plan.

3.5.1 List visitor centres target groups that need to understand and support conservation goals of the protected area.

3.5.2 Specify messages and different techniques used for the target groups.

3.5.3 Is the availability and accessibility of information guaranteed during all periods of the year that visitors can be expected? Indicate opening dates and hours of visitor centre and other places where information is available and specify which information is available.

3.5.4 Are information, education, interpretation and communication in the visitor centre available in English and, in case that monitoring of visitor flows shows many visitors from other countries come to the area, other relevant languages?

3.6 The visitor management plan includes training programme for staff and others involved in offering activities, services and facilities to visitors.

3.6.1 Do you have a training programme for the staff and others involved in offering activities, services and facilities to visitors?

3.6.2 Specify goals, target groups, methods and time schedule of the training programme.

3.6.3 Are training needs of staff and other people involved assessed on a regular base?

3.6.4 Is the training programme monitored systematically? Can the plan be revised accordingly?