Simien Mountains National Park



General Management Plan

2009–2019

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Foreword

The Simien Mountains National Park (SMNP) offers Ethiopians unique opportunities to experience and understand our wonderful country. It is a place of learning, recreation and fun where Ethiopians can connect with our past and appreciate the natural, cultural and social forces that shaped Ethiopia. UNESCO has classified the SMNP as a "World Heritage Site" since 1978. Therefore, the appreciation of its significance is not only acknowledged by the Region but also by the international community. Thus, those of us at the Regional level should feel proud of our natural heritage.

It is quite some time since the finalization of this management plan was awaited. I offer my appreciation to the government of Austria and their Embassy in Ethiopia in financing the project, UNESCO, FZS and to all those local and international organizations and individuals especially to the Core Planning Team who has demonstrated their good will, hard work, spirit of co-operation and extraordinary sense of leadership.

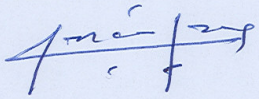
Being proud and having an approved plan by itself alone shall not mean much. What matters most is the practical implementation of the plan into a reality. To this effect, in the last ten years an attempt was made by the Amhara Nations Regional State and the Government of Austria, in achieving certain aspects of the activities. This is just scraping the surface, and so there is much more yet to be done in partnership at all levels of development.

The practical implementation of this management plan calls the immediate attention of conservation agencies, the effective and efficient coordination and participation of the local and international communities either in the bilateral or multilateral agreements. As this plan comprises of issues related to resources conservation, management, development and rational utilization of the SMNP and the buffer zone, it is evident that the achievement could not be made by the Amhara National Regional State and/or the Parks Development & Protection Authority alone.

Our goal is to ensure this special place is conserved in perpetuity. We see a future in which this extraordinary place will continue to contribute in meaningful ways to Ethiopians' appreciation, understanding and enjoyment of Ethiopia, as well as to the economic well-being of communities in particular and the country in general.

Therefore, I would like to take this opportunity to call upon the attention of every national and the international community to collaborate and bring together their efforts in this implementation of this management plan.

Berhanu Gebre



General Manager, Parks Development and Protection Authority

Approval page

The Amhara National Regional State has approved this General Management Plan to be implemented in Simien Mountains National Park.

Executive Summary

This General Management Plan (GMP) for the Simien Mountains National Park (SMNP) lays out a vision for the development and management of the park over the next 10 years, and outlines specific actions required to fulfil this vision over the next 3 years. This GMP was developed through a combination of approaches, building on a consultant-produced draft GMP that was reviewed by a stakeholder workshop and other national and international actors. This draft plan summarised background information and the problems and issues facing the SMNP, but nevertheless had some gaps. These gaps were filled through a combination of 3 technical working groups (comprised of experts from SMNP, PaDPA staff, partner projects and other technical experts) that examined specific issues facing ecological management, park outreach and park operations and drew up strategies and actions to address these issues. The Tourism Development and Management programme was based on the Tourism Master Plan, developed by national consultants. The Settlement Management Programme was based on the consultant produced Grazing Reduction Strategy, a project proposal developed to resettle park residents and input from the Core Planning Team. Community and other consultations took place during the production of these documents. The Core Planning Team (CPT) directed the planning process and made key decisions

The GMP is organised into five management programmes, using a logical framework approach, which group together common topics that align with park management responsibilities wherever possible. Each programme consists of a long term strategy with guiding principles and objectives that provide the vision for the programme as well as specific objectives and general actions that outline the route and milestones by which the programme purpose will be achieved.

A practical, management-orientated 3-year action plan accompanies each management programme and provides the detailed actions and activities by which the strategy will be achieved over the next 3 years. This action plan is designed to be regularly rolled forward every 3 years throughout the implementation of the GMP, so that actions and activities are assessed and refreshed in the light of achievements and developments during the GMP implementation. The GMP is designed to be dynamic, flexible and adaptive to changing management needs and priorities, as well as the local socio-political context. SMNP annual operations plans should be developed through close consultation with the GMP and these 3-year action plans.

Park Purpose, Significance and Exceptional Resource Values

The Simien Mountains National Park, in the northern highlands of the Amhara National Regional State of Ethiopia was the first natural World Heritage site designated in Ethiopia, in recognition of its spectacular landscape and its rare and endemic biodiversity. The SMNP is also part of the Conservation International's Eastern Afro-montane Hotspot. With 97% of the natural vegetation of the Ethiopian highlands already lost, the SMNP represents a relic highland refuge for Ethiopia's unique biodiversity and natural heritage.

The Purpose of SMNP is:
To conserve the exceptional resource values of the Simien Mountains, including its endangered and endemic fauna and flora, spectacular landscape and hydrological system, for current and future generations of the people of Simien, Ethiopia and the world, thereby contributing to sustainable economic and tourism development

The Exceptional Resource Values (ERVs) of the SMNP, (which include, but are not limited to, SMNPs Outstanding Universal Values (OUV) for WHS listing) together give the park its global and national significance. The most important ERVs are the rare, endemic and endangered species

which are found across all taxa and habitat types, along with the escarpment landscape. These features are also the identified Outstanding Universal Values, the basis on which the area was inscribed as a World Heritage Site. The altitudinal diversity and associated habitat and vegetations types are also key values of the SMNP. Aside from these important natural and scenic resources, the park provides socio-economic and cultural benefits to local communities through financial flows associated with ecotourism, direct livelihood support from illegal grazing and grass cutting and through local climate stabilisation. Nationally and internationally, SMNP serves a critical function by providing downstream users with water and other goods.

Management Programmes

Five management programmes, addressing logically grouped issues were developed.

1. Ecological Management Programme

2. Settlement Management Programme

3. Park Operations Programme

4. Tourism Management Programme

5. Outreach Programme

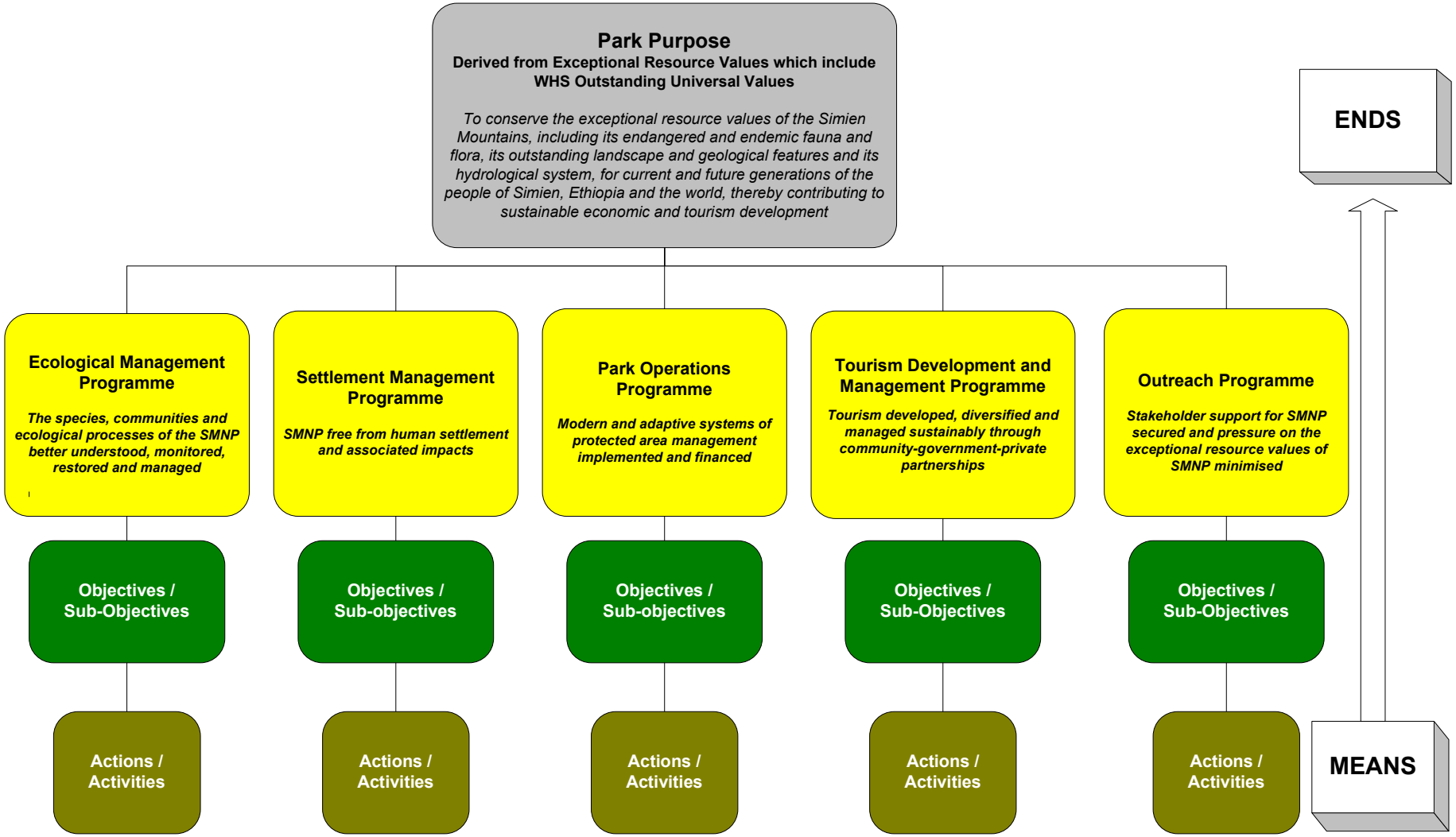
The purpose of each management programme directly contributes to park purpose, whereas attainment of the objectives of each programme will lead to programme purpose being fulfilled. Detailed actions and activities are designed to meet each objective.

Ecological Management Programme

This programme will deliver a key component of an adaptive approach to park management by providing ecological management and monitoring information. The programme has been formulated using latest international conservation planning methods and practices. Six Principal Ecosystem Components (PECs) have been identified by technical experts which together capture the unique biodiversity of SMNP. If all these PECs are conserved, then the long-term health of the park's ecosystem will remain intact.

Principal Ecosystem Component	Level of Ecological Organisation
1. Hydrological System	System
2. Afroalpine	Community
3. Sub-Afroalpine	
4. Montane forest	
5. Walia ibex	Species
6. Ethiopian wolf	

The Ecological Management programme has identified and prioritised the threats to these PECs and has devised strategies for their reduction or mitigation. Human population and agricultural expansion and settlement in SMNP will be addressed in the Settlement Management (SMP) whereas uncontrolled grazing will be tackled by strengthening law enforcement (Park Operations). Other prioritised threats to specific PECs are addressed in this EM Programme, with actions designed to address direct threats to wildlife such as disease, genetic inbreeding and persecution due to human-wildlife conflict. In addition, degraded habitats will be rehabilitated including


Park Purpose
Derived from Exceptional Resource Values which include WHS Outstanding Universal Values
To conserve the exceptional resource values of the Simien Mountains, including its endangered and endemic fauna and flora, its outstanding landscape and geological features and its hydrological system, for current and future generations of the people of Simien, Ethiopia and the world, thereby contributing to sustainable economic and tourism development
ENDS
Ecological Management Programme
The species, communities and ecological processes of the SMNP better understood, monitored, restored and managed
Settlement Management Programme
SMNP free from human settlement and associated impacts
Park Operations Programme
Modern and adaptive systems of protected area management implemented and financed
Tourism Development and Management Programme
Tourism developed, diversified and managed sustainably through community-government-private partnerships
Outreach Programme
Stakeholder support for SMNP secured and pressure on the exceptional resource values of SMNP minimised
Objectives / Sub-Objectives
Objectives / Sub-objectives
Objectives / Sub-objectives
Objectives / Sub-Objectives
Objectives / Sub-Objectives
Actions / Activities
Actions / Activities
Actions / Activities
Actions / Activities
Actions / Activities
MEANS

reforestation of particular sensitive and damaged areas. Finally, the efforts will be made to both understand and mitigate potential future changes due to global warming.

This programme also provides the framework for management orientated monitoring and research of the PECs, their key ecological attributes and threats - a crucial stage in adaptive management. Information of the status of the PECs and their threats will be fed back to enable the design and implementation of appropriate future management actions throughout the SMNP. The ecosystem monitoring plan, including threat monitoring, is included in Appendix 1 of the GMP. This monitoring plan also identifies ecological indicators for monitoring the achievement of the park purpose. Modern data acquisition, management and distribution systems will be put in place to handle the monitoring data flow as the monitoring programme is put in place. Partnership will be built to fulfill monitoring and research needs and the financial, material and human capacity for ecological management will be built.

Settlement Management Programme

The Settlement Management Programme provides a framework for removing settlement and its associated impact in the SMNP. Human settlement and cultivation inside SMNP has been increasing since the park was established in the 1969 and resource degradation is apparent. As part of this GMP, human settlement and cultivation will be controlled, reduced and restricted, using voluntary resettlement initiatives. In the short term new settlers at Arkuasiye, situated in a narrow wildlife corridor to the park extension area, efforts will be made to facilitate the rebuilding of the village at a more favourable location outside the park on a new road. At Gich, where long term residents are located, agricultural expansion will be halted and the negative impacts on the ecosystem of settlement and agriculture minimised. If funding can be obtained, the Gich community will be encouraged to resettle outside the park with training and provision in alternative livelihood strategies and support for new businesses provided in exchange for relocation. Grazing will be controlled by strengthened law enforcement (see Park Operations). Further initiatives to deal with settlers who are not willing to leave must be developed.

Park Operations

The Park Operations Programme lays out a vision for a secure and efficiently run National Park with good infrastructure and where additional financing can be obtained to support this development and management.

Improving resource management and protection is a key feature of this programme, given the need to control the illegal and unsustainable use of the park's resources by local communities and this requires a number of initiatives. Actions have been drawn up to improve the human and institutional capacity of SMNP management through training, providing incentive mechanisms and improved structures and staffing levels. Systems and the framework for resource protection will be strengthened by increased involvement of community members and scouts, by identifying and filling gaps in the legal framework and by improving the awareness of communities and the police and judiciary. The new park boundary will be secured by gazettement nationally of the new boundary and demarcation on the ground. Planning of activities and the alignment of financial and human resources will be improved by coordinating annual and quarterly planning and budgeting with the GMP implementation, as well as monitoring and evaluation its implementation.

SMNP infrastructure will be improved through the construction, renovation and provision of equipment to outposts and improving transport and vehicle provision in the park. A better communication network, including a radio system will be designed and put in place and improved field equipment will be provide for patrolling and other park operations.

Finally, with inadequate financing a key obstacle for SMNP management, actions have been drawn up that will investigate innovative internal and external funding mechanisms and prepare and adopt a business plan for the park.

Tourism Development and Management Programme

The Tourism Development and Management (TMP) Programme, adapted from the SMNP Tourism Master Plan, aims to develop, diversify and manage tourism in SMNP, through government-private-community partnerships in a culturally and environmentally sustainable manner. Revenue generated should contribute both to conservation management and diversifying the livelihood opportunities of park-associated communities. Tourism is a growth area internationally and nationally and has increased in SMNP over the last two decades. It already provides significant revenues to government, covering the recurrent SMNP budget. That said, tourism is a notoriously volatile industry and thus market diversification much be achieved as well as insulation against global economic downturns.

SMNP will take advantage of previous trends and attempt to increase visitor numbers, but in a sustainable manner, so that the exceptional resources on which tourism depends are not degraded. Marketing and promotion of SMNP tourism will be improved through analysis of the current market and development of an SMNP brand. This brand and marketing strategy will be coordinated through tourism providers and relevant government offices. Otherwise, the primary role of SMNP in tourism development and management is to develop policy, guidelines, monitoring and enforcement of tourism activities, rather than the provision of tourism services, other than campsites.

SMNP management will improve visitor facilities and infrastructure, both in terms of quality and quantity by extending and maintaining the trekking and campsite network, and through working with local communities to develop and manage community tourism hubs with facilities and services. New locations for the construction of community-private partnership eco-lodges will be chosen, whilst standards for infrastructure and development determined and lease concession procedures, standards and agreements laid out and clarified. A range of actions will upgrade and renew visitor information centres, both at park HQ and at other information points in the park. High quality visitor information and promotional materials will be produced.

The feasibility of diversifying visitor attractions will be explored and a detailed plan to extend cultural initiatives will be drawn up and implemented. This will increase income to local communities and provide points of interest for visitors who are also interested in the rich cultural heritage of Ethiopia. Such cultural initiatives are being successfully piloted elsewhere and SMNP will learn from these experiences.

SMNP's capacity to manage and deliver an enriching tourism experience will be strengthened both by improving staff and community service provider's capacity and by devising tourism management systems to ensure that tourism impact is monitored, mitigated and adaptively managed. Tourism administration improvements will include developing computerised tourism records, campsite booking systems, the development of health and safety guidelines and evacuation procedures and improving tourism impact monitoring.

Strategies have also been devised to enable communities to participate and share benefits from SMNP tourism, and becoming central partners in SMNP tourism provision and management. This involves implementing activities that will improve the level of understanding of tourists and the tourism industry in communities prioritised for community tourism development. Communities will then have the ability to participate in an informed and proactive manner and a tourist-friendly environment will be created through training and discussions with park staff, tourism partners and local communities. Community tourism associations will be supported that develop and manage tourism opportunities (such as campsites, cultural tourism or artefact production) for communities through training, structure provision and arranging benefit-sharing mechanisms.

Outreach Programme

With the recognition that SMNP is profoundly influenced by the landscape and people living in and around it, the outreach programme, which aims to build stakeholder support and reduce pressure on the exceptional resource values of the SMNP, is a key component of this GMP. All community development initiatives are undertaken principally to support the development and security of

SMNP itself. Unfortunately SMNP only has the mandate, capacity and resources to catalyse and facilitate community development initiatives, rather than directly fund or implement them, however vital they are for SMNP management.

The Outreach Programme is built on a strategy of building effective partnerships that enhance dialogue and participatory and coordinated management, along with improving understanding and awareness of the importance of SMNP and the environment. The model of park advisory committees at kebele level will be strengthened and extended to the new park area. Communication between KPAC and the woreda park advisory committee improved. The park will facilitate the implementation of kebele bye-laws, particularly those pertaining to resource protection and land use planning and train stakeholders in conflict management. Awareness will be increased developing a range of environmental education activities and school environmental clubs and through facilitating visits by decision makers, conducting discussion forms with local stakeholder, developing better educational materials, improving national publicity and developing a SMNP website.

Sustainable community development and livelihoods will be improved through partnering with other actors in the area, such as the Austrian Development Programme, and other government departments, to mitigate the shortage of fuel and construction wood. Tree nurseries and fuel-efficient stove use will be promoted and supported and other forms of sustainable energy explored for SMNP itself. Improved and environmentally friendly agricultural technologies will be promoted such as improved crop varieties, horticulture and livestock feed systems.

Finally, human population growth is the greatest underlying issue in the Simien Mountains and members of local communities are aware they cannot provide for their families. Basic reproductive health education is provided by government and other actors. SMNP will support these initiatives by including family planning awareness in community discussion forums and assist these other actors, if possible both logistically and materially, to implement their family planning programmes.

General Management Plan Monitoring and Evaluation

A GMP implementation and impact monitoring framework makes up the final section of the GMP. This plan is also a key component of adaptive management. A multi-tiered framework of indicators has been developed to enable monitoring and evaluation to be carried out at several different levels: from attainment of the park purpose (ecological monitoring plan), through threats and programme purposes and objectives (impact and outcome monitoring), to completion of actions and activities (implementation monitoring). This draws on best practice elsewhere and is integrated with the GEF Protected Area Systems Plan Project that has commencing in Ethiopia in 2008, by using the WB/WWF Management Effectiveness Tracking Tool. However, this plan will need refinement, simplification and prioritisation before full GMP implementation

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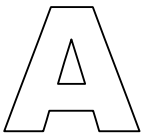
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Acronyms

AAU	Addis Ababa University
ADC	Austrian Development Cooperation
ANRS	Amhara National Regional State
AOP	Annual Operations Plan
BMNP	Bale Mountains National Park
CBD	Convention on Biological Diversity
CBM	Community-based Monitoring
CBNRM	Community-based Natural Resource Management
CBO	Community-based Organisation
CDF	Community Development Fund
CI	Conservation International
CPT	Core Planning Team
EIA	Environmental Impact Assessment
EM	Ecological Management
ERV	Exceptional Resource Value
ETB	Ethiopian birr
ETC	Ethiopian Tourism Commission
EU	European Union
EWCA	Ethiopian Wildlife Conservation Authority
EWCO	Ethiopian Wildlife Conservation Organisation
EWCP	Ethiopian Wolf Conservation Programme
FDRE	Federal Democratic Republic of Ethiopia
FZS	Frankfurt Zoological Society
FZS-AECP	Frankfurt Zoological Society's Afroalpine Ecosystem Conservation Project
GDP	Gross Domestic Product
GEF	Global Environment Facility
GIS	Geographic Information System
GMP	General Management Plan
HQ	Headquarters
HWC	Human-wildlife conflict
IDP	Integrated Development Project
IUCN	World Conservation Union
KEA	Key Ecological Attribute
MDG	Millennium Development Goals
METT	Management Effectiveness Tracking Tool
MoARD	Ministry of Agriculture and Rural Development
MoCT	Ministry of Culture and Tourism
MoFED	Ministry of Finance and Economic Development
NBSAP	National Biodiversity Strategy and Action Plan
OR	Outreach
PA	Protected Area
PaDPA	Park Development and Protection Authority, ANRS
PASP	Protected Area System Plan
PO	Park Operations
PW	Park Warden
PEC	Principal Ecosystem Component
RBI	Resource Based Inventory
RP	Resource Protection
SMNP	Simien Mountains National Park
SMNP-IDP	Austrian Development Cooperation SMNP Integrated Development Project
SNRMP-NG	Simien Natural Resource Management Programme
TDMP	Tourism Development and Management Programme
UNDP	United Nations Development Program
UNESCO	United Nations Educational, Scientific and Cultural Organisation
WB	World Bank
WCD	Wildlife Conservation Department (MoARD)
WCPA	World Commission on Protected Areas
WHS	World Heritage Site



Plan Introduction

Background Context

The Simien Mountains National Park (SMNP) of northern Ethiopia is a UNESCO World Heritage Site in recognition of its outstanding natural beauty and biodiversity. Although a relatively small area when first established in 1966, it harbours two of the world's most threatened mammals; the only protected population of the Walia ibex and the second largest population of the Ethiopian wolf.

The SMNP has been under continuous encroachment since the time of gazettement from an expanding human population inside and around the park. Despite initial promising park development in its first decade, the civil war, which ended in 1991, prevented any further management and development and curtailed efforts to resettle inhabitants. Since that time, lack of resources and technical expertise further limited efforts to implement good management and reduce the threats to the area. By 1996, wildlife populations had declined and some 4500 people were living inside the small park. With a further 30,000 people immediately in the vicinity, the park's resources were being degraded by uncontrolled use and thus the SMNP was declared a 'World Heritage Site in Danger'.

Since then, the Amhara National Regional State's Park Development and Protection Authority (PaDPA), with support from partners, particularly the Austrian Development Cooperation, has taken on the area's management and efforts are being made to address these problems. In recent years, the boundary has been realigned to remove most settlements and the remaining key and relatively unsettled Afroalpine areas have been incorporated into the park. Park infrastructure has been built up, the capacity of park management staff increased and tourism has been developed so that it now provides income to both the government and to local communities. However, significant work still needs to be done both to meet the benchmarks set by UNESCO to remove the SMNP from the 'In Danger' list (see Section B), but also to implement effective and adaptive park management.

General Management Plans (GMP) are essential tools for laying out the vision and philosophy for protected area development and management, identifying management needs and for organising strategies for long and short term management. Despite this, SMNP has never had operating GMP. A 1986 plan was never implemented due to civil war, and a further draft plan produced in 2000 was never finalised or endorsed. The current management challenges highlighted the need to produce an updated and relevant plan. Thus both the management authorities and donors deemed the finalisation of a General Management Plan to be a priority for coordinated management action.

Function of the GMP

The primary purpose of this GMP is to lay out the vision and philosophy for the 10-year development and management of SMNP as thus guide and facilitate the day-to-day and year-to-year management of the park's resources.

Primary purpose:

- To lay out the vision and philosophy for the 10-year development and management of SMNP
- To outline strategies with detailed activities by which the vision can be achieved

In addition to its primary purpose, this GMP has other functions.

Secondary purposes:

- To lay out the roles and responsibilities for implementers
- To function as a public relations document by providing a written description of SMNP's management philosophy
- To solicit donor funding by clearly laying out the management framework, priorities and general input requirements
- To provide continuity in management as managers, policy makers or partner projects change
- To provide a framework for the participation of and coordination among all stakeholders, including local communities, government, projects and donors

It is challenging for any management plan to meet these, at times, diverse purposes for different stakeholders. Ultimately this is a plan for the management authorities of the SMNP that tries to find some balance between what ***CAN*** be done with current resources and what ***NEEDS*** to be done to address the considerable issues that are facing SMNP and secure the area for future generations. It is clear **that considerable additional financial and technical resources are required for full GMP implementation,** and thus the public relations and donor proposal functions of this GMP, which will assist with support and financing, are of more importance than in some other protected areas.

Principles underlying this GMP

The following principles guide the implementation of this GMP and are fundamental to management of SMNP.

- Conservation of the Outstanding Universal Values and other Exceptional Resource Values of the park takes precedence for all management activities
- SMNP cannot be managed without reference to the communities living in and around the park
- SMNP management will be responsive and embrace an adaptive management approach
- The environmental, social and cultural impacts of all park users will be minimised

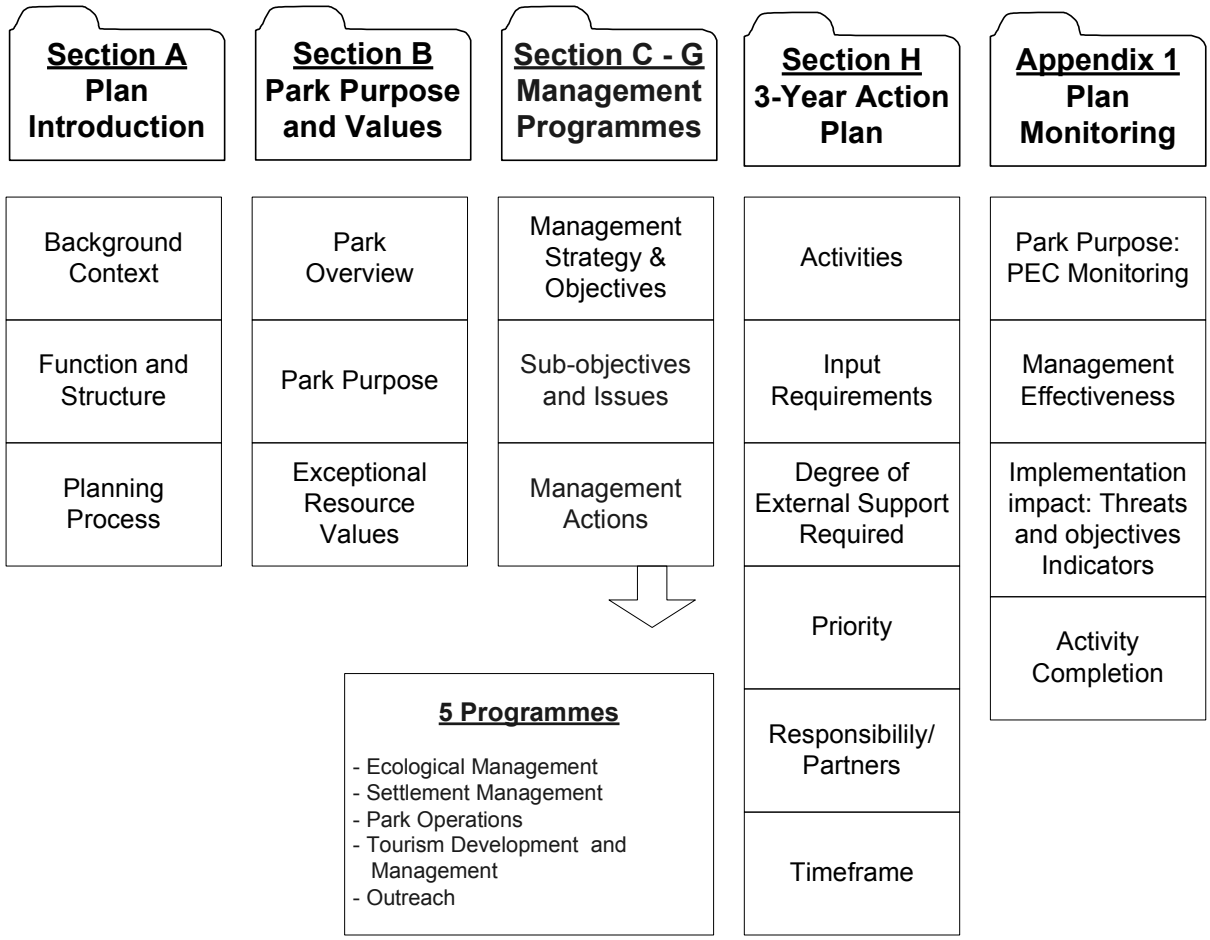
GMP Structure

The structure of the plan has been designed to try and provide a user-friendly document, primarily for park managers that have to implement its vision, but also for stakeholders and donors to assist with implementation. A "**Logical Framework Approach**" is used which has proven to be an effective approach for development and conservation project planning. This approach ensures explicit and logical linkages are established between all components of the GMP. This will therefore provide an efficient, accountable and logical rationale for planning and also facilitates GMP implementation, monitoring and evaluation.

Until recently, general management plans typically adopted 10-year planning horizons. However, lessons learnt from their implementation suggest that although a **10–year vision** is needed to articulate how the protected area needs to develop, 10-year actions may become redundant as the ecological, political and socio-economic contexts change. This GMP incorporates both 10-year strategic objectives and **3-year action planning** to ensure that the GMP retains a long-term strategic vision while providing the required flexibility and responsiveness to changing needs and situations. The 3-year action plan also lays out roles and responsibilities, identifies external support required (and thus indicates which sections of the plan will not be implemented unless additional support is obtained), potential partners, and prioritises actions for implementation. Each management action also includes specific activities to guide day-to-day implementation. Ultimately,

there will be a strong link between the actions and activities prescribed by this GMP and the Annual Operations Plans (AOPs) and associated budgets developed by park management.

Figure A.1. SMNP GMP Structure



The GMP is structured by management programmes that break down overall park management into coherent areas of activity. Management teams within SMNP, such as ecology and tourism, reflect this management programme structure wherever possible. Thus primary responsibility for implementing each programme will fall to the Team Leader of a given department. This allocation of responsibility will help to build a sense of ownership and accountability for GMP implementation and success among all park staff. Each management programme follows the Logical Framework Approach adopted throughout the GMP (Fig A2).

The five management programmes for SMNP are:

1. Ecological Management

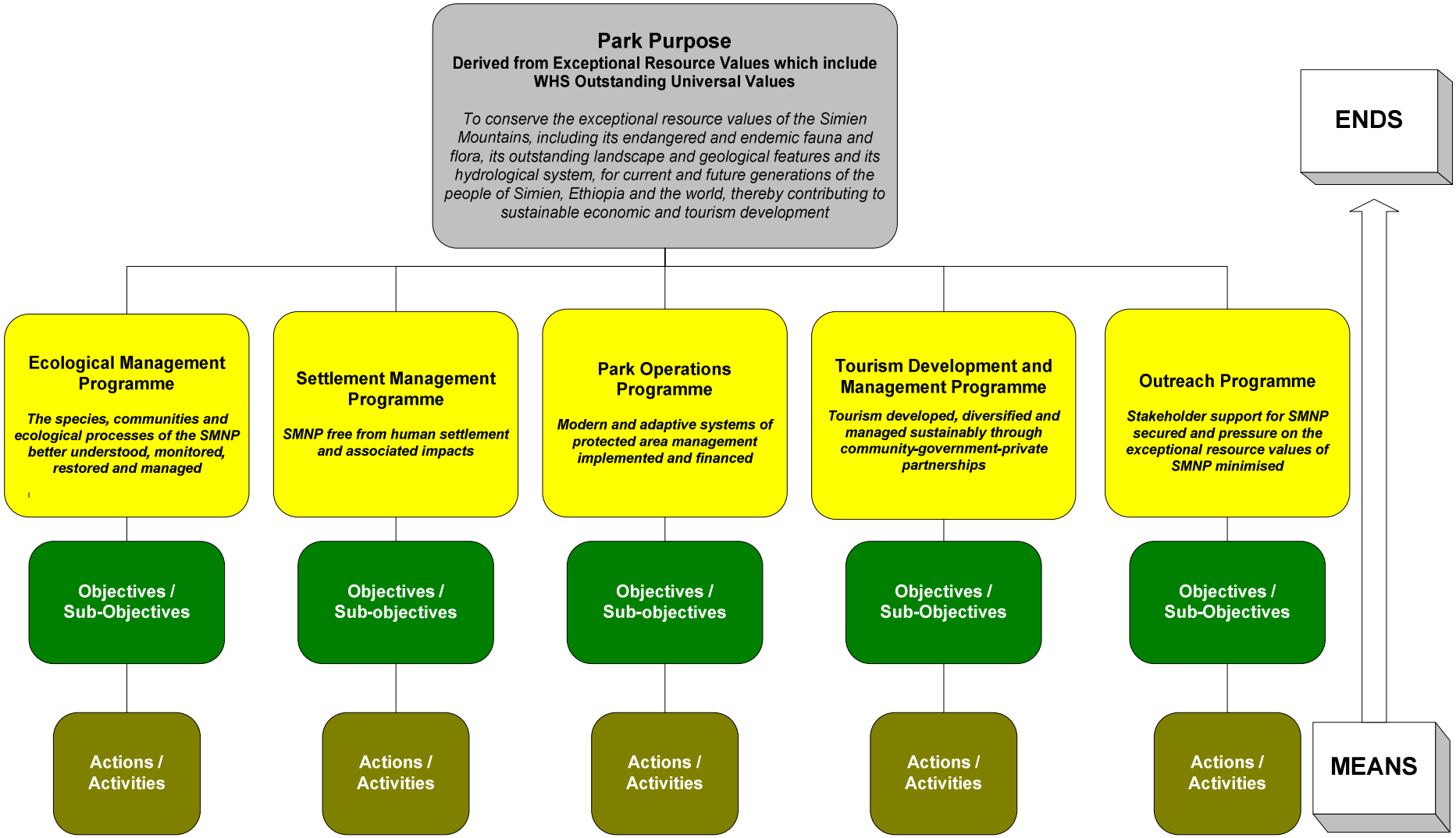
2. Settlement Management

3. Park Operations

4. Tourism Development and Management

5. Outreach

Figure A.2. SMNP GMP linkages between Park Purpose and management programme purpose, objectives and actions.



The Planning Process

A General Management Plan (GMP) for SMNP was drafted in 2000 by an expatriate consultant, supported by the Austrian Development Cooperation (ADC). This plan did not, however, incorporate stakeholder comments and was never finalised or endorsed. A new planning process was instigated in 2006, again supported by the ADC SMNP-IDP. A national consultant group led this process and a draft was produced in 2006. The planning process involved a field visit, review of secondary information and visits to key stakeholders' offices, particularly local government. Direct community consultations were carried out as part of the 2000 planning process and communities were also extensively consulted on specific issues (see below). A consultative workshop and review took place in October 2006 at which all local, national and some international stakeholders were present, it was apparent that some key issues such as settlement, grazing and tourism were not dealt with in detail. Thus, with support from UNESCO, PaDPA requested a revision of the content and structure of the draft GMP and this was facilitated by Frankfurt Zoological Society (FZS), given their experience in developing GMPs for the Bale Mountains National Park, the Guassa Area of Menz in Ethiopia and other National Parks in East and Southern Africa.

A core planning team was formed in March 2007 and tasked to review and finalise the draft GMP. Their role was to drive the finalisation process and make key decisions on the planning process and content of the GMP. Technical working groups were formed in June 2007 to develop the strategy, objectives and actions for the Ecological Management, Park Operations and Outreach Programmes. A Tourism Master Plan and a Grazing Pressure Reduction Strategy Document were produced from national consultancies in late 2007 and these documents formed the basis of the Tourism Development and Management Programme and the Settlement Programme respectively. CPT determined the composition of the technical working groups and also the adaptation of the Grazing Strategy and Tourism Master Plan into the relevant management programmes. Finally, they oversaw consultation processes and final redrafting of this document when new federal regulations were circulated by EWCA late in 2008, disallowed any natural resource use in National Parks such as SMNP.

Participation in Planning

The PaDPA / SMNP-IDP Simien Mountains National Park Management Plan Draft produced in September 2006 was prepared through literature reviews, consultation with park, PaDPA and SMNP-IDP staff as well as major stakeholders in the Debark, Janamora and Adi Arkay woredas. In addition, a broad stakeholder workshop was held in October 2006. Community consultations and consultations with other local stakeholders were carried out as part of the preparation of the Tourism Master Plan and the Grazing Pressure Reduction Strategy (2007). For example, in the latter case, questionnaires on livestock-related issues were conducted to household heads and livestock owners in and around the SMNP and also to animal health professionals working in adjacent woredas. Extensive stakeholder consultations were also carried out during the preparation of the proposal on the Development of Alternative Livelihoods for the Population of the SMNP, Ethiopia (PaDPA 2007).

The use of technical working groups to develop three management programmes ensured that appropriate technical and stakeholder expertise were brought into the planning process and also that SMNP and PaDPA staff were integrally involved in developing strategies and actions to address the issues they had highlighted.

Information for planning

Resource Information

The PaDPA / SMNP-IDP Simien Mountains National Park Management Plan Draft produced in September 2006 by ERCAND Consult, provided a comprehensive and detailed summary of the background information on the SMNP. Part 1 of that document, 'Description' of the SMNP, includes

background, resources and management, management issues and constraint. This detailed information is not reproduced in this GMP, as this GMP is a working document for park managers, however the most important and relevant information is included in each programme. Readers requiring further information are therefore referred to the above document or to the original references included in that document. Further GIS data have been analysed for this GMP, particularly on vegetation types and distribution and new maps have been produced.

National Policies and Legislation

Internationally, Ethiopia is a signatory to a number of articles and conventions such as the Convention on Biological Diversity, CITES, the Convention on Migratory Species and the World Heritage Convention. These commit Ethiopia to put in place comprehensive and integrated guidelines for the selection, establishment and management of protected areas. As a country rich in natural resources, but poor in financial resources, considerable support is required for Ethiopia to fulfil these obligations.

In 2005 a Wildlife Development, Conservation and Utilization Policy came into force. This policy provides for (i) the participation and partnership of all stakeholders, including local communities, in the management of wildlife resources (ii) the zoning of protected areas into core and multiple use zones, (iii) The participation of local communities in the planning and management of protected areas as well as benefit-sharing and (iv) The establishment of community protected areas. A new Wildlife Proclamation was issued in 2007 (Proclamation 541/2007), to support this policy which states that protected areas in Ethiopia of international significance and with endemic or endangered wildlife should be managed by the federal wildlife authority, a newly declared Ethiopian Wildlife Conservation Authority. However management could be delegated to regional authorities such as PaDPA who were also responsible for the management of wildlife outwith these highest priority areas. New Regulations to provide detail on how the proclamation should be implemented are being published at the time of writing. In brief, they state that SMNP should be managed by the federal EWCA and that no resource use of any kind is permitted in the park. Currently, a sound proclamation for managing national parks and other protected area exists in the Amhara National Regional State under Zikre High 96/2003, which established the PaDPA in 2003.

Other relevant policy at the federal level include the national Constitution, Environmental Policy for Ethiopia (1997), the National Conservation Strategy (1997), the National Biodiversity Conservation and Research Policy (1998), National Biodiversity Strategy and Action Plan (2005), Access to Genetic Resources and Community Knowledge and Rights (2006), Environmental Impact Assessment (2002), Rural Development (2002), Rural Land Administration and Utilization (2005), Forestry Development, Conservation and Utilization (1994) as well as forthcoming Tourism Development Strategy. Corresponding regional policy and legislation has also been developed in most sectors e.g. ANRS Rural land Administration and Use (2005/6). Specific relevant policy and legislation is referred to in each management programme if required.

Implementation of this GMP can be supported by all current legislation at regional and national level. However further detail is required in current legislation and harmonisation is required between federal and regional policy and legislation in the environmental, wildlife and forestry sector. These may be reviewed and addressed by a new GEF/UNDP Protected Area Systems Plan (PASP) that started in 2008

B Park Purpose, Significance and Values

Park Purpose

The park purpose statement is formulated from the Outstanding Universal Values and other Exceptional Resource Values of the park (see below), historical considerations and federal and regional policies.

SMNP Purpose is:

To conserve the exceptional resource values of the Simien Mountains, including its endangered and endemic fauna and flora, its spectacular landscape and hydrological system, for current and future generations of the people of Simien, Ethiopia and the world, thereby contributing to sustainable economic and tourism development.

Supplementary and complementary purposes of SMNP are:

- **To support culturally and environmentally appropriate tourism development that provides benefits for local communities and conservation management**
- **To conserve and provide access to sites of religious and cultural importance**
- **To assist with climate stabilisation through vegetation conservation and provide a reference site for global and local climate change**
- **To promote the diversification of environmentally sustainable economic opportunities for the livelihoods of local communities**
- **To provide a resource and support for ecological and sociological research**
- **To conserve both current and future commercially important wild genetic diversity, such as medicinal plants**

Simien Mountains National Park Overview

Park Description

The Simien Mountains National Park (SMNP) is situated in the northern Ethiopia highland massif. It was formally established in 1966 and, when gazetted under the Negarit Gazetta (No 4 of 31st October 1969, Order No 59 of 1969), the park encompassed an area of 136 km^2. Redemarcation of the park boundaries was carried out in 2003 and 2007, which excluded villages at the edge of the park and some areas under cultivation, as part of the process towards removal of SMNP from the World Heritage in Danger list (see below). This redemarcation was undertaken by a team composed of representatives from PaDPA, the park office, Woreda Administration offices, Woreda

Agricultural offices and the concerned Kebele Associations (KAs) and thus been fully participatory and agreed by local kebeles and communities. The park boundary was also extended to include Mesarerya and Limalimo Wildlife Reserves in order to secure larger areas of suitable habitat for the Walia ibex and Ethiopian wolf. In 2007, a final extension to include the Silki, Kidus Yared and Ras Dejen Mountains with interconnecting corridors was completed. The current Simien Mountains National park extends from $37^0$51'26.36"E to $38^0$29'27.59''E longitude and from $13^0$06'44.09 " N to $13^0$23'07.85" N latitude. The total area of the park including the recent extensions is about 412 km^2.The process for regazettement of the realigned park boundary and inclusion of the new park extensions is outlined in this GMP and is currently underway.

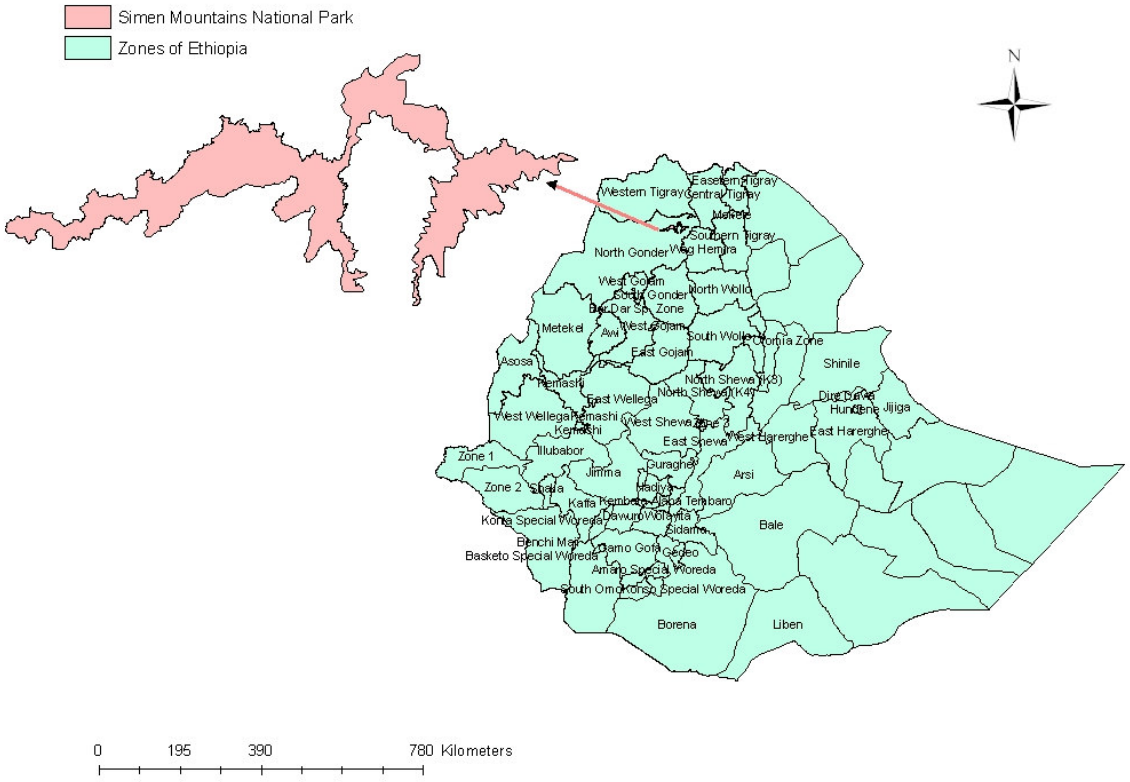


Figure B.1 SMNP location

Administration and Management

The SMNP, located in the zone of North Gondar of the Amhara National Regional State (ANRS), lies within the four woredas of Debark, Adiarkay, Janamora and Teselmit, and now borders 38 kebeles. Formal management of the area began with the establishment of the first national wildlife institution, the Department of Forestry, Game and Fishery within the then Ministry of Agriculture, in 1944. At that time, the concept of wildlife conservation was viewed as primarily the regulation of wildlife hunting. Thus, prior to 1960s the current area of SMNP was managed as a controlled hunting area and regarded as a Royal hunting ground (Falch, 2000). Later, as land use pressure and hunting activities increased in the country, the need to conserve the resources through establishment of wildlife conservation areas became apparent. According to Misgina (1991), the issue was expressed formally by the Ethiopian Delegation who attended a UNESCO General Conference held in Paris in 1962, saying "it is our wish to manage and develop national parks and wildlife reserves in such a way as to secure the preservation of their flora and fauna, provide

centres of biological and ecological research, and contribute to the growth of the national economy, especially through the development of tourism and game cropping". Thereafter, two UNESCO missions visited the country in 1963 and 1965 and based on their findings, the SMNP was formally established in 1966.

The park was originally managed by the former Ethiopian Wildlife Conservation Organisation (EWCO) within the Federal Ministry of Agriculture and Rural Development (MoARD). Until 1977, the day-to-day management of the park was led by expatriate wardens supported by the World Wildlife Fund (WWF) and the American Peace Corps. In 1978, the park was inscribed to the UNESCO World Heritage List. Following this, in 1981, intensive technical assistance was provided to SMNP for the development of a management plan (Hurni, 1986) and scout training. Although extensive baseline data were collected, the management plan was never implemented due to civil war between the previous Marxist military government and opposition groups between 1976 and 1991. Park management resumed after the war, in 1991, with reconstruction of the severely damaged park infrastructure. In 1997, under the decentralization process of the government, the Ethiopian Government transferred management responsibility for SMNP from EWCO to the Amahara National Regional State (ANRS). ANRS established the semi-autonomous Amhara Parks Development and Protection Authority (PaDPA) which took over management of the SMNP. As of 1997, the budget for park development and running costs has been provided by PaDPA, with substantial financial assistance to the park and local communities from the Austrian Government through the joint Austrian-Ethiopian Integrated Development Project (SMNP-IDP).

Development of another general management plan for the park commenced in 2000 and again in 2006, but neither drafts were finalised or endorsed. This GMP is based on the process and drafts produced in 2006.

Conservation Interventions

In 1968, an intensive assessment of the park area was carried out by Dr. B. Nievergelt of the University of Zurich, and in 1973, he proposed conservation-oriented development measures for the area (Hurni, 1986). In 1970, Prince Bernhard of the Netherlands, and president of the WWF, visited the park (Nicol, 1971). In 1974 the Pro Simien Foundation was established in Switzerland with the aim of initiating and supporting interdisciplinary research in the area (Hurni, 1986). A number of activities were carried out through this foundation in support of SMNP conservation, including preparation of topographical maps, studies on soil erosion, preparation of a management plan, village profile studies and establishment of a student boarding house for the children of the park staff at Debark.

In 1997, the Simien Mountains Nature Oriented Tourism Development Project (SMNOTDP) was initiated with the assistance of the Austrian government. The major objective of the SMNOTDP was to develop a new and updated management plan for the park and to implement the annual operation plans. A new project was formulated and implemented between 2004-2007, the Simen Mountains National Park – Integrated Development Project (SMNP-IDP) . Under the new project, increased emphasis was given to poverty alleviation in park-associated communities in order to support SMNP conservation. Support was also given to SMNP infrastructure and community touris development.

The Ethiopian Wolf Conservation Programme (EWCP) was established in 1995 with the aim of assessing and countering the threats to the Ethiopian wolf. Although initially and focussing on wolves in the Bale Mountains, it expanded its activities to populations throughout the country, including the Simien Mountains, in 2000. Since then, the EWCP has maintained a continuous population monitoring programme in Simien and undertaken activities to determine the extent of suitable wolf habitat in and around the national park, assess rodent abundance in different Afroalpine areas and periodically vaccinate domestic dogs in and around the park to reduce the threat of disease transmission to the Ethiopian wolf population.

Frankfurt Zoological Society's Afroalpine Ecosystem Conservation Project (FZS-AECP) has been supporting conservation activities in the Simien Mountains (and other Afroalpine areas in northern Ethiopia) since 2005. Project activities are diverse and holistic in scope and include mapping the extent and quality of Afro-alpine habitat in SMNP, monitoring wildlife populations (in collaboration with EWCP), supporting park planning and management, assessing resource use, strengthening local environmental education programmes, and other forms of capacity building for conservation ad management at all levels of government and within communities.

Cultural and Human Aspects

The Simien Mountains are surrounded by ancient cultural centres like Aksum, Lalibela and Gonder, also inscribed as World Heritage Sites. The massif was originally part of the old trade routes between Aksum, Lalibela, Mekele and Gonder (Kirwan, 1972 and Hurni, 1986). The mountains have been inhabited by settlers and cultivators for at least 2000 years, with the first recorded inhabitants being Ethiopian Jews. After the decline of the Jewish kingdom in the 14th century, many of the Ethiopian Jews converted to the Orthodox Christian faith. Areas to the south of the Debark-Ambaras-Chennek footpath in the SMNP were given as "rist" land to the Christians and areas north of this line were given to Muslims. In the 1960s there were still some Jewish settlers in the Simien area, but most emigrated to Israel between 1988 and 1991.



At the time of the park's creation in 1969, a number of villages and tracts of land used by local communities were included within the park's boundaries, and this situation remained at the time of World Heritage Listing in 1978. There are no accurate estimates of the park's population when gazetted, but the World Heritage List nomination document explicitly mentions that 80% of the park was under human use, mainly grazing, agriculture and settlement. In 1979, seven villages were forcibly relocated from the northern escarpment which resulted in tensions between the local communities and park management authorities. In 1994 a population census suggest there were 11,000 park residents, whereas the 1996 the World Heritage Commission mission estimated that 4,500 park residents with another 30,000 living in the immediate vicinity who were partially dependent on its natural resources. Realignment of the park boundary in 2003 and 2004 to exclude edge villages reduced the human population to 3,200 in some 587 households. Thus despite efforts to resettle inhabitants and park boundary realignment a significant population remains, most in Gich village. Another settlement has recently grown up at Arkuasiye in a critical wildlife corridor of the park extension area. Furthermore, the 2004 Simien Mountains study, prepared by the Centre for Development and Environment of the University of Berne, estimated the human population growth rate at 1.5-2% per year, resulting in a doubling of the population every 35 years.

Climate

The Simien Mountains have both a wet and dry season, with approximately 75% of annual rainfall between June and September. The SMNP lies within the isohyets of 1350-1600 mm annual rainfall with an annual average of rainfall at 3600 m *a.s.l.* of around 1500 mm. Temperatures are relatively constant throughout the year; however there is huge diurnal variation ranging from a minimum of -2°C to -10 °C at night to a maximum of 11°C to 18°C during the day.

Generally, the climatic conditions of the Simen Mountains could be classified into four major climatic zones based on altitude (Falch 2000):

- Wurch zone (above 3700 m a.s.l.) - alpine climate, cultivation impossible
- High Dega zone (3400-3700 m a.s.l.) - cool climate, upper limit of barley and potato cultivation is 3700 m *a.s.l.*
- Dega zone (2400-3400 m a.s.l.) - temperate climate, upper limit of wheat and pulses cultivation is 3150 m *a.s.l.,* barley cultivated.

- Woina Dega zone (1500-2400 m a.s.l.) - sub-tropical climate, upper limit of maize and tef cultivation, maize and pulses cultivated.

However, Hurni (1986) gave simple classification, by dividing into two main types (upper and lower climatic types). Based on this, Falch (2000) has compiled a summarized description (Table B1).

Table B1.Climatic types in the Simien Mountains National ParkVegetation

Major characteristics	Lower climatic type	Upper climatic type
Altitude range	2000 – 3200 m	3200 – 4500 m
Wind system	Southwest monsoon (upwardly decreasing influence), trade-winds only in the dry season	Northerly winds all year
Clouds and precipitation	Convective rains, less frequent hailstorms	Increase in cloud cover with altitude, maximum annual rainfall at about 3500 m , frequent hailstorms with high erosivities
Snow and frost	No snow, rare frost	Occasional snow in higher elevations, frequent frost
Cultivation (crop) suitability	Favourable for most Ethiopian crops and pulses	Unfavourable for most grains and pulses except barley, potatoes and some vegetables

Vegetation

Simien Mountains are characterised by a high but yet unquantified level of plant endemism and, as such, are part of the Eastern Afromontane hotspot of plant diversity. In addition to the high number of Ethiopian endemics, three species are endemic to Simen Mountains. These include *Festuca gilbertiana* (only known from Gich plateau), *Rosularia simensis* and *Dianthus longiglumi.* Based on the general classification of plant formations in the country, the vegetation of the SMNP can be categorized into three major units based on altitudinal range and dominant plant species.

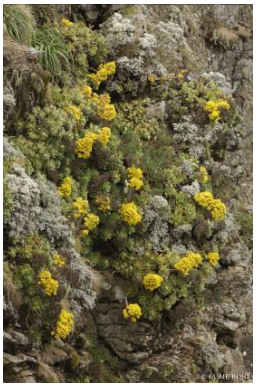


Table B2. Major vegetation types in the Simien Mountains National Park

Belt	Altitudes (m a.s.l.)	Dominant Species
Afroalpine	>3700	*Lobelia rhynochopetalum* *Festuca* spp.
Sub-Afroalpine	2700-3700	*Erica arborea* *Festuca macrophylla*
Montane forest	1900- 3000	*Hagenia abyssinica* *Juniperus procera* *Schefflera abyssinica*

Flagship mammal species



The walia ibex (*Capra ibex walie*) was formally recorded in 1835 by the explorer Rüppell. Due to its restricted range and low population numbers, the species was included in the IUCN Red List of Threatened Species in 1963 and is now listed as "Endangered'. Although there is no general agreement on the taxonomy of the Caprinae, the walia ibex is generally considered to be a distinct species, based on its anatomy, habitat and isolation. It is therefore considered endemic to the Simien Mountains where it inhabits the steep slopes and the grassy ledges of the escarpment between 2,300 – 4,000m *a.s.l.* but mostly between 2,500 and 3,000m *a.s.l.* Ibex are also found in the Mount Mesarerya and Mount Kossock areas. The current walia ibex population estimate is 650, an apparent increase over the last decade. Because of its unique, rare and endangered status, the Walia ibex has become a national symbol for wildlife conservation in the country.



The Ethiopian wolf (*Canis simensis*), formerly known as the Simien fox, was also formally recorded for the first time by Rüppell in 1835. It is endemic to Ethiopia and is the rarest canid in Africa with a population of some 500 adult animals (Sillero-Zubiri *et al*. 2004) of which approximately 70-80 are in the Simien Mountains. It was included in the IUCN Red List of Threatened Species in 1990 and is currently listed as "Endangered' (IUCN, 2007). In the SMNP, Ethiopian wolves are restricted to the Afroalpine habitat above 3,600 m *a.s.l.,* whereas in the Bale Mountain National Park they occur at altitudes as low as 3,000 m *a.s.l*.. This variation is probably due to the higher population pressure in the Simien Mountains where the lower altitudes are taken over by cultivation.

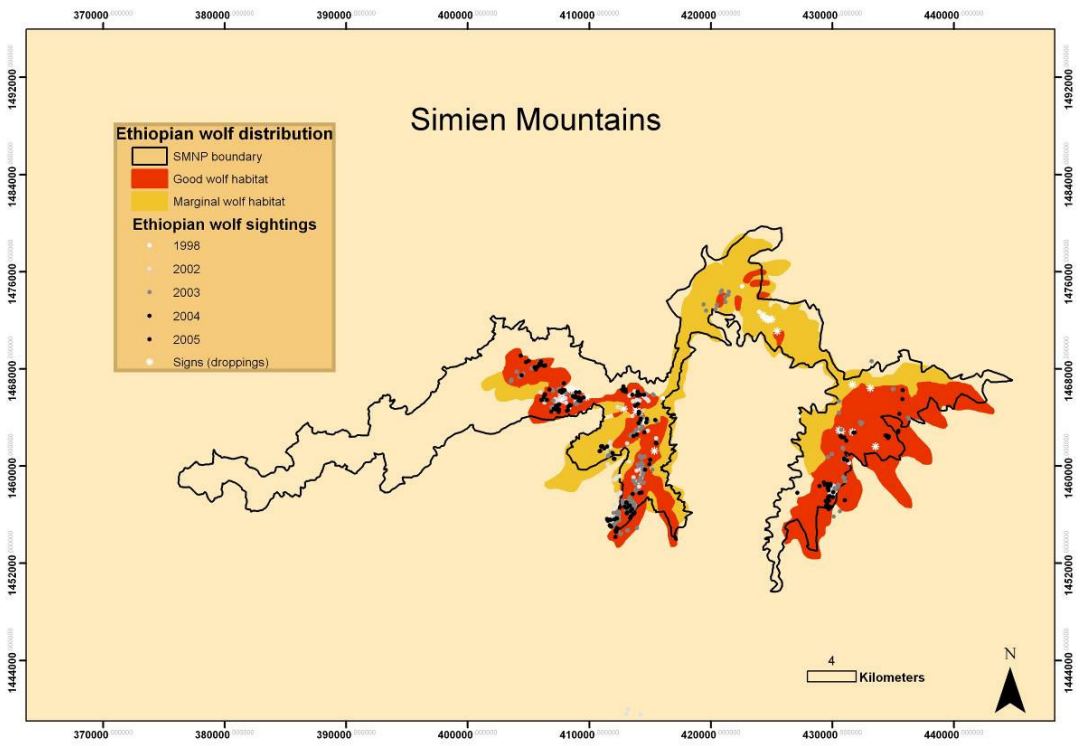


Figure B2: Distribution of Ethiopian wolf habitat in the Simien Mountains and wolf sightings from 1998-2005 (EWCP unpublished data).



The gelada (*Theropithecus gelada*), more accurately described as a monkey but also known as 'the bleeding heart baboon', is also endemic to Ethiopia. Geladas occupy the entire Gich plateau up to 3900m *a.s.l.* and other plateau areas. Population estimates vary, but nearly 4000 were counted in 2007 by Bergman *et al.,* (pers. comm.) and groups of up to 1000 or more animals have been reported. The animals are also reported in the lowland fields. Conflict with farmers occurs when geladas feed on field crops.

Birds



According to EWNHS (1996), 137 species are recorded in the park. However, the observations of the park staff give a higher figure of 182 species and there may be over 200 species in all (Falch, 2000). Of these, six are endemic to Ethiopia - these include the Abyssinian catbird (*Parophasma galinieri*), black-headed siskin (*Serinus nigriceps*), Ankover sirin (*Serinus ankoberensis*), spot-breasted plover (*Vanellus melanocephalus*), Abyssinian woodpecker (*Dendropicos abyssinicus*), Abyssinian longclaw (*Macronyx flavicollis*). A considerable population of red-billed chough are also known to occur on the Gich plateau, while white-collared pigeon (*Columba albitorques*), white-winged cliff-chat (*Myrmecocichla semirufa*) and the range-restricted Rüppell's chat (*Pentholaea melaena*) occupy the escarpments (EWNHS, 1996). The other well known species recorded in the park are the wattled Ibis (*Bostrychia carunculata*), the thick-billed raven (*Corvus crassirostris*) and the tawny eagle (*Aquila rapax*). It is also home to an important population of bearded vultures (*Gypaetus barbatus*).



Exceptional Resource Values of SMNP

Exceptional Resource Values (ERVs) are the biophysical features of an area that are considered to be particularly important in maintaining the unique ecological character and functions of an area and that provide outstanding benefits (social, economic, aesthetic) to local, national and international stakeholders. The identification of SMNP's ERVs provides a foundation for the park's purpose, identifying the park's management issues and opportunities and generating management objectives and targets. The area is thus of critical biodiversity, ecological, cultural and economic importance. The table below shows the top 18 ERVs prioritised by SMNP GMP Planning Team, grouped into four main categories: *natural, scenic, social and cultural*. The highest ranking ERVs are the same as the Outstanding Universal Values (OUV) for which the park was inscribed as a World Heritage Site, thus the ERVS include but are not limited to the OUVs.

Table B3. Exceptional Resource Values of the Simien Mountains National Park

Type	Exceptional Resource Value	Rank
Natural	**Rare, endangered and endemic species** ***(Reason for WHS inscription criterion x)***	**1**
	Altitudinal habitat diversity	**3**
	Afroalpine vegetation	**4**
	Biodiversity hotspot	8
	Geological formations	9
	Montane forest	13=
	Ericaceous belt	13=
Scenic	**Escarpment landscape** ***(Reason for WHS inscription criterion vii)***	**2**
	Mountains peaks	7
	Wildlife viewing	11
Social	**Water catchment (also has natural value)**	**5**
	Tourism benefits	**6**
	Climate stabilisation	12
	Climate change reference site	15=
Cultural	Walia kend and Kidus Yared (spiritual sites)	10
	Old trade route (Axum-Lalibela)	15=
	Ras Dejen name in legends	15=

Natural Values

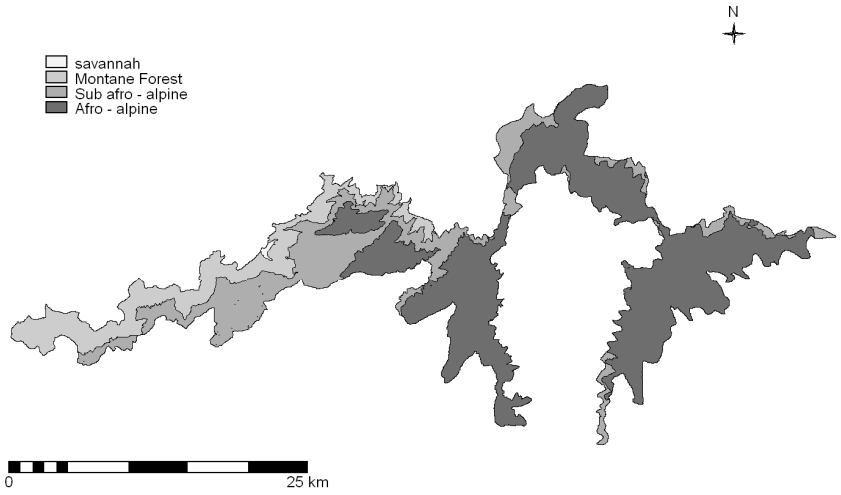
Rare, endangered and endemic species

A combination of unique environment, diverse altitudinal variation, unique climate and isolation have given rise to a number of rare and endemic species in the Simien Mountains, as well as elsewhere in the Ethiopian highlands. As a result of their limited distribution, small populations, and intense threats due to increasing human pressure on the ecosystem, many of these species are also threatened with extinction. Because of the high levels of endemicity and threats to the Eastern Afromontane ecosystem, of which SMNP is a part, it is named as a Conservation International

Biodiversity Hotspot. Of particular significance to the SMNP, are the rare and endemic large mammal fauna, namely the Ethiopian wolf, walia ibex and gelada, all of which are flagship species for the park and described above. Less obviously, six species of endemic birds and seven of small mammals (6 rodents and 1 shrew) are also present.

Altitudinal habitat diversity

The remarkable natural value of SMNP, particularly its huge diversity of fauna and flora, is partly attributed to its extreme altitudinal variation. The park extends through a number of habitat types including montane forest (1,900-3,000 m *a.s.l.*), sub-Afroalpine (or Ericaceous belt, 2,700-3,700 m), and Afroalpine grasslands (3,700 – 4,600 m). This diversity has resulted in a notable number of species adapted to the diverse habitats and climatic regimes (see above).



Parks Development and Protection Authority (2009)

Fig B1. Altitudinal Zones in the SMNP

Afroalpine vegetation

The Afroalpine vegetation of the highland plateau (above 3,700m *a.s.l.*) not only supports a number of rare and endemic mammals and birds, but also an ecologically unique and scientifically remarkable trophic structure. Overall, due to the extreme climate, plant diversity is low, dominated by grasses and herbs as well as the endemic giant lobelia (*Lobelia rhynchopetalum*), which at heights up to 10 metres is a dominant feature of this treeless landscape. The grasses, collectively known as '*guassa'* provide many uses for local people, such as rope and thatch. The grasses and herbs also support an extraordinary high density and diversity of rodents and the soil is constantly turned over by cryoturbation and rodent activity. In turn, these rodents support the endangered and endemic Ethiopian wolf and an exceptional assemblage of raptors. Highland swamps and lakes, another key feature of the Afroalpine, also support a number of resident and migratory water bird populations.

Montane forest

This forest between 1,900 and 3,000m *a.s.l.* is found on the less steep parts of the escarpment leading to the lowland plateaux at the northern end of the park and the newly included Limalimo Wildlife Reserve (LWR) on the western side. Some elderly local people indicate that the lower altitudinal areas of the park were once covered with dense natural forests. However, almost all the primary forests have been destroyed due to uncontrolled clearing, grazing, and settlement, apart from canyons and other inaccessible places. There are small remaining patches (sometimes called forest 'graveyards') where the original vegetation is intact and are, thus, of high conservation

priority and require priority protection. The biodiversity in the montane forest is generally much higher than on the highland plateau. The most common trees are *Juniperous procera*, *Hagenia abyssinica*, *Olea chrysophylla, Cordia africana, Ficus* spp. and *Szygium guineense,* almost all of which are endemic to Ethiopia and threatened. Other smaller trees and plants include: *Solanum spp., Rosa abyssinica*, *Primula verticillata*, and species of *Alchemilla*, *Thymus* and *Urtica*.

According to Puff and Sileshi (1999), the afro-montane area can further be subdivided into "wet" and "dry" afro-montane forests. The wet afro-montane forest patches are often found on north or northwest facing slopes and in steep and shady gullies. Examples are the Adarmaz forest (between 2400 – 2700m), *Albizia schimperiana* dominated forest (at 2060m in the valley of Adarmaz T/ Himanot River) and the Muchila-Neznazit afro-montane forest patch. The dry afro-montane forest patches are located on steep slopes often facing south or southeast. These are generally poor in species. Some intermediate afro-montane forest remnants occur with both "wet" and "dry" elements.

Ericaceous belt / Sub-Afroalpine

A distinct and extensive *Ericaceous* belt (often termed 'Sub-Afroalpine') occurs between 2,700 and 3,700 m a.s.l., although this does not correspond to the altitudinal range of similar Ericaceous zones on the mountains of tropical East Africa. In Simien, it occurs mostly on the escarpment areas, which is apparently the result of the moisture regime on fog-influenced slopes, although scattered *Erica* forests are also found on the high plateau areas. Both shrub and tree forms are widespread, as well as the remnants of ancient forests of Giant Heath *(Erica arborea*) - for example in the Jinbar Wenz valley - and *Erica trimera* mainly in the cliffs. The Ericaceous belt is typically classified into a mixed *Erica/Hypericum/Lobelia/Festuca* belt (3000-3700m *a.s.l.*) and Ericaceous forest (2,700 - 3,700m *a.s.l.).* As one of only a few woody species found in the Simien Mountains, *Erica* is highly utilised for fuel and building by local people. The utility of this species, combined with the slow regeneration and growth rate, put the species under risk. The species is officially protected and conservation of *Erica* habitat is essential, both for *Erica* spp. and the other species this habitat supports.

Scenic Values

Escarpment landscape

The dramatic landscape of the Simen Mountains is mainly the result of volcanic activity ('Hawaiian-type') with outpouring lava, during the Oligocene period (approximately 40-25 million years ago). This volcanic activity resulted in SMNP's steep 2000m high escarpment extending in a SW-NE direction. Subsequent erosion has further delineated the highland plateaus, deeply incised lowland valleys, gorges, and jagged mountain peaks. When not cloaked in mist or cloud, the cliffs of the escarpment offer outstanding views in all directions. In addition, the road that runs along the Limalimo escarpment, which was built during brief occupation period of the Italians, offers spectacular views as you climb towards Debark from Shire Endesilase and across the Tekeze valley.

Mountains peaks

Ethiopia is sometimes called the 'Roof of Africa' as it has 80% of all land in Africa above 3,000 m *a.s.l*. SMNP is one of the highest mountain ranges in all of Africa. It boasts many summits above 4000 m, with the highest peak at Ras Dejen (4,530m). Ras Dejen is the highest mountain in Ethiopia and thus one of the main attractions for visitors to Ethiopia.

Wildlife viewing

The high density of charismatic, rare, and endemic fauna, along with the open terrain and outstanding vista in SMNP make wildlife viewing an exceptional scenic value. Among the most easily seen wildlife are the widely distributed gelada, sometimes seen in enormous groups exceeding 800 individuals. Walia ibex were a rare sighting in the Simien Mountains before the

1980s and during the civil war, but individuals and groups are now easily seen on the steep ridges of the SMNP escarpment, especially around Bwahit. Ethiopian wolf sightings are less frequent than in the Bale Mountains, but encounters with individuals and groups in the Afroalpine are still possible. Other readily observed large mammal species include golden jackal (*Canis aureus*), klipspringer (*Oreotragus oreotragus*), bushbuck (*Tregalaphus scriptus*), serval (*Felis serval*), spotted hyena (*Crocuta crocuta*), black and white colobus (*Colobus guereza*), and anubis baboons (*Papio anubis*). Additionally, with over 182 bird species recorded in SMNP, ornithologists are also delighted with bird watching in the park and there are considerable opportunities for avitourism development.

Social Values

Water catchment



The Simien mountains are an important water catchment area from which a number of tributaries (including Zarima, Inzo, Ansiya and Buya rivers) rise and drain to Tekeze river. This river is a critical water source for downstream irrigation and livelihoods in Humera area and the Sudan. Except for the Tekeze and Blue Nile, rivers in Gonder are seasonal, flowing only 3-6 months after the rainy season. Thus, as the most upper catchments areas of tributaries to the Tekeze river, the park has an important role in maintaining perennial river flow. Overuse of this system would make the water flow seasonal, increase flooding and decrease dry season water availability. Thus, conservation and management of this water catchment will maintain vital ecosystem processes that also contribute to ensuring food and livelihood security of the population residing in the catchments area within and far beyond the park boundaries (regionally and internationally).

Tourism benefits

The SMNP is one of Ethiopia's major destinations for overseas visitors and thus brings in foreign currency and drives economic development at both national and local levels. Tourism generates park revenue as well as profitable domestic industries, hotels, restaurants, transport services, souvenirs, and other services (e.g. scouts, cooks and guides). It can therefore significantly improve the quality of life of the communities living around the park and reduce the dependence (and hence pressure) on the park natural resources and other ERVs. Hence, this GMP includes a management program that will bring about improved management of tourism development and related activities so that tourism revenue can contribute to both park management and to local socio-economic development. This will also enhances the local community's sense of ownership and responsibility to the park.

Climate stabilisation

The conservation and conservation of the resources and ecosystem processes in the park has a stabilizing effect on the ecosystem processes in the park and the surrounding degraded areas (Nievergelt et al, 1998). Vegetation cover has a major role in regulating soil temperatures and above ground temperature up to 2m, as well as water retention and downstream hydrological dynamics. Vegetation cover, especially forest and other areas with large woody biomass, is also a regulator of local and global climate change through carbon sequestration, moisture retention, and temperature regulation. It is also partially the case that the potential for already degraded areas to recover is determined by the biodiversity protected in the park as these species and populations provide a source of genetic diversity, seed dispersal and migration.

Climate change reference site

The Simien Mountains, as part of a highland ecosystem, are one of the most vulnerable on the planet to the earliest effects of global and local climate warming and, with no higher areas available for biodiversity to migrate as temperatures increase, under the severest threat from climate change

impacts. Thus, the SMNP provides an ideal and important reference site for monitoring climate change and validating climate prediction models before effects are observed more widely. This 'early warning system' is also critical for devising mitigation measures to protect natural resources and ecosystem processes that are likely the first to be affected by global warming and, hence, reduce the future risk to communities that depend on them.

Cultural Values

Walia kend and Kidus Yared (spiritual sites)

Walia Kend is a spiritual site in the Ras Dejen Wildlife Reserve (RDWR) where walia ibex still frequent. There is a legend that Saint Yared brought the walia ibex to Simien by using it to carry his holy books. As a result the walia ibex is important in the folklore and oral literature of the Simien communities.

Old trade route (Axum-Lalibela)

The Simien Mountains are surrounded by ancient cultural centres like Aksum, Lalibela and Gonder. Axum and Lalibela are six days walk north of Simien and eight days walk southeast of Simien respectively and SMNP was originally part of the old trade and pilgrimage routes between Aksum, Lalibela, Mekele and Gonder. Thus the area, its people and cultural history are part of this trading history that is very much a part of Ethiopia's history as a nation

Ras Dejen legends

King Dawit (1367-1396 G.C) of Ethiopia had 3 children-Shebele, Dejenie and Gubaie. Accordingly, he divided the whole of his country 3 sub-divisions for easy administration, the protection of forests and wildlife, and the security of the people. One of these sons, Dejenie was given the area from Abay Gorge to the Simien Mountains to administer. Thus the name "Dejen" (ketema) (or Dejen town) was associated with the area between the former border of Shewa and Gojjam provinces and to Ras Dejen (the highest summit) in the Simien Mountains.

SMNP in the International Context

Biodiversity Hotspot

SMNP is part of the Conservation International (CI) Eastern Afromontane Hotspot (PASP, 2005). Listing as a hotspot arises from two criteria. First it acknowledges the outstanding global importance of the biodiversity in the area, but it also acknowledges its highly threatened status. Some 97% of the natural vegetation of the Ethiopian highlands is estimated to have been already lost and expanding human activities will cause further loss (Hurni, 1987). As a result, the SMNP represents a relic highland refuge for Ethiopia's unique biodiversity and a priority for conservation globally.

The Simien Mountains as a World Heritage Site

World Heritage Site designation is given to places on earth that are of outstanding universal value to humanity. Such sites are inscribed on the UNESCO World Heritage List to be protected for the benefit of current and future generations of mankind and for their intrinsic value. The Simien Mountains was one of the earliest World Heritage Sites to be inscribed and one of the two first natural sites. It was inscribed in 1978 on the basis of its importance for biodiversity (current criterion x) and its exceptional natural beauty (current criterion vii).

World Heritage Site Listing assists SMNP by:

- Reinforcing its importance globally, regionally and nationally
- Raising the profile of the area internationally, thus obtaining support for biodiversity conservation and associated poverty alleviation

- Assisting in fundraising for effective park management support and development, both directly from UNESCO and the UN Foundation and improved leverage from other donors
- Providing a valuable marketing tool by raising the tourism profile of the area

The SMNP was put on the List of World Heritage in Danger in 1996, following a UNESCO monitoring mission reported declines in both Ethiopian wolf and walia ibex populations, and continued human pressure on the park. This pressure arose from the ~4,500 people living inside the park and a further 30,000 living in its immediate vicinity and expanding agriculture and grazing. The construction of the Debark-Mekane Birhan road through the park was also seen as a threat. This 'In Danger' listing coincided with the transfer of the park management from the federal government to the Amhara National Regional State in 1997. In 2001, after a high level mission and workshop, four benchmarks were adopted by the World Heritage Committee to guide the removal of SMNP from the List of World Heritage in Danger:

1. Realignment of the park's boundary to exclude the villages along the boundary;
2. Extension of the park to include at least Mesarerya and Lemalimo Wildlife Reserves;
3. Significant and sustainable reduction in the human population density within the park, especially within the core area;
4. Effective conservation within the extended national park of a larger population of walia ibex and Ethiopian wolf.

By 2006, substantial progress had been made to meeting benchmarks 1,2 and 4 and, as benchmark 3 was unachievable in the short term, the benchmarks were revised to the following:

1. Finalize the extension of SMNP to include the Silki, Kidus Yared, and Ras Dejen Mountains with the interlinking corridors.
2. Re-gazettement of the new park boundaries, including the extensions of Lemalimo, Mesarerya, and the Silki, Kidus Yared and Ras Dejen Mountains as well as the realignment of the boundary to exclude certain villages.
3. Develop a strategy and action plan, as part of the planned management plan revision, to significantly reduce the impact of livestock grazing on the conservation of the property by introducing "no grazing" and "limited grazing" zones based on ecological criteria and by setting up a strict management regime in zones were grazing will still be tolerated in the short to medium term, and secure funding for its implementation.
4. Develop a strategy and action plan as part of the management plan to support the development of alternative livelihoods for the people living within the park as well as its immediate vicinity, in order to limit in the medium term their impact on the natural resources of the property, and secure funding for its implementation.

It was recognised that 1-2 years would be required to reach these benchmarks and that considerable additional finance would be required, particularly for benchmark 4. At the time of publication, benchmarks 1 and 2 are almost complete, with only regazettement remaining, whereas new legislation has ruled out the possibility of grazing within SMNP. Thus increase resource protection is the strategy that will be adopted to remove livestock grazing in the park. This will involve a substantial investment in law enforcement. Funds are currently being sought to action benchmark 4. In addition, other threats have been mitigated, for example an alternative route has been decided for construction of the Bwahit-Dilibza road construction that avoids critical wildlife habitats and corridors, and impact mitigation measures are being adopted for the Debark-MekaneBerhan road.

The production of this General Management Plan is also a key component of the strategy to meet these benchmarks and includes objectives, actions and activities for their fulfilment. Movement of settlers in a critical wildlife corridor, increased disease control measures, development of the tourism will have particularly conservation impact and assist the maintenance of WHS status for SMNP.

C

Ecological Management Programme



C Ecological Management Programme

Programme Purpose: The species, communities and ecological processes of the SMNP better understood, monitored, restored and managed to mitigate human impacts and ensure long-term viability of the ecosystem.

Ecological Management Programme Strategy

The exceptional resource values of the Simien Mountains National Park are the key features that characterise the area and make it of international significance. Ecological monitoring, rehabilitation and management of these values and mitigation of threats is the core aim of the SMNP. Thus, this Ecological Management Programme is a key aspect of this GMP and ecological monitoring and evaluation is a key component of GMP implementation since it will determine whether the park purpose is being met.

This ecological management strategy provides a general statement of principles and policy that will guide the ecological management of the natural resources within SMNP over the 10-year period covered by the GMP. Achievement of all components of the programme will ensure that all components of the ecosystem are maintained in or restored to their desired state. Actions to reduce threats will be necessary in some situations, however, while appropriate management action will eliminate or reduce threats, other threats may emerge as our understanding of SMNP ecosystem increases and external factors change. As such, adaptive management is a critical component of the Ecological Management strategy and ensure that the actions under this programme are modified to deal with changes in threats and management needs. This will conserve SMNP's ERVs and build best practice in monitoring and ecological management within the park.

This strategy is aligned with the federal and regional legislation and policies, although many relevant documents are currently in draft or being revised, with the National Biodiversity Conservation and Research Policy (1998) and Strategy and Action Plan (2005), the Environmental Impact Assessment Proclamation (No. 300/2002) and the Wildlife Development, Conservation and Utilization Policy (2005) being particularly relevant (see section A).

Guiding Principles

- All essential abiotic and biotic components as well as processes of the ecosystem must be able to exist.
- Natural changes to the ecosystem should be allowed, while human-induced changes that cause, for example, a reduction in species diversity, a threat to rare and endangered species, or a disruption to ecosystem function should be prevented, limited or reversed through active management.
- Research and monitoring that feeds back into decision-making and adaptive management will be promoted and supported.

SMNP Principal Ecosystem Components

Ecosystems are inherently complex therefore, given the limited resources available, it is impossible for SMNP management to monitor, research, and manage all individual components of the ecosystem. Thus, an adapted planning process[1] has been used to identify those ecological components, termed here "Principal Ecosystem Components" (PECs) that together represent the whole ecosystem and its functions. It is intended that together these PECs represent the unique biodiversity and ecological processes of the Simien Mountains and identify the components that will be the focus of management action. A number of secondary ecosystem components that co-occur with each PEC are also identified. Assuming that the PECs are truly representative, concentrating on their monitoring and management will ensure that all ecosystem components within SMNP, including all co-occurring ecosystem components, are conserved and, thus, an overall healthy ecosystem will be maintained.

Table C1: Principal Ecosystem Components and Co-occurring Ecosystem Components (endemic species are indicated in bold)

PEC	Co-occurring Ecosystem Components
Hydrological System	• Rivers • Wetlands • Sweet water crab
Afroalpine	• **Ethiopian wolf (*Canis simensis*)** • **Walia ibex (*Capra ibex walie)*** • **Gelada (*Theropithecus gelada*) (near endemic)** • Serval (*Felis serval*) • Spotted hyaena (*Crocuta crocuta*) • Golden jackal (*Canis aureus*)

[1] Based on The Nature Conservancy's (TNC) Conservation Action Planning (CAP) process, adapted by Conservation Development Centre (Nairobi) and Tanzania National Parks

PEC	Co-occurring Ecosystem Components
	• Klipspringer (*Oreotragus oreotragus*) • **Unstriped grass rat (*Arvicanthis abyssinicus*)** • **Narrow-headed rat (*Stenocephalemys griseicauda & S. albocaudata*)** • **White-toothed shrew (*Crocidura baileyi*)** • **White-footed rat (*Praomys albipes*)** • ***Lovat's mouse (Dendromus lovati*)*** • • Harsh-furred rat (*Lophuromys flavopunctatus*) • Swamp rat (Otomys typus) • Common molerat (*Tachyoryctes splendens*) • **Giant lobelia (*Lobelia rhynchopetalum*)** • ***Festuca gilbertiana*** • ***Rosularia simensis*** • *Helichrysum* spp. • *Erica arborea* • **Abyssinian longclaw (*Macronyx flavicollis*)** • **Abyssinian woodpecker (EE)** • **Spot-breasted plover (*Vanellus melanocephalus*)** • **Black-headed siskin (*Serinus nigriceps*)** • **Ankober serin *(Serinus ankoberensis*)** • White-collared pigeon (*Columba albitorques*) • Bearded vulture (*Gypaetus barbatus*)
Sub-Afroalpine	• *Erica arborea* • Giant St. John's wort *(Hypericum revolutum)* • **Giant lobelia (*Lobelia rhyncopetalu)*** • Abyssinian Wild Rose *(Rosa abyssinica)* • Giant Sphere Thistle (*Echinopsis giganteum)*

PEC	Co-occurring Ecosystem Components
	• ***Rosularia simensis* (endemic to Simien)** • ***Dianthus longiglumi* (endemic to Simien)** • ***Festuca gilbertiana* (endemic to Simien)** • ***Plactosephalus variensis*** • ***Kniphofia foliosa*** *and* ***K. comosa (EE)*** • Epiphytes • *Biden* Spp • *Senecio gigas* • *Echinopis kebericho* • *Urticaria simensis* • **Walia ibex** • **Gelada** • **Menelik's bushbuck (*Tragelaphus scriptus meneliki*)** • Klipspringer • Golden jackal • Gray (bush) duiker (*Sylvicapra grimmia*) • **Soft-furred rat (*Myomys albipes*)** • **Groove-toothed rat (*Pelomys harringtoni*)** • **White-footed rat (*Praomys albipes*)** • Harsh-furred rat (*Lophuromys flavopunctatus*) • Swamp rat (Otomys typus) • Common Mole rat (*Tachyoryctes splendens*) • Abyssinian catbird (*Parophasma galinieri*) (near endemic) • Wattled ibis (*Bostrychia carunculata*) (near endemic) • Thick billed raven (*Corvus crassirostris*) (near endemic) • Bearded vulture (*Gypaetus barbatus*)
Montane forest	• *Juniperus procea* • *Hagenia abyssinica* • *Syzygium guineense* • *Acacia abyssinica* *All endemic to Ethiopia* • *Cordia africana* • *Dombeya schimperiana* • *Olea Africana* • ***Acanthus senni*** • ***Hypericum quartinianum*** • Vervet monkey (*Cercopithecus aethiops*) • Bushpig (*Potamochoerus porcus*) • Gray (bush) duiker • Black and white colobus (*Colobus guereza*) • Leopard (*Panthera pardus*) • **Soft-furred rat (*Myomys albipes*)** • **Abyssinian woodpecker (*Dendropicos abyssinicus*)** • **Abyssinian catbird (*Parophasma galinieri*)** • Black-headed oriole (*Oriolus larvatus*)
Walia ibex (*Capra ibex walie*)	
Ethiopian wolf *(Canis simensis)*	

**New record for the northern highlands*

The PECs for SMNP cover various spatial scales and levels of biological organisation of a functioning ecosystem, from processes operating at the landscape and ecosystem level, to components representing the community level and, finally, species themselves (Table C2). For each PEC, a number of defining Key Ecological Attributes (KEAs, Table C2) have been identified. KEAs are the ecological features that most clearly define or characterise the PEC, limit its distribution, or determine its long-term viability. These KEAs are generally attributes of biological composition, spatial structure, abiotic or biotic processes, or ecological connectivity. The KEAs also provide a basis for developing a monitoring plan to improve our understanding of the PECs, their ecological functioning, and any threats to their integrity and long-term viability. Thresholds of Potential Concern (TPCs) will be ultimately be developed for each KEA so as to identify when management actions are required to restore a PEC/KEA to its desired state. For example, TPCs for SMNP might identify the maximum sediment load for the hydrological system or minimum population sizes for walia ibex and Ethiopian wolves. If such thresholds are reached management interventions will be triggered.

Table C2: Principal Ecosystem Components in Simien Mountains National Park

Principal Ecosystem Component	Level of Ecological Organisation	Key Ecological Attributes
1. Hydrological System	System	○ Water flow ○ Water quality ○ Climate ○ Erosion and runoff
2. Afroalpine	Community	○ Extent and fragmentation of habitat ○ Vegetation composition and structure ○ Rodent diversity, distribution and abundance ○ Large mammal diversity and abundance
3. Sub-Afroalpine		○ Extent and fragmentation of habitat ○ Vegetation composition and structure ○ Mammal diversity and abundance
4. Montane forest		○ Extent and fragmentation of habitat ○ Tree composition and structure ○ Bird and mammal diversity and abundance
5. Walia ibex	Species	○ Population size, structure and distribution ○ Habitat and food availability ○ Density of predators ○ Genetic diversity
6. Ethiopian wolf		○ Population size, structure and distribution ○ Habitat and rodent availability ○ Genetic diversity

Ecosystem Threats

A threat, for the purposes of this GMP, is defined as any factor, resulting either directly or indirectly from human activities (legal or illegal), that has the potential to destroy, degrade, or impair a PEC or its KEAs in the next 10 years. Threats were assessed according to their severity (level of

degradation), permanence (potential to reverse the degradation) and geographic extent (percentage of the PEC that is affected), with an overall threat ranking then given by the working group (Table C3).

During the threat analysis, several threats were identified as affecting more than one PEC. A threat matrix shows which threats are cross-cutting and depicts heir overall threat rank for each PEC (Table C3). Pressure from agricultural expansion, livestock overstocking, over harvesting of natural resources and settlement are high level threats that are affecting a number of PECs and require immediate management action. These are dealt with both in this and the Settlement Management Programme. Some threats (*e.g.* disease, hybridisation, poaching) spanned both walia ibex and Ethiopian wolves, the two SMNP species identified as Principal Ecosystem Components.

Prioritisation of these threats, based on their overall threat rank, guides the 3-year action plan for this programme and the ecological monitoring plan for SMNP (Appendix 1). It also guides the Settlement Programme which directly addresses the human-associated activities that are posing the greatest threat to ecosystem health.

Table C3: Threats to SMNP Principal Ecosystem Components

Threats	Hydrological system	Afroalpine	Sub-Afroalpine	Montane forest	Ethiopian wolf	Walia ibex
Agriculture/Cultivation						
Settlement						
Overgrazing						
Wood extraction (fuel and building)						
Grass cutting/removal						
Poaching and/or persecution (e.g. poisoning)						
Alien species						
Fire						
Erosion						
Illegal plant collection (medicinal plants, seeds)						
Negative impacts of tourism (trampling, litter, wildlife disturbance)						
Negative impacts of road (litter, noise, road kill, loss of vegetation, disturbance)						
Wildlife diseases						
Small, isolated populations (loss of genetic diversity, stochastic effects)						
Soil compaction/trampling						
Pollution (fertilizers, vehicles, cleaning agents, litter)						
Climate change (global warming)						
Hybridisation						

Threat Level Key

Threat level	Severe = 4	High = 3	Moderate = 2	Low = 1	None = 0
a. Severity	Destroying or eliminating PEC	Seriously degrading PEC	Moderately degrade PEC	Slightly degrade PEC	No degradation
b. Permanence	Impossible to restore PEC	Very difficult to restore PEC	Moderately difficult to restore PEC	Slightly difficult to restore PEC	Not difficult to restore PEC
c. Geographic extent	76-100%	51-75%	26-50%	1-25%	0%
Overall threat level	Severe (10 – 12)	High (7-9)	Moderate (4-6)	Low (1-3)	None (0)

Ecological Management Programme 10-Year Objectives

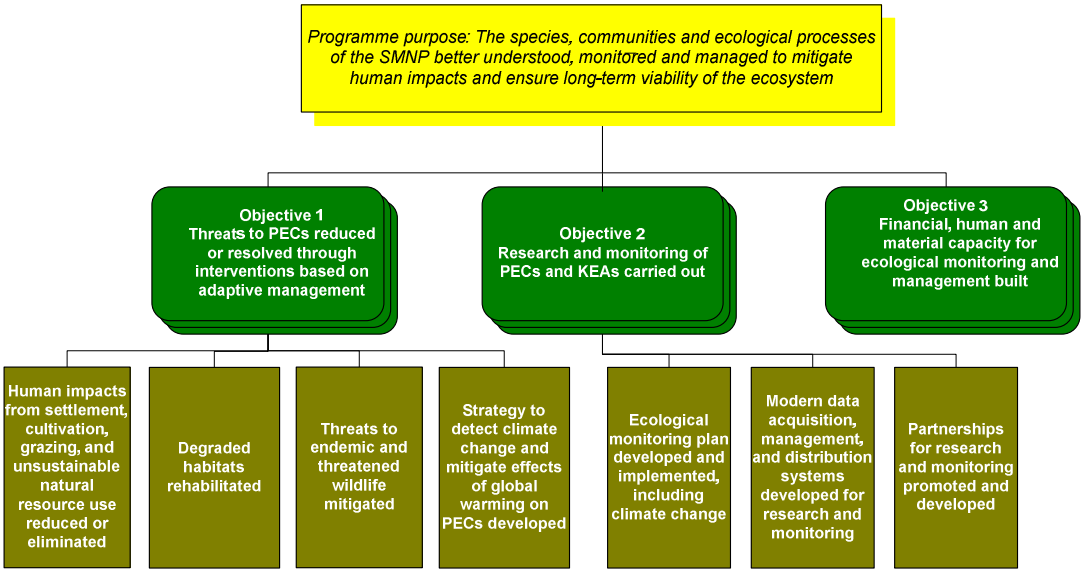


Figure C1: Logical framework for the Ecological Management Programme, including the programme purpose, objectives, and sub-objectives.

The following three objectives provide the framework for achieving the programme purpose:

1. **Threats** to PECs **reduced or resolved** through interventions based on adaptive management

2. **Research and monitoring** of PECs and KEAs carried out

3. **Financial, human and material capacity** for ecological monitoring and management built

A series of 10–year management sub-objectives and associated actions have been formulated for these management objectives, which are described below. In addition, a brief description of the relevant management issues or challenges is included, providing justification for the actions.

A feedback loop (Fig. C2) between the Objectives 1 and 2, dealing with management interventions and monitoring/research, forms the basis for adaptive management of the SMNP ecosystem to achieve both the Programme and the park purpose. The 3-year action plan for the Ecological Management Programme, which lists the activities, input requirements, priorities, responsibilities and timeframe for carrying out the actions, is included in Section H.

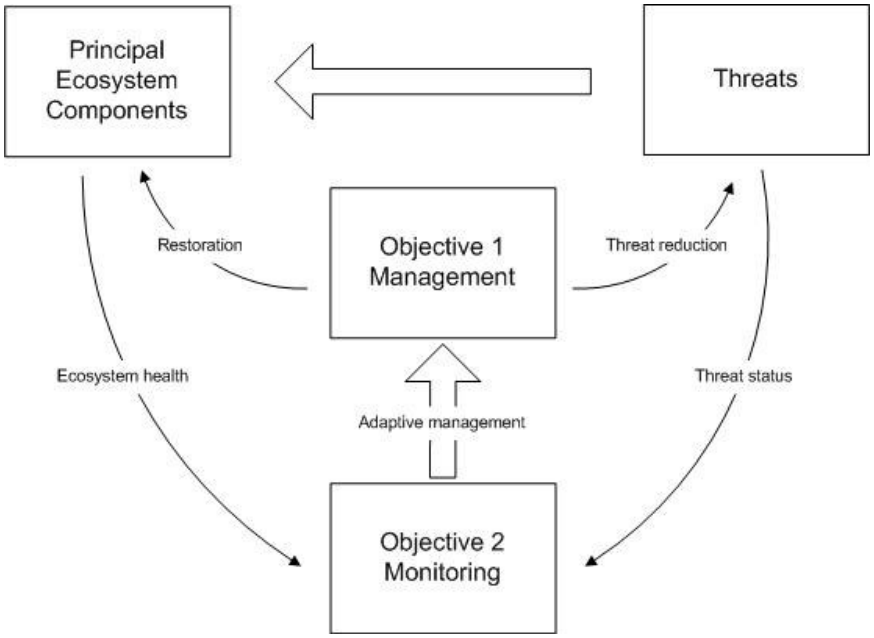


Figure C2: Adaptive Management Framework

Objective 1: Threats to PECs reduced or resolved through interventions based on adaptive management

The first objective deals with the ecological management necessary to mitigate human associated impacts on the SMNP Outstanding Universal Values and other Exceptional Resource Values, through active management that should maintain (or restore) the desired state of the PECs and KEAs. Some of these threats, (*e.g.* agriculture, grazing, settlement) are dealt with specifically in the Settlement Management Programme. However, other sub-objectives and actions are outlined that deal with other priority threats requiring immediate mitigation as well as PEC/KEA restoration once threats are removed. The importance of carrying out each action according to the threat level is reflected in the priority rankings assigned to each action in the 3-year action plan (Section H). Actions to mitigate threats given a low or even medium ranking are unlikely to be completed in the first three years of this GMP.

Sub-objective 1.1: Human impacts from settlement, cultivation, grazing, and unsustainable natural resource use reduced or eliminated

The main threats to the ecological status of SMNP PECs and KEAs stem from human land and natural resource use and mis-use. People have been living inside the park since it was created. The most notable settlement within the park currently is the village of Gich, which accounts for over half of all households and is surrounded by a vast area of cultivated land inside the park boundary. Livestock densities throughout the Afroalpine are estimated to be approximately 250 livestock/km^2 (Busby *et al.* 2006) with about 4,000 head of livestock in Gich alone (Fig. C2). People living outside but in the vicinity of the park also rely heavily on its natural resources for their livelihoods. Rapid population growth inside and around the park result in, among other things, ever increasing rates of deforestation, cultivation, and overgrazing – all of which contribute to escalating ecological deterioration. Since it seems unlikely that voluntary resettlement of the human population is likely in the short to medium term (but see Settlement Management Programme), it is critical that measures are undertaken to limit the impacts of human settlement and natural resource use on the biodiversity and ecological processes of the SMNP. This sub-objective outlines management actions that are urgently needed to stabilize the situation and reduce the ecological impacts of human settlement, cultivation, grazing, and unsustainable natural use on SMNP PECs and KEAs.

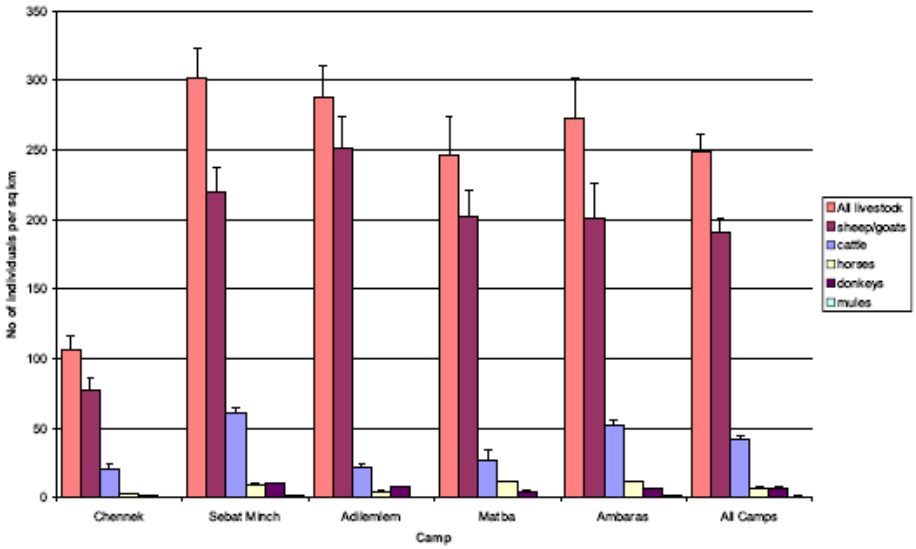


Figure C3. Livestock densities in different parts of the Afroalpine of SMNP (from Busby et al. 2006).

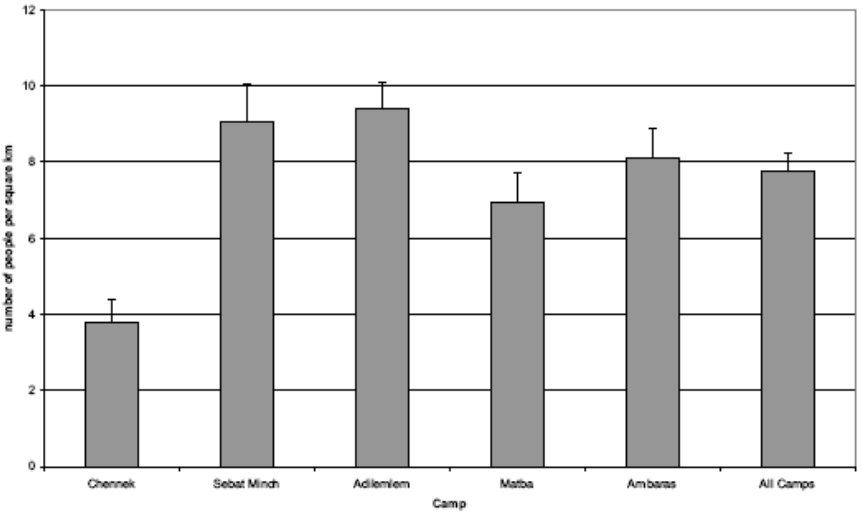


Figure C4. Human densities (outside villages only) in different parts of the Afroalpine of SMNP (from Busby et al. 2006).

Action 1.1.1: Provide knowledge to facilitate mitigation of ecological impacts of settlement, cultivation and grazing as well as unsustainable NR use

Most of the actions to reduce settlement and cultivation will be dealt with in the Settlement Management Programme, while this programme is tasked specifically with ecological management of human threats. Some areas are already agreed as “no grazing” zones with communities and as these are expanded, they provide valuable experiments that will increase understand of the impact of grazing and other natural resource use on the ecosystem. The EM programme can also assist other Programmes with monitoring of settlement, cultivation and illegal natural resource use in the park in order to feedback into adaptive management (Action 2.2.2/3).



Photographs of Guassa-Lobelia stand in SMNP Afroalpine under low (left) and high (right) grazing pressure (credit C. Marsden).

Action 1.1.2: Develop soil and water conservation plan in partnership with other stakeholders

Ineffective soil and water conservation measures or lack thereof are resulting in soil degradation, soil erosion, and, in all likelihood, reduced water quality/flow in the catchments and downstream. A soil and water conservation plan will be developed to deal with these ecological problems and devise solutions to abate ecological deterioration within the catchment areas. Ecologically sustainable agricultural systems should be developed that include terrace development, soil conservation, and improved land management practices such as improved fallow periods. Special attention should be devoted to the conservation of wetlands (e.g. by excluding grazing), as these are a critical component of the water catchment and critical for dry season river flow on which park and downstream users depend for drinking water, irrigation, and cattle watering. The uncontrolled exploitation of forests, also a major cause of watershed degradation, must also be addressed. The plan will be developed and implemented in partnership with the Settlement Management Programme, communities, and local authorities, since the capacity and willingness of communities to implement many of the regulations and conservation measures will be vital. It was previously reported that insecurity of land tenure is one of the factors that has discouraged the land users from investing labour, time and money on the land they cultivate. Strict regulations, enforcement measures, and penalties will need to be developed, agreed, and monitored in partnership with communities and other stakeholders.

Action 1.1.3: Develop fire monitoring and control mechanisms

Burns set by people are used to facilitate hunting, flush out predators, and to encourage new grass growth (and hence grazing) after the rainy season (Hurni 1986). Burning is also commonly practiced for clearing fallow agricultural land or forests for cultivation. The annual burning of grassland, bushland, forests, and cultivation poses a serious risk since fires may easily spread up the escarpment threatening habitats and wildlife inside the park. This risk may also increase in the face of climate change since reduced rainfall may lead to longer and more severe dry seasons. However, fire is probably also a natural feature of some habitats, such as the *Erica* shrub and forest, and may be important for regeneration of some species such as *Hagenia*. Firstly, a deeper understanding of the role and impact of fire on the ecosystem is necessary to establish an appropriate fire management plan. A fire management plan will be developed that outlines the desired and acceptable frequency of fire. Where fire may be a natural and necessary part of the ecosystem functioning, managed burning may need to undertaken by the park in order to achieve the desired state of certain PECs or KEAs. In other areas, fire may need to be controlled to prevent severe habitat destruction. Mechanisms to combat the threat from fire when necessary will also be outlined, including the infrastructure, services, and human capacity for fire monitoring and response. Rehabilitation of degraded areas (Action 1.4.1) and aforestation (Action 1.2.4) will also reduce the threat of fire, since secondary bush growth in deforested and degraded areas increases the fuel load and potential for fires to spread.

Action 1.1.4: Develop regulations for sustainable water resource utilisation

The Simien Mountains forms the uppermost catchment area for a number of tributaries that rise that contribute to the Tekeze river. Except for the Tekeze and large rivers in the highlands, watercourses in SMNP are seasonal, flowing only three to six months after the rainy season. Unsustainable water resource utilization could curtail the perennial discharge of these tributary rivers and, hence, water resources on which downstream users depend in the dry season. Regulations are thus needed for park users and development activities inside and around the park to ensure water resources are not depleted and the hydrological system is not threatened. For instance, irrigation should only be practiced immediately after the rain has stopped. The EM Programme should provide ecological advice to the other programmes to guide water use plans for park management, tourism development, and local communities. Regulations should also be in line with recommendations drawn from Environmental Impact Assessments for all new developments.

Sub-objective 1.2: Degraded habitats rehabilitated

Burnand (1998) reported that more than 20% of the grassland on the Gich plateau was heavily overgrazed or eroded, while less than one third was in its natural state. In some areas, degradation has exceeded a level from which the ecosystem will recover naturally even if threats are removed. Preventative measures to avert further ecological deterioration will be dealt with under Sub-Objective 1.1, However, where ecological degradation is largely irreversible even in the long term, rehabilitation will be required to restore ecological health.

Action 1.2.1: Devise and implement soil rehabilitation measures

Given the level soil erosion in the park, mostly due to inappropriate cultivation practices and overgrazing, there is a massive need for soil rehabilitation in SMNP. For instance, large areas abandoned fields are evident around Gich where soils were no longer productive and declining crop yields forced people to cultivate new areas. Once abandoned, cultivated and grazed areas within the park that are severely degraded will need to be rehabilitated through management interventions to achieve conservation objectives. Given that current levels of cultivation and grazing within the SMNP are still incompatible with the conservation objectives of the park and unsustainable over the long-term, alternative livelihood strategies are being developed in line with the GMP to gradually free further areas within the park from human settlement, cultivation and grazing. As such, an increased demand for soil restoration is impending.



Photograph of soil erosion from barley fields around Sebat Minch (credit C. Marsden)

Action 1.2.2: Devise and implement reforestation programme with indigenous trees

Harvesting of trees and Erica for fuel and building materials has left some areas of the SMNP devoid of woody vegetation. Slash and burn practices are also used in the lower altitudes for cultivation and settlement. Grazing also restricts regeneration leading to degradation of the montane forests and Erica zone. In areas surrounding Muchila, relatively large patches of montane forest were cleared during 1983 to 1996 by the returnees (former inhabitants) after the war. The same can be stated for Tiya, Truwata and Dihwara. Forest graveyards, which were not previously cleared and now form isolated patches, are also now subject to tree felling due to scarcity of wood. In other areas, deforestoration, overgrazing and settlement abandonment have converted forest to scrub bushland. Plantations of fast growing species, particularly Eucalyptus, have been established in villages in and around the park to reduce the reliance of communities on indigenous trees and the resultant deforestation in the park. A forest resource assessment is needed to determine the extent and structure of natural forests, the extent and structure of degraded forests, and areas where reforestation will be undertaken. The park has already initiated a trial reforestation programme around Sankaber outpost where 4616 seedlings of indigenous tree species donated by the Woreda agricultural office have been planted and managed. Given the necessary funds and training, a park-operated forest nursery is also planned to support selective reforestation with indigenous trees in degraded forest habitats within SMNP. Permanent plots will also be established as part of the ecosystem monitoring plan (Action 2.1.1) to investigate the potential for natural regeneration in some habitats, the results of which will feedback into this action as part of adaptive management (Action 2.2.3).

Action 1.2.3: Develop mitigation measures for negative ecological impacts of road

A road from Debark to Mekane Birhan was constructed through SMNP in the late 1990s, passing through Sankaber camp, Chennek camp, and Sebat Minch camp. While this provided road access through the park for park staff and tourists it also created a host of environmental and ecological problems and enabled public traffic to traverse the park. The road through the park is particularly problematic in the west and east of the park where it cuts through Erica woodland and Afroalpine grasslands, crossing both walia ibex and Ethiopian wolf habitat. Re-alignment options have been considered including (1) a shortcut between Sawre Hill and Sankaber camp to avoid the Erica woodland and walia ibex habitat at the edge of the escarpment, and (2) an alternative access road from Sawre Hill to Mekane Birhan for through traffic to avoid the park altogether; but no agreements have been reached on the issue since the resources for either option are not available. Some mitigation measures have already been undertaken to reduce the negative ecological impacts of the road. For example, vehicles are prohibited from traversing the park at night to reduce the likelihood of road kills. Other measures are needed to prevent soil erosion, rehabilitate degraded habitats, limit pollution, and restrict transport of alien plants (Action 1.2.6). In collaboration with the regional Rural Road Authority, the park should undertake regular maintenance of the road passing through the park area to avoid erosion; this may necessitate proper drainage systems, cleaning of ditches, and construction of retaining walls where appropriate. New quarry pits should be restricted within the park. Further, the ecological impacts of the road must be disseminated to the Amhara Regional Government so that the gravity of the issue is understood and alternatives are considered within road plans for the region. Public traffic in the park should be monitored and, if possible, diverted to other routes (under the Park Operations Programme).

A new road was proposed in 2006 to connect the Beyeda Woreda with the Debark-Mekane Birhan road. Originally, the road was meant to pass through critical walia ibex and Ethiopian wolf habitat in the Silki-Yared – Kiddis Yared Mountains and Ras Dejen, but the park authorities argued strongly against this and the regional Road authority are considering alternatives route options. The park will need to remain actively engaged in this process to ensure the ecological impacts of the new Bwahit-Dilyibza road are considered and mitigated. Environmental Impact Assessments should include potential effects on soil, water, habitats, and species during and after construction.

Action 1.2.4: Establish methods to identify and control alien species

As a first step to controlling alien species, park and monitoring staff should be readily able to recognize and identify alien and invasive species. Priority alien and invasive species lists with

appropriate pictures and descriptions will be provided to all park staff, and will be regularly updated as necessary. Systems and databases for regular reporting of sighting locations of alien species will be developed and integrated into park and community-based monitoring, as well as ranger-based monitoring (Action 2.1.2). A strategy will be developed to control the extent of alien and invasive species in SMNP and mitigate any potential negative impacts of alien and invasive species. In some cases, alien and invasive species will need to be completely removed from the park while others may be relatively benign, causing little or no impact on ecosystem health.

Sub-objective 1.3: Threats to endemic and threatened wildlife mitigated

The park harbours a number of endemic species, including two of the world's most threatened mammals, the walia ibex and the Ethiopian wolf. Not only is the unique and endemic biodiversity of the SMNP one of its ERVs, but is a basis for its inscription on the World Heritage List. The walia ibex can only be found in the Simien Mountains and the Ethiopian wolf is only found in seven small, isolated populations in Ethiopia (Marino 2003).

The park regularly carries out total counts of both walia ibex and Ethiopian wolves. Numbers of walia Ibex have apparently increased after the establishment of the park from 105 animals in 1972 (Müller 1972) to 250 in 1996 (Nievergelt et al. 1998), 514 in 2001, 570 in 2005, and 659 in 2008 (Berhanu Gebre 2005). However, walia ibex numbers plummeted during the civil war in 1989-1990 when disturbance and poaching inside the park were substantial. It is generally believed that the population is underestimated to some extent by these total counts but the population trend is still apparent and encouraging.

Ethiopian wolf numbers also appear to have increased from an estimated 20-30 individuals in 1997 (Nievergelt et al. 1998) to 41 in 2001, 52 in 2005, and 77 in 2008 (SMNP, unpublished data). Monitoring of focal packs by the EWCP suggested a minimum of 13 packs in 2004, totalling between 52 or 75 wolves (upper limit to estimate potential total number in poorly known packs) with 2 packs in Gich, 4 in Chenek, 4 in Ras Dejen and 3 in Silki. Average pack size ranged between 4.0 and 5.7 adult and subadult wolves (EWCP unpublished data).

The apparent trend in both walia ibex and Ethiopian wolf population is the result of both increased conservation efforts as well as inclusion of new habitats in survey areas (*e.g.* previous walia ibex surveys didn't include animals in the Adiarkay district). The park has also applied new methods of counting walia since 2004 but the consistency of counts made in 2003/2004 by the park on the one hand (579 individuals in 2003) and the Center for Development and Environment-University of Berne, Switzerland, in collaboration with Amhara Region Agricultural Research Institute, on the other hand (around 500 individuals in 2004) further suggest that the population has increased more than four times in the last 30 years. Furthermore, improved relations with park-adjacent communities has resulted in decreased poaching and some improved habitat conservation. While poaching and persecution are not currently a major concern due to effective dialogue between the park and surrounding communities, other direct threats, such as disease, to the SMNP's unique wildlife are still evident.

Action 1.3.1: Devise and implement wildlife disease monitoring and management strategy

The walia ibex and Ethiopian wolf are particularly vulnerable to diseases transmitted from domestic animals. Signs of a viral disease known as Contagious Ecthema (Orf), which is believed to be transmitted from sheep, have been observed recently in walia ibex (T. Negussie, personal communication). The disease-related death of 3-4 walia ibex in 2004 prompted measures to reduce the incidence of livestock diseases and parasites and prevent contact (and hence transmission) with walia ibex. Domestic dogs are the primary reservoir for canid diseases, such as rabies and distemper, which can be transmitted to Ethiopian wolves. In the Bale Mountains, rabies and canine distemper outbreaks in the last 18 years have decimated subpopulations of wolves killing up to 76% of individuals in local subpopulations. In SMNP, outbreaks of this magnitude could be catastrophic for the population, which may lack the same metapopulation structure that facilitates recovery from such severe, but localised, epidemics in Bale. The current policy of zero

tolerance of domestic dogs in SMNP must be enforced and vaccination programs, such as the one for dogs being implemented by the Ethiopian Wolf Conservation Programme (EWCP) and for livestock by the Sustainable Resource Management Program in North Gondar (SRMP-NG), should be included within the disease management strategy for the park. Advice should be sought from the EWCP, SRMP-NG, local wildlife authorities, and international experts such as those in the IUCN's SSC Wildlife Health Specialist Group, Canid Specialist Group and Caprinae Specialist Group during the development of the park's disease monitoring and management strategy. Where resources are limited, opportunities for partnering with external organisations such as the EWCP and SRMP-NG should be investigated, promoted and supported for implementation of disease management in SMNP.

Action 1.3.2: Develop mechanisms to conserve genetic integrity and viability of walia ibex and Ethiopian wolf, especially prevention of hybridization

The island- like setting of the Simien Mountains – which are surrounded by lowlands that create an ecological barrier to dispersal – means that many wildlife populations are small and insular. This insularity increases the risk of inbreeding which may cause adverse effects on fitness and random genetic drift which can lead to a loss of genetic diversity. At least for the time being, genetic diversity can probably be maintained as a by-product of broader conservation strategies that ensure demographic stability and maintain viable population sizes. This means ensuring that demographic catastrophies, such as those caused by disease outbreaks, are prevented (Action 1.3.1), encroachment on suitable habitat is prevented, and migration between subpopulations is maintained through dispersal corridors (Action 1.3.4). However, SMNP should promote and support research on the genetic diversity and viability of these species in order to inform long-term genetic management. Further, hybridization is a threat for walia ibex and Ethiopian wolves since interbreeding with domestic goats and dogs, respectively, threatens the genetic integrity of these endangered species. Free ranging goats and dogs must be excluded from the ranges of walia ibex and Ethiopian wolves, respectively, to prevent hybridization.

There is no general agreement on the taxonomy of the Caprini and consequently the status of the walia ibex remains in doubt. Although many authors argued that it is a subspecies of the alpine Ibex (*Capra ibex*) or the nubian ibex, Nievergelt (1981) prefers taxonomic classification which considers the walia ibex as a separate species or one which considers the alpine, Siberian, nubian and walia ibex and possibly the west caucasian ibex as a subspecies of the *Capra ibex*. Schaller (1977) also proposed the subspecies classification of Nievergelt (1981). Harper (1945) and Nowak (1991) originally considered walia ibex as a separate species (*Capra walie*) but some still refer to it as capra ibex walie or capra nubiana walie (Heptner et al. 1966 in Nievergelt unpublished report). The anatomical differences together with the differences in habitat have lent weight to the argument that the walia ibex of the Simien Mountains is a distinct species but further research is clearly required to establish its conservation status.

Action 1.3.3: Manage human-wildlife conflict

One of the major costs to park-resident and park-adjacent communities is from human-wildlife conflict (HWC, e.g. livestock predation by leopards, crop raiding by geladas). This not only increases negative attitudes towards the park, but also threatens wildlife populations when communities respond with wildlife persecution and killings. Anecdotal reports suggest that HWC between leopard, jackal, serval and spotted hyaena has increased in recent years and that sightings of these predators are now rare. Central to tackling HWC is the collection of good data on where HWC is occurring, its type and scale and estimate its economic costs. Under this action, the areas and severity of HWC will be identified, trends in predator numbers investigated, local task forces that represent all stakeholders formed and then data collection protocols, response and data feedback mechanisms developed. Sites where HWC mitigation strategies should be implemented will be identified as a priority. Appropriate mitigation solutions will then be piloted, agreement for their implementation negotiated with the affected communities and jointly monitored for their effectiveness.

Action 1.3.4: Ensure wildlife corridors are maintained in partnership with other programmes

To maintain maximum population size, genetic diversity and resistance to mortality, connections between isolated subpopulations for movement and dispersal must be maintained in and around SMNP. Information is required on the presence, location and population size of sub-populations and the potential and barriers for movement is required. Some newly demarcated areas of SMNP my provide additional habitat for walia, for example in the Silki, Kidus Yared and Ras Dejen Mountain areas, which also harbour over half of the Ethiopian wolf population (Fig C5). Walia ibex may also occur south of Mount Mesarerya and around Mount Kossoch. These areas, which are crucial for conserving two of the park's PECs, are now included in the most recent SMNP extension. Settlement, cultivation and grazing in these areas is increasing currently but it is critical these are regulated and reduced if possible. .

The EM programme should (i) collect data that can inform boundary extensions of the park (ii) gather information on changing threat levels in these area and (iii) liaise with the local authorities in partnership with the Settlement Management and Outreach programmes to ensure that wildlife corridors are maintained in the face of human settlement or resource use in and around the park.

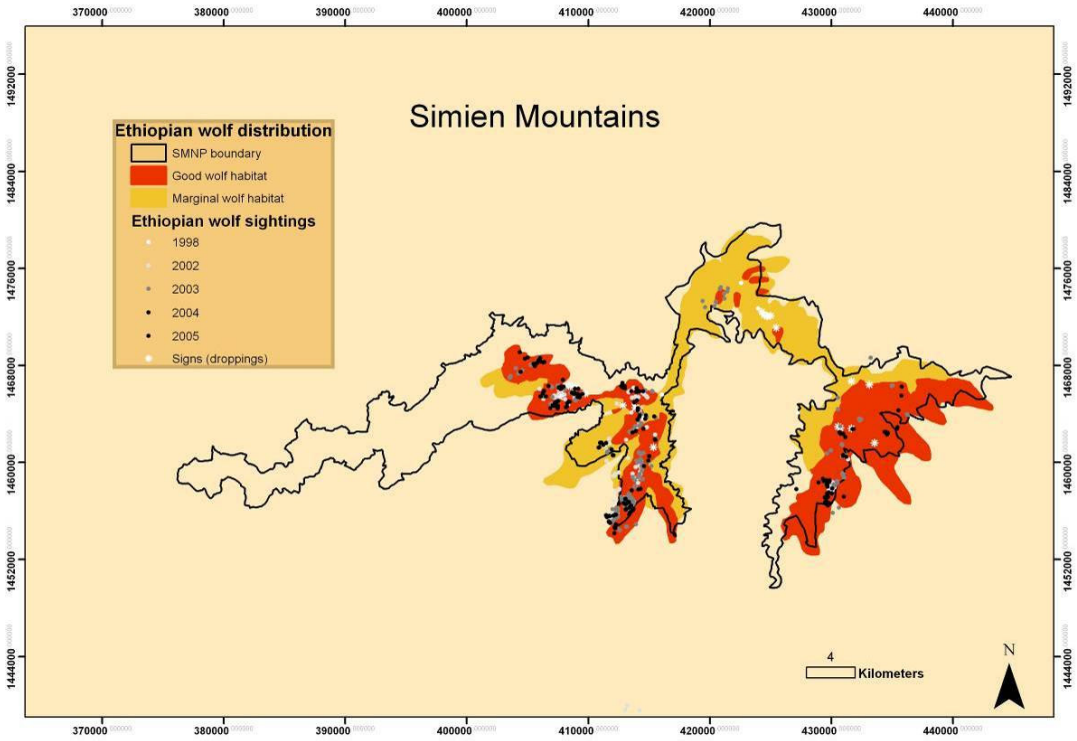


Figure C5. Distribution of Ethiopian wolf habitat in the Simien Mountains and wolf sightings from 1998-2005 (EWCP unpublished data).

Sub-objective 1.4: Strategy to mitigate effects of global warming on PECs developed

The Simien Mountains harbours ecosystems that are the most vulnerable on the planet to global and local climate warming, as there are no higher altitudinal areas available for biodiversity to migrate as temperatures increase. Global temperatures increases will also increase conflict between people/agriculture and biodiversity, ecosystem services, and unique habitats. The actions below are identified to help ensure that key habitats and ecosystems services in SMNP are maintained both for biodiversity and societal value.

Action 1.4.1: Increase understanding of likely climate change impacts in SMNP

Current projections predict a 3-5^{0}C rise in the next 90 years in the Ethiopian highlands. This would not only raise the altitudinal limits of agriculture (thus increasing human pressure for cultivation in

the park) but also impose other yet unknown ecological changes that could fundamentally alter species compositions, bring about species extinctions, and immobilize ecosystem services. These predictions require further analysis and timelines in the face of rising CO_2 emissions. Simulation modelling using global climate data applied to local circumstances can be used to predict long term scenarios for regional and local climatic condition and potential response strategies. This is imperative to determine which species, habitats, and ecosystem processes are most likely to be affected and the manner in which they will be affected. In particular, the impact of climate change on rainfall patterns, land uses, human population distribution, and water services in highland areas is of utmost priority for the SMNP. These predictions will be used to devise mitigation measures for local and global climate change impacts (Action 1.4.2).

Action 1.4.2: Devise measures to mitigate local and global climate change impacts

Current climate projections suggest that only the highest habitats will remain in tact in the face of climate change over the next 50 years. Furthermore, areas providing critical water services, where rainfall is also likely to remain highest, will be under pressure from human population increases and agricultural expansion. The risk of losing biodiversity and ecosystem services is thus enormous throughout the world's montane habitats. The threat is particularly grave in areas such as SMNP since it is both a global biodiversity hotspot and provides water to some of the world's poorest people who are almost wholly dependent on natural resources and have few or no alternatives to cope with climate change impacts. Measures to minimise local climate change (e.g. reducing deforestation) should be investigated and implemented, in partnership with other programmes where necessary. Other measures are required to increase awareness of climate change among stakeholders, prepare for the expected extremes of climate change, and enable species' adaptations. This will include protecting key habitats from encroaching settlement and cultivation, safeguarding watersheds to secure the livelihoods of the millions of downstream users, managing natural resources for long-term sustainability, and securing corridors for wildlife movements. Regional land use planning and zonation also need to incorporate climate change predictions (Action 1.4.1) to ensure climate change coping strategies for people and biodiversity are taken into account.

Objective 2. Research and monitoring of PECs and KEAs carried out

Ideally, the functioning of the Simien ecosystem should be fully understood, the status of the PECs and their KEAs should be known and threat levels should be comprehensively identified and monitored in order to feedback into management interventions under Objective 1. This process is critical for making informed management decisions in order to meet the park's purpose and, thus, a fully adaptive management system must be operational. Although the full realm of knowledge on the SMNP ecosystem is not currently available, a framework has been drawn up in this GMP to assess the severity of potential threats where these are unknown, to monitor the ecosystem's health, and to ensure that the most important applied research to facilitate evidence-based management in SMNP will be carried out.

Sub-objective 2.1: Ecological monitoring plan developed and implemented

A framework has been developed for monitoring the health of the Simien Mountains ecosystem within the National Park (see Appendix 1), based on developing protocols for monitoring the desired state of the KEAs for each PEC. Threats and climate change will also be monitored under the same plan, since these are an integral facet of ecosystem health and can impede any management actions for maintaining ecosystem health. Given the limited human and financial resources available to SMNP, monitoring of threats classified as severe or high are prioritised. The actions under this sub-objective are design to ensure the development and implementation of a comprehensive and scientifically robust monitoring programme in SMNP that will collect regular data on ecosystem health and feedback into management interventions under Objective 1.

Action 2.1.1: Develop and implement plan and protocols for PEC, KEA, and threat monitoring in SMNP

Formulation of the GMP revealed that there were few detailed data on the current state of PECs and KEAs, despite the substantial and growing recognition of the exceptional biodiversity and important ecosystem processes of SMNP. Furthermore, there are few, if any, systematic processes in place to document and evaluate the severity of many of the threats identified in this programme. Developing and implementing the necessary protocols to gather systematic baseline data on PECs, KEAs, and threats is a priority to meet this sub-objective, as well as carrying out ongoing monitoring. From these data, trends can be assessed, management effectiveness can be evaluated and adaptive management can be put into practice (Action 2.2.3).

Action 2.1.2: Review monitoring plan and protocols based on available data and change as necessary

Current SMNP resources prohibit the full monitoring plan (Appendix 1) from being implemented immediately or in the very near future. Therefore, an annual prioritisation process, particularly as management actions reduce threat levels, is required for the annual implementation of the monitoring activities in SMNP, to enable this to feed into adaptive management (Action 2.2.3). Where threats are poorly understood, activities to collect further data are included to enable identification and prioritisation of any management action required. Therefore, annual monitoring activities should be revised to fill data gaps on the status PECs, KEAs, and priority threats. Furthermore, new tools and techniques will need to be incorporated into the monitoring plan and protocols as knowledge and expertise are acquired.

Sub-objective 2.2: Modern data acquisition, management, and distribution systems developed

One of the greatest obstacles to adaptive management is lack of appropriate systems for data management and dissemination. Data that are collected under sub-objective 2.1 need to be properly compiled, stored, analysed and fed back into adaptive management, which is the basis of this programme and overall GMP implementation. Alternative data acquisition systems (e.g. Ranger Based Monitoring and para-ecologists) also need to be investigated to strengthen SMNP capacity for ecosystem research and monitoring.

Action 2.2.1: Develop and maintain database for previous and ongoing research and monitoring data, including GIS database

This action will develop appropriate and user-friendly information-holding systems (databases) that staff can access and use for adaptive management. Existing spatial and meta data will be sought and compiled within the database as well as any data being collected presently and in the future. External expertise will be required for the initial installation, of databases, importation of existing data, and training of park staff in database management. Thereafter, a database manager within SMNP will be appointed and trained to ensure the database is maintained up to date, backed-up regularly, and made available for all SMNP staff and partners as appropriate. Data collection protocols (Action 2.1.1) and associated forms will need to be standardised to ensure compatibility with database formats and data storage requirements.

Action 2.2.2: Devise systems for data analysis and dissemination/reporting to ensure feedback of monitoring data into ecosystem management

Robust ecological data are the basis for an evidence-based approach to ecosystem management. With data on ecosystem health accruing from the implementation of the SMNP monitoring plan (sub-objective 2.1), regular reviews and assessments of these data are required as part of the adaptive management process depicted in Figure C2. The key to good data management, in addition to just having good databases, is having good, standardised data analysis procedures and dissemination of results for management purposes. These systems will be developed to ensure that data collected as part of the monitoring plan (Action 2.1.1) feedback into adaptive management. As a result of this action, the park ecologists will remain up to date with research and monitoring outputs from SMNP, or other similar ecosystems, and thus be determining the priorities for management action in this and other programmes.

Action 2.2.3: Implement Ranger Based Monitoring (RBM)

Ranger based monitoring can be an effective means of collecting data from all parts of the park on an ad hoc basis while scouts are on patrol. This model has been used in other parks (e.g. North Luangwa National Park in Zambia and Serengeti National Park in Tanzania) and thus SMNP can review potential models and data collection protocols. In brief, simple but valuable data will be collected by scouts on incidents such as animal carcasses, tree cutting, fire, wildlife sightings, etc. Scouts will be trained in basic data collection skills and field techniques, including the use of GPS and binoculars, and provided with data sheets during patrols. Data collection will be checked regularly to ensure the data are reliable and accurately recorded for ease of analysis. A database system will also be set up for data entry, storage and analysis.

Action 2.2.4 Train and employ para-ecologist team to support research and monitoring in SMNP

Para-ecologists will be selected from young men and women from the communities living in and around the SMNP. With sufficient training and mentoring these para-ecologists will develop field skills and collect detailed ecological data to support research and monitoring in SMNP. In a country like Ethiopia, which lacks sufficient resources to employ enough park biologists or support enough researchers to cover all aspects of research and monitoring, these para-ecologists provide a readily available and relatively inexpensive means of implementing ecological research and monitoring within the overall park management structure. Training will be provided in theoretical and applied research and conservation, thereby increasing local and national capacity as well as awareness and support for the park. Funding opportunities (e.g. scholarships) will also be investigated to support the higher education of para-ecologist so as to increase national capacity for conservation in the long-term and create employment turnover (and hence benefits) locally.

Action 2.2.5: Develop systems for minimizing community fatigue and improving accuracy of information for socio-economic data

While socio-cultural and socio-economic data are critical for research and monitoring as well as overall park management, there is a risk that excessive interviews and discussion forums with local communities can lead to community fatigue and, thus, unwillingness to contribute to further research and/or negative feelings towards the park. Furthermore, it is notoriously difficult to obtain accurate socio-cultural and socio-economic data. Therefore, in order to suitably inform park management, tools need to be investigated and implemented to ensure that such data are as reliable as possible. Such research should be undertaken in a coordinated fashion to ensure that research is necessary and appropriately targeted. Furthermore, systems should be put in place to avoid unnecessary duplication of research and to disseminate results back to participants. Furthermore, advice should be sought from trained social scientists on research techniques and protocols to administer community questionnaires and engage communities in SMNP research appropriately.

Sub-objective 2.3: Partnerships for research and monitoring promoted and developed

Partnerships are a key component of GMP implementation. In this Programme, partnerships will be sought that enhance knowledge and capacity for research and monitoring in SMNP as well as strengthen the global image of the SMNP as a centre of excellence for scientific research.

Action 2.3.1: Promote and guide development of research and monitoring centre for SMNP using external support and funding

One of the objectives this and other GMPs (e.g. Hurni 1986) is to initiate and support management oriented research and monitoring in the SMNP and promoting scientific research is recognized as a secondary purpose of the park. Although this is not currently a priority for park management in the face of more imminent threats to the ecosystem and funding for this is not available, a research and monitoring centre should be promoted among partners to provide coordination of research and monitoring activities by park managers, national and international researchers, NGOs and other partners operating in the park. It will also be the focal point for establishing links with other research bodies (Action 2.3.2), as well as developing research priorities and promoting research by

other organisations (Action 2.3.3). A management board chaired by the park and including key research and monitoring partners will be responsible for administration, management, and fundraising for the centre, which will require external support and funding. Research guidelines for SMNP will be direct conduct of researchers operating within the park under the auspices of the centre. The centre could also facilitate the expansion of basic facilities (e.g. library, laboratory, computer access) for research and monitoring outlined under Action 3.1.2.

Action 2.3.2: Create links with universities and research institutes, government, NGOs and communities to acquire and share expertise for research and monitoring

Partnerships between SMNP and universities, research institutes, government (including other parks) and NG organisations will be used to fill gaps in technical expertise and build the capacity of park management for ecosystem monitoring and management outlined in this programme. This action will also promote experience sharing amongst partners about how ecosystem monitoring and management are being carried out in the Ethiopian highlands and other ecosystems nationally and internationally. For instance, the Bale Mountains National Park is ecologically very similar to SMNP and faces many of the same threats. Stronger links between the two parks as well as the NGOs working in both areas (e.g. FZS and EWCP) will be created to increase knowledge, share expertise, and learn from other experiences. Links with parks (e.g. Drakensburg Mountains in South Africa) and universities (e.g. Oxford University) outside Ethiopia will be sought to increase SMNP's access to international expertise for ecosystem monitoring and management. Integrating community knowledge and expertise will also be a central component of this action. SMNP (and partner) capacity will be built through mentoring, exchange visits, and forums for discussion and dialogue to increase knowledge and make informed decisions about management interventions.

Action 2.3.3: Promote and facilitate research priorities by regional, national and international bodies

Given the current resource limitations, SMNP recognizes that it will have to rely on partners to a great extent to fulfil the purpose and objectives of the Ecological Management Programme. Research and monitoring carried out by other regional, national and international bodies will be promoted and supported within SMNP, particularly the priority list of research and monitoring topics maintained under this Action. The list of priority applied research topics will be circulated to external academic, conservation and research institutions by a variety of methods and research will be facilitated by SMNP management by assisting with permissions, providing facilities, support for overall logistics and/or funding applications, and other aspects where possible. This will foster strong partnerships, improve SMNP capacity for research and monitoring through knowledge and experience-sharing, and provide critical information and data to guide this programme and the Settlement Programme. A set of rules and regulations have been drawn up outlining operational guidelines for undertaking research in SMNP, ensuring exchange of information between external researchers and SMNP management (*e.g.* reporting and data sharing), and promoting capacity-building for research within SMNP wherever possible (*e.g.* park-researcher collaboration).

Objective 3. Financial, human and material capacity for ecological management built

Trained manpower in SMNP for ecological monitoring and management are currently insufficient to fulfil the EM Programme and thus the park purpose. This Objective is closely aligned with Actions in the Park Operations programme (SO1.1) but pertains specifically to financial, human and material capacity for ecological management in SMNP.

Action 3.1.1: Fulfil staff requirements and undertake necessary training

Currently, there is insufficient staff and capacity in the SMNP to undertaken all of the actions outlined in this programme. Therefore, the aim of this Action is to upgrade the skills of existing staff and employ/train addition staff where it is deemed necessary to successfully implement the management actions under Objective 1 and set up the monitoring and feedback systems under Objective 2. This Action will be undertaken in collaboration with the Park Operations Programme. A needs assessment will be conducted to identify specific on the job or external training required for SMNP staff responsible for ecological monitoring and management. Some key areas that may be

relevant include theoretical and applied ecology, field skills for implementing monitoring protocols and specific research needs, data analysis (including statistical methods), and scientific publishing practices. Short courses in other areas, institutions, and countries will also be identified and funding opportunities sought for park staff to receive appropriate training outside of SMNP. This could be facilitated through the partnerships developed under Action 2.3.2.

Action 3.1.2: Improve infrastructure, facilities and equipment for ecological management

In order to carry out the actions under Objective 1 and 2 of this programme, appropriate infrastructure, facilities and equipment need to be available to park staff. This will include, among other things, appropriate housing for visiting researchers, library and reference materials, laboratory equipment and facilities, basic field equipment for the harsh climate in SMNP (4-season tents, sleeping bags, boots, raingear, etc), and other field equipment (GPS, binoculars, etc).

Research Regulations in the Simien Mountains National Park

- Researchers should report to the park office upon arrival and present both letters of permission from the relevant authorities and a copy of their research proposal. Researchers may only undertake the work for which they received letters of permission.
- It is strictly forbidden to collect samples or specimens of any plant or animals without explicit letters of permission from the relevant authorities.
- Researchers should also receive a letter of support from the park prior to beginning their work.
- Researchers will be assigned a park liaison person with whom they will discuss their work plan and timeline before commencing the work.
- Researchers should ensure that their park liaison person is kept regularly up-to-date on progress of the project and report any changes in their work plan as necessary.
- Researchers should submit written quarterly reports to their park liaison person for review and comment.
- Researchers should provide SMNP with copies of any publications, theses, or other materials produced.
- The Simien Mountains National Park and any park collaborators should be acknowledged in any publications or other materials produced and offered authorship where it is considered appropriate.
- Researchers must abide by all park regulations
- Researchers should promote local employment and training wherever possible
- Wherever possible, researchers should work together with a counterpart from the park and, *but only if necessary*, a scout should accompany the researcher in the field with any associated expense to be covered by the researcher

D Settlement Management Programme



D Settlement Management Programme

Programme Purpose: The Simien Mountains National Park free from human settlement and associated impacts

Settlement Management Programme Strategy

Uncontrolled human use of natural resources in the Simien Mountains National Park is undoubtedly the greatest threat facing the biodiversity and ecological processes of the area. More than 80% of SMNP is used by local communities for grazing, agriculture and human settlement, leaving only the highest peaks and inaccessible cliffs undisturbed (Ludi, 2005; PaDPA, 2007). With some 587 households remaining in SMNP and over a thousand immediately adjacent, the Afroalpine plateau areas are intensively grazed by domestic livestock and cultivation is expanding. Approximately 8% of the park area is currently under cultivation, mainly for barley but also wheat and pulses (Fig D1). This use has already impacted on both key biodiversity and ecological processes with a reduction and degradation of key habitats, soil erosion, forest deforestation and degradation and an increased risk of disease transmission between domestic and wild animals.

Background information on the issues and the impact of grazing is outlined in the "Grazing Pressure Reduction Strategy Document for Simien Mountains National Park" (GPRSD SMNP PaDPA, 2007) and is not repeated in detail here. In summary households from all 17 kebeles around the park use the park for grazing livestock. In 2007 some 38,270 cattle, 59,639 sheep, 17,414 goats, 13,490 equines and 46,664 poultry was estimated in these 17 kebeles (PaDPA, 2007) with an average of 2.7 TLU per household. Although generally people adopt a mixed strategy of livestock and agriculture, a significant proportion of households, particularly impoverished households, have no animals (15% in Gich, Ludi, 2004). Although overall numbers of livestock have increased, the number of animals per household decreased between 1994 and 2004 (Ludi 2004).

The proportion of the park overgrazed consequently more than doubled between 1973 and 1998, by which time 25% of the 900 ha of Afro-alpine vegetation (before the recent park extension) was heavily overgrazed and 60% was considered heavily grazed (Nievergelt *et al*., 1998). Grazing levels are considered to be around 3 times the sustainable rate ((Hurni & Ludi 2000). Overgrazing has led to a deterioration of grassland quality with an increase of unpalatable grasses like *Festuca* and a reduction in diversity (Burnand 1998). Ultimately, soil productivity declines and erosion also occurs when vegetation cover is lost. In the sub-alpine *Erica* and forests areas, overgrazing is preventing regeneration of shrubs and trees. There is a shortage of grazing land outside the park as land has been transformed for agriculture. Other resource use also occurs but is not well documented, principally grass cutting on the escarpment, as this grass is the only source of long grass for homestead use in the area.

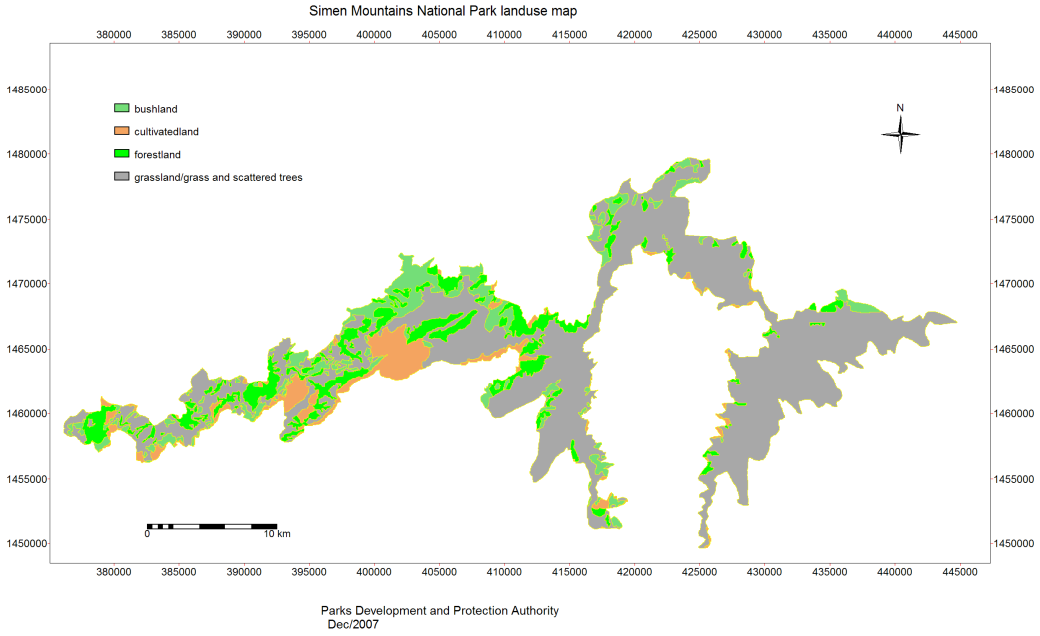


Fig D1: Landuse, including cultivation in SMNP

The problems of settlement and the impact of uncontrolled human use have been present since the park was gazetted in 1969. Although no accurate estimates of inhabitants are available, a number of communities lived inside the park at the time of gazettement and perhaps half of the park was used in some way by humans. By 1986, around 50% of the park was thought to be used for either cultivation (3,400 ha, 17.5%) or grazing (6,600 ha, 35%). Efforts to resettle some inhabitants, particularly in Gich village, have been made but have been unsuccessful. The human population has continually grown, doubling in size every 35 years. For example in 1967/8 there were 122 households (610 people) at Gich (Nicole 1971) whereas by 2006 some 457 households (1670 people) were thought to be present. By the time the park boundary was realigned in 2006, 11,000 people were estimated to live in the park, but this was substantially reduced to around 3,200 people in 587 households by boundary realignment and a reduction of the original park area. Some 2,280 hectares are estimated still to be cultivated (Fig D1), mainly in the Gich area and poor soil conservation and other poor farming practices have led to soil erosion and poor soil productivity.

The communities of the Simien Mountains are all impoverished and are often food insecure and dependant on food aid. In Gich, external assistance for food is needed for almost 6 months of the year and with few alternative sources of income, this village is well aware they have little future on the land in the park. In this scenario, SMNP cannot completely ignore the needs of the impoverished communities living within and around its boundaries, but the longterm future of both the SMNP and these communities is in jeopardy in the current situation. The SMNP is a very small area, and its unique biodiversity and ecological processes simply cannot tolerate extensive human use. Moreover, under new legislation (2008), resource use in this area is forbidden, thus alternative strategies to resettle park inhabitants including the creating of pull factors and livelihood diversification in exchange for resettlement remains as the only way forward.

Resource protection will, however, also be required to enforce regulations and prevent resource use and grazing from livestock of households outside the park but will be challenging to implement (See Park Operations). With grazing providing 81% of annual feed requirement of livestock, there will be a significant challenge in reducing stocking rates in an equitable manner, whilst not

impacting detrimentally on people's livelihoods. Promotion of alternative and improved livestock systems has been carried out over recent years by the Austrian Integrated Development Project and will continue under a new phase of that project. Priority strategies are outlined in the Outreach programme.

This SMNP settlement management strategy provides a general statement of the policy and principles that will guide human influence on SMNP over the period of the GMP. A series of principles, drawn from national policy and best practice of participatory natural resource use systems elsewhere, have been drawn up to guide the design and implementation of the programme.

Guiding Principles

- Resettlement will occur on a voluntary basis and in accordance with Ethiopian Law and international standards on resettlement and human rights
- Opportunities for current park inhabitants to resettle will be offered equally across age and gender

Settlement Management Programme 10-Year Objectives

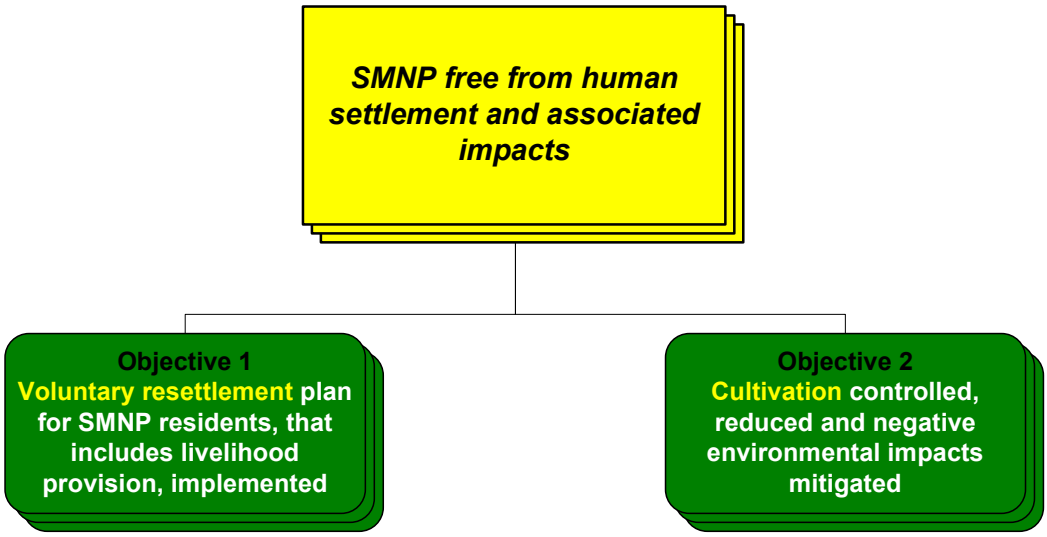


Fig D2: Logical framework for the Settlement Management Programme, including purpose and objectives

In order to achieve the Settlement Management Programme purpose, the following two 10-year objectives have been drawn up, based on the guiding principles outlined above.

1. **Voluntary resettlement plan** for SMNP residents, that includes alternative livelihood provision, implemented
2. **Cultivation** controlled, reduced and negative environmental impacts mitigated

A series of associated actions have been formulated for these management objectives, and are described below. In addition, a brief description of the relevant management issue or challenge is included, providing the justification for the actions. The 3-year action plan for the Settlement Management Programme, which lists the activities, input requirements, priorities, responsibilities and timeframe for carrying out the actions, is included in Section H.

Objective 1: Voluntary settlement plan for SMNP residents, that includes alternative livelihood provision, implemented.

With the recent realignment of the park boundary and the excision of a number of villages (Fig. D3), the number of people residing in the park has reduced. By 2005, 587 households were estimated to live in the park area (some 3,218 people), the vast majority in the Gich area of Debark woreda (ERCAND Consult, 2006). In addition, some 1,477 households live immediately adjacent to the park, some are cultivating plots inside the park and many graze livestock. The total area under cultivation in the park was recently estimated at 3126 ha, some 7.6% of the park area.

Following the park extension to incorporate the Afro-alpine areas of Silki, Kdus Yared and Ras Dejen, one village, Arkuasiye in Janamora woreda, established only in the 1990s and now comprising some 130 households, was included within the new park boundary (Fig. D3). This village is a market place and thus most settlers are involved in small businesses. This village straddles an important wildlife corridor between Bwahit and Silki and its relocation is critical to ensure habitat connectivity as no other habitat connection exists.

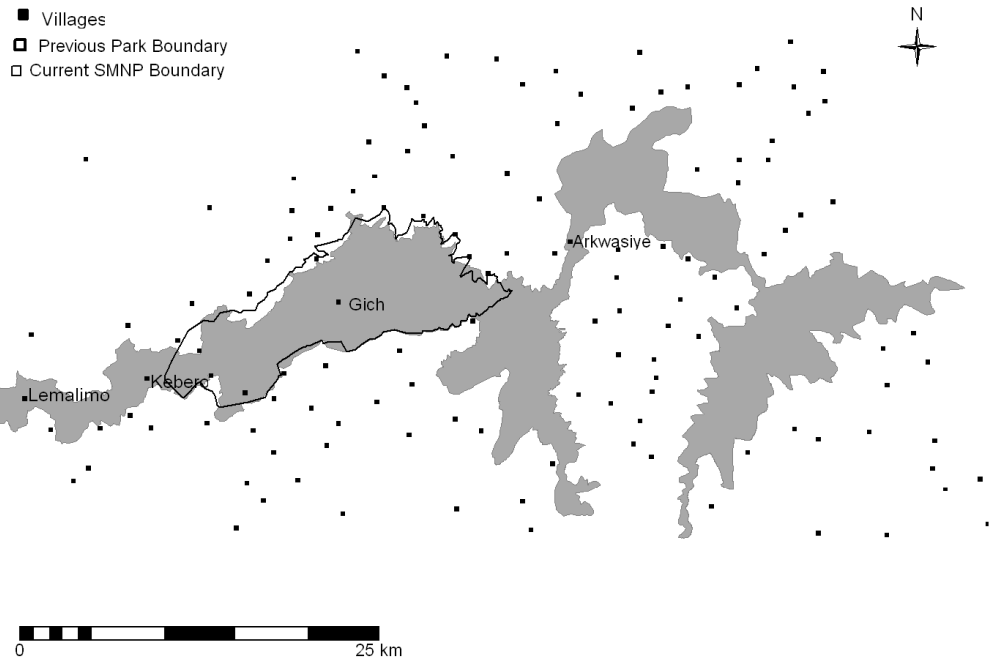


Fig D3: Villages in and around SMNP

As part of this GMP, where people are still resident in SMNP, overall human settlement and cultivation will be reduced, preferably to zero. If complete removal of settlement and cultivation is not possible due to limited financial resources or the unwillingness of communities to resettle, settlements and human impacts will be contained and managed so that they are compatible with conservation objectives and have minimal environmental impact.

Inhabitants of the two settlements of Gich and Arkuasiye will be targeted for voluntary resettlement. In both cases, resettlement will not be of the same form as resettlement programmes elsewhere in Ethiopia, as only local movements will take place, within the existing woredas around the park, or perhaps to Gondar if suitable areas can be found. Resettlement could benefit and be aligned with current land certification processes, and explore whether those people who have no land rights, may be moved out of the park in exchange for secure land tenure. Urban plots in local towns will be sought to offer to any park residents who wish to move to towns.

Action 1.1: Implement direct relocation of targeted park residents

In Arkuasiye, both regional and local authorities and most villagers have agreed that relocation from this vital wildlife corridor is a priority. No agricultural land from this settlement is included in the park boundary and most inhabitants are traders. This weekly market village will be relocated to a more favourable position at Chroleba on the planned new road to the Ras Dejen area, where the village's business traders can take advantage of easier transport and large market access.

In order to implement the relocation of Arkuasiye village to Chiroleba on the new Bwahit-Dilibza road, a task force will be established to outline and drive the process of voluntary relocation of the whole of Arkuasiye village. The task force will consist of members of PaDPA, SMNP, zonal, woreda and kebele representatives, as well as community members. This task force will draw up a detailed action plan to establish the mechanisms of relocation, but will include consultation work that ensures that the Arkuasiye residents are happy to remove and relocate their houses and shops, and that the terms and conditions of resettlement are understood by all parties. Signed agreements outlining the rights and responsibilities of all inhabitants and the park and local government must be drawn up that are legally binding and in accordance with national and international law. Costs must then be estimated and funding found both for the work of the task force and for the costs involved in the removal and relocation of houses and shops.

Action 1.2: Develop alternative livelihoods for SMNP residents

Residents of Gich are well aware that their livelihoods are unsustainable and that they have few livelihood options due to limited literacy levels. Livestock and agricultural holdings are very small and households are food insecure and dependant on food aid for up to 6 months of the year. Whilst some older residents are unsure about relocation and do not wish to move from their birthplace, many younger people are willing to move, given the right incentives. Movement of these people will create a positive example for others.

A project has been drawn up to create incentives and 'pull' factors that will attract the current residents out of the park and is outlined extensively in a project document (PaDPA 2007). The project proposes to establish 29 private businesses and cooperatives that will create new, acceptable, feasible and alternative sustainable livelihoods for current park residents, and support relocation and new housing costs. The project will provide all investments, including training and start up assistance where necessary, along with ongoing technical assistance for five years. In addition, the establishment of small grants and loans programmes inhabitants of the SMNP buffer zone. However, substantial funding (~$6 million) needs to be sought for this project before it can be implemented.

Objective 2: Cultivation reduced, controlled and negative environmental impacts mitigated

Ultimately all of the land area (7.6%) under cultivation in the park must be returned to a natural state, but this will not occur unless resettlement of remaining park residents occurs. Until that time, agricultural expansion must be stopped and existing land use controlled, whilst any abandoned fields are rehabilitated. In addition, better soil and water conservation techniques need to be implemented in farmed areas and are dealt with in the Ecological Management Programme.

Action 2.1: Halt expansion of agricultural fields

Although ultimately voluntary resettlement of people undertaking agricultural activities will be supported, the intermediate first step in reducing and controlling cultivation is a survey of all cultivated land. GPS references will be recorded for all field boundaries and the household using that land determined. Once land users have been identified, a process of determining user rights needs to be facilitated, whereby community members determine whether current users had rights to the land before the SMNP was gazetted, an appropriate cut-off date for establishing user rights. It is possible that some current users have moved in relatively recently and did not use land inside the park prior to 1969. Rules for managing these lands much be clearly described, discussed with rightful land users, and agreed in legally binding agreements between the park and community members. Penalties for violating the agreed rules must be laid out and understood and agreed by landusers. In addition, efforts to diversify livelihood strategies, with minimal environmental impact, must be implemented

Action 2.2: Rehabilitate degraded agricultural and grazing areas

Once the extent of agricultural land has been determined to rightful users and as resettled households leave their fields, existing degraded agricultural and grazing areas will be rehabilitated, in collaboration with Action 1.1.2 of the Ecological Management Programme. A soil and water conservation plan will be developed with the key stakeholder of the local woreda agricultural offices, who have the technical expertise to conduct this work. Areas will be prioritised according to importance for key species and ecosystem processes. Further information and activities are outlined under the Ecological Management Programme.

Park Operations Programme



E Park Operations Programme

Programme Purpose: Modern and adaptive systems of protected area management implemented and financed

Park Operations Strategy

This park operations strategy aligns the management and development of SMNP, its infrastructure, services and operations with the above programme purpose and with regional and national policies.

The principal national policy-level instruments relevant to the Park Operations Programme strategy and implementation are those relating to SMNP boundary agreement, demarcation and gazettement. Recent changes to the boundary of Simien Mountains National Park could be gazetted at the regional level, under the proclamation "Zikre Hig" No 96/2003, which lays out the legislation for managing national parks in Amhara NRS under the establishment of the Parks Development and Protection Authority of the ANRS. However, as the original SMNP gazettement was done at the federal level, degazettement of the old boundary followed by regazettement of the extended area will also be carried out at the federal level.

New regulations to implement the Wildlife Development, Conservation and Utilization Policy (2005) and 2007 Wildlife Proclamation (Proclamation 541/2007), are currently being published. In brief, they state that SMNP should be managed by the federal EWCA (although this could be reassigned for PaDPA to manage) and that no resource use of any kind is permitted in the park. Given the current high level of use by communities residing in and around the park this will require substantial investment in strong law enforcement and conflict management.

A set of principles designed to achieve the programme purpose and to guide all management decisions and actions, is outlined below;

Guiding Principles

- All park conservation activities are designed to maximize the protection of endangered and endemic species in the park and conserve the ERVs/OUVs
- Park operation activities will follow standard and proven procedures
- All park operation activities will be conducted inline with park rules and regulations
- Park management recognises that the collaboration and participation of stakeholders must underpin all management operations

Park Operations Programme 10-year Objectives

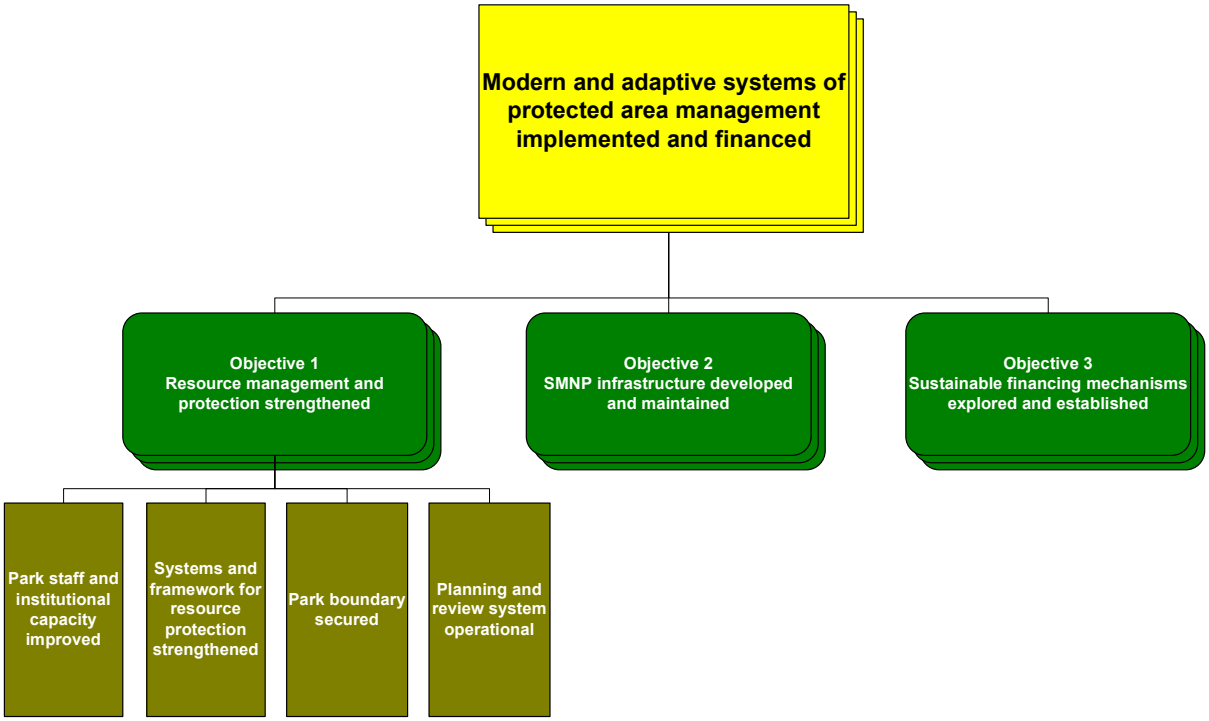


Figure E1: Framework for the SMNP Park Operations Programme, including programme purpose, objectives and sub-objectives.

Three 10-year objectives have been drawn up for the Park Operations Programme, using the guiding principles, to tackle the issues, challenges and opportunities identified by park stakeholders relevant to this programme. The objectives are:

Objective 1: **Resource management and protection** strengthened

Objective 2**: SMNP infrastructure** developed and maintained

Objective 3: **Sustainable financing mechanisms** explored and established

Sub-objectives have been formulated where appropriate, with associated actions, for these management objectives and are described below. In addition, a brief description of the relevant management issue or challenge is included, providing the justification for the actions. The 3-year Action Plan for the Park Operations Programme, which lists the activities, input requirements, priority, responsibilities and timeframe for carrying out the actions, is included in Section H.

Objective 1: Resource management and protection strengthened

In the future the resources of SMNP should be well protected within an expanded park and managed by an efficient and effective team of park employees, including scouts. Four sub-objectives have been devised to meet this objective, covering staff capacity, resource protection

systems, securing the expanded park boundary and ensuring that an effective and adaptive park planning and review system is operational.

Sub-objective 1.1: Park staff and institutional capacity improved

The staff and capacity of the SMNP has been considerably strengthened in recent years, as resources have been allocated from PaDPA and partner projects and capacity development initiatives have been implemented. However, gaps still remain both in the number and quality of staff, their commitment to their work and the institutional structure of SMNP. This is particularly important with reference to scout numbers and capacity as they are at the front-line of resource protection activities and thus must be properly trained, equipped and managed to ensure that they are motivated, effective and professional. The following management actions have been developed to address these issues.

Action 1.1.1: Establish effective institutional capacity for SMNP

The current park management structure, staffing levels, duties and allocation of financial resources will be reviewed to ensure that these are adequate for all responsibilities of SMNP management to be met and to implement this GMP (see Figure E2). This review will critically analyse responsibilities, job descriptions and salary levels within the civil service structure. The output will be the design of an appropriate overall and modern park management and operations structure. This will be implemented through discussion relevant authorities to create or restructure new posts, rewriting job descriptions and then filling posts through retraining existing staff or appointments as appropriate. This restructuring will maximise SMNP management efficiency, but should also be reviewed mid-way through this GMP as part of the ongoing monitoring and evaluation of implementation effectiveness.

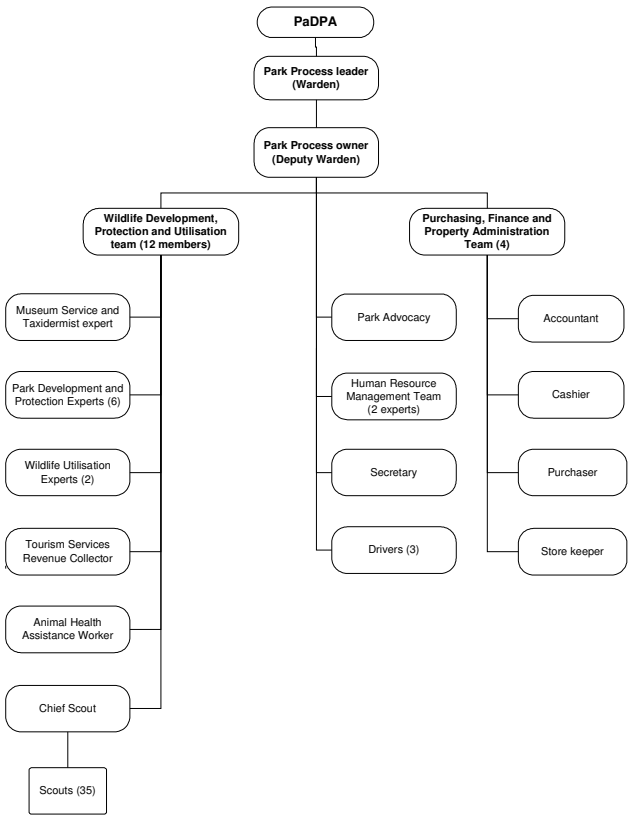


Figure E2. Current staffing structure of SMNP

In addition, equipment needs for all departments must be identified, prioritised and supplied throughout GMP implementation as funding allows. It is imperative that equipment lists are prioritised and essential equipment actively acquired rather than only some non-priority items form a long list of non-essential equipment being obtained.

Action 1.1.2: Facilitate short term and long term training for SMNP staff

A human capacity needs assessment must be carried out based on the recommended institutional structure and capacity for SMNP management from Action 1.1.1 above. After appropriate training opportunities and options have been explored and identified, a training plan must then be drawn up and implemented as funding allows. Experience sharing visits to other protected areas both within and outside Ethiopia will be particularly valuable once staff are settled and are implementing their jobs effectively and can thus expand their knowledge and outputs after these trips. Particular capacity gaps are also identified under other management programmes thus such initiatives must be cross-referenced.

SMNP scout training must be undertaken as a separate activity. To maintain motivation and effectiveness it is imperative that the scout corps is trained and retrained regularly, ideally every 6-12 months. Once trainers are trained this can be conducted 'in-house'. Undoubtedly there will be a requirement for new scouts to be hired, thus the first training course conducted once GMP implementation begins, should also include a selection course. The initial training should be conducted by a reputable international scout training unit according to the following training pattern:

1) minimum two-week training of trainers course, including officer/management training
2) selection course that could include current scouts to identify those who might only be able to undertake lighter (non-field patrolling) duties in the future
3) six week training intensive courses for all scouts, including at least two weeks conducting field operations and learning by doing

Training curricula

The trainers and officer/management training course must cover, beyond the standard training techniques:

1) maintaining motivation and discipline
2) in depth background to conservation in the Ethiopian context
3) legal framework and how to manage resource protection effectively within this
4) effective delegation
5) planning and coordinating resource protection patrolling and other activities
6) monitoring and evaluating resource protection effectiveness
7) reporting
8) developing and conducting a training schedule
9) intelligence gathering

The six week course should be tailor-made and must cover the following priority areas:

1) general background to policing and resource protection
2) general conservation and natural heritage protection
3) discipline, motivation and teamwork
4) community relations
5) conflict management
6) patrol planning and tactical patrolling
7) legal framework (federal, regional and local bye-laws), rights and responsibilities
8) arresting powers and procedures
9) weapons handling and use (if necessary)
10) ranger-based-monitoring
11) the role of intelligence gathering

Resource protection effectiveness must be monitored (as per Action 1.2.1) to ensure patrolling and coverage is effective, community relations are not compromised and that the scout corps remain motivated. The evaluations of these monitoring outputs should feed into the ongoing training schedule that is planned annually. As funds allow external trainers should be brought in to retrain the trainers and to add variety to the scout training.

Action 1.1.3: Create incentive mechanisms for staff

Staff morale must be continually addressed to maintain effectiveness. One of the strategies, beyond training, to achieve this is recognition and reward. A resource protection reward system must be developed with input (into the method of reward allocation, not the value) from the resource protection staff. Reward systems for staff in all park departments must then be created with similar input to design. These performance-related reward systems must be clear and transparent and designed to set out the standards of work and regulations that park staff must adhere to. Transparent evaluation procedures are fundamental to success.

The incentive mechanisms developed must be clearly tied to job descriptions as well as to the government procedures relevant to job performance and disciplinary action. Thus the ability to sanction underperforming staff is central to the incentive scheme.

Sub-objective 1.2: Systems and framework for resource protection strengthened

Action 1.2.1: Maintain an effective patrolling system for resource protection

Annual patrolling plans for the SMNP must be prepared, based on the distribution of outposts and scouts and terrain, as well as knowledge of the greatest threats to the PECs. The underlying principle of SMNP patrol coverage is that every part of the park (even the most inaccessible places) should be reached by a patrol on a monthly basis at the very minimum to ensure effective law enforcement, tourism management and community liaison. Annual patrol planning must be inclusive and involve field staff at each outpost, as this will assist acceptance of its design by all resource protection staff thereby ensuring future accountability. The annual plans will then guide patrol leader preparation of monthly or bi-monthly patrolling plans based on the annual plan and the previous patrol periods reports and coverage to ensure that patrolling maintains coverage whilst reacting to changes in threats or other ranger-based monitoring (RBM) requirements.

Resource protection monitoring systems must be established to ensure that patrolling is effective – in terms of combating threats, meeting other requirements (e.g. RBM needs), coverage and also understanding shortcomings (e.g. decreased motivation or discipline, staff shortages, equipment needs, etc.). Initially patrols should report by filling in a daily report form, if there is a literate scout on that patrol. If this is unfeasible then using voice recorders for later transcription must be investigated. All report forms should be collated and submitted to HQ at the end of each patrol cycle (be this 2 or 4 weeks). In addition, outposted scouts should keep handwritten map records at outposts for their own reference and planning. One member of SMNP HQ staff must be dedicated at least 25% time to entering patrol report forms and producing coverage and incident feedback maps (be these drawn on photocopies, or ideally printed from a GIS system). These feedback maps and reports should be produced within a week of patrol report forms being submitted to enable immediate planning of future patrols.

Resource protection monitoring systems should be continually upgraded as this is the best and most consistent information on what is actually happening on the ground. Once GPS's and radios are acquired then the use of these to report patrol positions, ideally two or three times a day at set times, as well as more regularly on report forms should be investigated. If illiteracy renders this impossible the use of fixed tracking GPS systems that can be carried by a patrol leader and downloaded later should be investigated.

Action 1.2.2: Create a mechanism for local community participation in resource protection

Using the kebele park advisory committees (KPAC) as a means of dialogue between SMNP management and communities, working guidelines for community scout (CS) operations with government scouts must be developed, discussed and agreed. These must include the modalities for CS selection and monitoring. CS's will be selected in all kebeles, trained together with the government scouts, equipped and integrated into the SMNP reward and incentive system. Once operational, the effectiveness of CS involvement in resource protection must be monitored and evaluated.

Action 1.2.3: Review and reform existing laws

A workshop will be held to examine the laws pertaining to resource protection in SMNP and identify any gaps in legislation. Policy and legislators at both regional and federal level must be included in the workshop to advise on amending existing legislation particularly at the bye-law level. Support will then be given to the relevant government departments to draft revised and suitable legislation for submission to the appropriate authority.

Action 1.2.4: Solicit support from judiciary and police

Resource protection systems are underpinned by law enforcement which requires synergy and understanding at all levels of the legal system. Typically laws pertaining to protected areas are not well understood amongst local police and judiciary who are not trained in this speciality. Local workshops must be held in each woreda to raise awareness and discuss the implications of laws relevant to protected areas. This must be followed up by regular meetings between SMNP and the local police, judiciary and other leaders.

Action 1.2.5: Improve awareness of SMNP legal framework in local communities of SMNP

In the area around the SMNP, community members still have limited understanding of the legal status of the park and of the laws and procedures that can be enacted to enhance its protection. KPAC meetings are a good forum for structured discussion on this topic, awareness raising and for information sharing and thus this issue must be regularly incorporated into meetings.

Sub-objective 1.3: Park boundary secured

A process that has doubled the size of the Simien Mountains National Park and excluded some settlements from the park, has been ongoing since 2006 and is one of the revised benchmarks set by UNESCO to remove the SMNP from the UNESCO WHS 'In Danger' list (see Section B). Key remaining areas of Afro-alpine habitat in the region, including the Lemalimo and Mesarerya wildlife reserves, the Silki Yared – Kiddis Yared Mountains and the peak of Ras Dejen have now been included in SMNP, but at the time of writing, although the boundary has been agreed with local communities, demarcation and de- and re-gazettement are still required.

Action 1.3.1: Finalise and demarcate park boundary

Demarcation of the new park boundary in the extension area, through the placement of beacons at strategic locations must be discussed with the KPACs and a demarcation committee formed in each kebele. These committees will agree the process of demarcation with the SMNP, locate boundary beacon sites and make a record of GPS location and physical features. Finally, boundary beacons will be erected.

Action 1.3.2: Regazette SMNP and review boundaries of World Heritage Site

The SMNP was gazetted at the federal level and thus de-gazettement with re-gazettement of the extension must also be enacted federally. A boundary description, including the GPS locations and a physical description of the boundary will be prepared. This will then be submitted by PaDPA to EWCA for consideration by the Federal Council of Ministers. Once the SMNP is regazetted the WHS boundaries should be reviewed with UNESCO and brought into line with the current distribution of the OUVs and the park area.

Sub-objective 1.4: Synergistic, collaborative and adaptive planning and review system operational

Strategic and operations planning is crucial for any organisation to ensure a common purpose and for aligning financial and human resources. Within government systems, it is also essential for budget requests and management. At both regional and federal level in Ethiopia, emphasis has recently been placed on business planning re-engineering, supported by a balanced scorecard system of monitoring and evaluation, in order to help implement more effective and transparent management and governance. Thus it is vital that adaptive planning is a core part of SMNP activities and that the GMP action plans are regularly reviewed in the appropriate cycle. The following actions have been developed to achieve this:

Action 1.4.1: Review and implement GMP monitoring and evaluation plan

The monitoring and evaluation framework developed as part of this GMP is currently too extensive for implementation. Prioritisation of indicators must take place as implementation of specific strategies commences, according to which strategies may be most uncertain in their effect, to ensure early warning of change in threat status can be detected and so that indicators are spread along the results chain from output, through outcomes to impact. In the plan-implement-review cycle, the backward look (review) is as important as a forward plan, but is a component that is often poorly carried out or documented. Annual review meetings should be held to monitor and evaluate the implementation of the GMP, management effectiveness and the impact of GMP implementation, as outlined in the Monitoring and Evaluation Section of this GMP. This action will therefore not only provide a key "review" component of the planning and management cycle, but also be the basis for an adaptive management system that is flexible and responsive to changes in context. Baseline assessments need to be undertaken once the GMP is approved, for example of the Management Effectiveness Tracking Tool (METT) score and then regular monitoring systems need to be integrated into work plans and annual operational planning and reporting. A report should be produced of results achieved and why actions were not carried out or require adaptation.

Action 1.4.2: Improve annual and quarterly operational planning and budgeting

The 3-year Action Plan within the 10-year strategic framework of the GMP will be the basis for annual work plans and used in all planning activities. However activities under this action will ensure that the whole management team is involved in regular planning and that budgeting is aligned with activities, with realistic outputs and timelines that take into account the financial, human and technical capacity available. Reprioritisation and assessment of appropriateness of actions and activities identified in the 3-year Action Plan, in line with changing circumstances and new knowledge is a key component of implementing an adaptive planning and budgeting system. Part of the planning process also requires the clear allocation of responsibilities to staff members (and potentially linking this to appraisals and rewards) so that implementation will take place.

Action 1.4.3: Develop next 3-year Action Plan for 10-year GMP

In order to ensure that subsequent rolling 3-year Action Plans within the GMP are produced in a timely fashion, protected area planning will be built into management structures.

Objective 2: SMNP infrastructure developed and maintained

Professional and effective protected area management requires quality, well designed and well located infrastructure to support management activities. Protected area headquarters need to provide accommodation for senior staff and scouts, storage and garage facilities, be a hub of both internal and external communications, and have sufficient office space and ancillary services. Access to outposts and the park must be assured, through a network of management roads and tracks. In SMNP, the new government road from Debark to Mekene Birhan passes through the park for 57km and plays great economic and social role for the Janamora and Beyeda woreda communities. It does, however, have a negative environmental impact and actions to reduce this impact are included in the ecological management programme.

Action 2.1.1: Construct, rehabilitate and equip outposts

Scout outposts must be strategically located to maximise patrol coverage, communication and comfort (see Action 1.2.1). Currently, there are 8 permanent and 1 temporary outposts in SMNP, of which five have been newly constructed by the Austrian IDP project and one is under construction. These new outposts consist of two buildings and provide living and sleeping space for 4 scouts with their families. Development of sub-HQs (Sanaka-Ber, Dilyibiza and Mekane Birhan) and of another 7 new outposts in the park extension area (Limalimo and Sugsug in Debark woreda, Bashaye, Abari, Sabra, Salawa, Adislemlem in Beyeda woreda and at Bama, Kilil and Majji in Janamora woreda) are the priorities for the first 3 years of this GMP (Fig. E2). The existing outposts at Gich, Chenek and 2 other locations also require some upgrading and also rehabilitated according to stricter aesthetic and environmental standards. Solar power and water facilities either need further development or better maintenance at existing outputs (7 of the current outposts have solar panels). Further storage facilities are also required at HQ.

Action 2.1.2: Develop an efficient park transport system

SMNP currently has 3 old vehicles which are used to access the highland areas of the park, visit neighbouring woredas and for HQ needs. All patrols are done on foot. The lowland area of the park is only accessible on foot or horseback due to steep gorges and difficult terrain. At some points, cables and wooden ladders were used to move between the highlands and the lowlands over the escarpment, but many are no longer functioning due to old age, flooding or other damage. Further vehicles are required for efficient protected area management, and sub-HQs would ideally each be assigned a pickup or other transport. With further and replacement vehicles required at HQ, a growing vehicle fleet would mean that at least routine maintenance activities might need to be conducted in Debark. A basic park garage, with appropriate infrastructure and equipment needs to be established and appropriate staff employed. Control systems for all vehicles must be developed and implemented.

Action 2.1.3: Develop an efficient communication network

Good communication within the park and to partners and stakeholders underpins efficient park management and particularly security for park staff and tourists. SMNP has an HF radio system between HQ and 6 of the outposts, but it is no longer functioning. Mobile phones are now being used for this purpose. Ideally a VHF radio system would be put in place for outposts to communicate with patrols and HQ. This requires experienced network design to ensure good coverage, licences and rental of frequencies from the federal government as well as equipment purchase and installation. Furthermore staff must be trained in radio communication and maintenance. A fast internet connection at HQ is now essential for efficient communication and information searches to back up the fixed telephone system now in place.

Acton 2.1.4: Provide modern field equipment to staff

Currently scouts are not fully equipped with quality technical or camping equipment which is essential to support patrolling and other park operations in Simien's harsh mountain conditions. A master checklist of necessary equipment for scouts and experts (e.g. camping equipment, uniforms, cold weather clothing and technical equipment [binoculars, GPS, compass, first aid kits]), needs to be drawn up, with prioritisation and replacement schedules, before equipment can be sourced and procured as funds allow.

Objective 3: Sustainable financing mechanisms explored and established

Although the SMNP budget is currently greater than for any other protected area in Ethiopia, and considerable support has been provided by the Austrian Development Cooperation over the last decade, there are still insufficient financial resources for the optimal management and development of SMNP. Over the last years, the budget allocated from PaDPA for both salaries and recurrent expenditure has increased (Table E1). Income to the park from tourists has been roughly equivalent to expenditure and a similar amount has been estimated to have been received by communities for services provided, such as horses, employment etc. However, no capital

investment has been provided by government in these years, with the ADC-IDP providing this component for park development.

Table E1. SMNP budget and revenues 1997-2000

Year (EC)	Budget allocated (Ethiopian Birr)			Revenue collected from tourists	
	Salaries	Recurrent costs	Total Budget	Amount returned to government	Estimated financial flow to communities
1997	349,902	216,177	**566,079**	616,146	736,567
1998	390,914	238,201	**629,115**	593,678	745,049
1999	388,411	296,220	**684,631**	828,721	930,400
2000	418,263	293,094	**711,357**	*737,293**	*787,425**

* 5 months only to Feb 08

Sustainable financing is now a key objective in the international conservation sector for protected areas and this is as important for SMNP as anywhere else. In order to realise the many ideas and sources of funding, SMNP must be well organised and focused. One of the key methods used to achieve this is business planning. The business planning concept for protected areas is now well entrenched through the Conservation Finance Program of the Wildlife Conservation Society (WCS) and the World Conservation Union (IUCN). Conservation business plans have been developed for the wildlife sectors of Madagascar, Rwanda, and Zambia and the forest sectors in Uganda and Rwanda. The new GEF-PASP project for Ethiopia includes business planning as a key objective and should be able to support initiatives in SMNP.

Action 3.1.1: Explore and capitalise on immediate options for revenue generation

Efforts to increase revenue generation could be targeted at realising internal or external finance and by pursuing innovative sustainable financing initiatives. Internally efforts could be made to increase government budget allocation by clearly justifying the increased commitment to safeguard the total ecosystem value and through the park extension. Additionally or alternatively, a system for revenue retention could be investigated for SMNP. Other internal mechanisms will include better use of funds, cost reduction where possible and improved financial management systems. Additional funding must also be sought from a variety of sources. For example, sponsorship might be available from commercial interests who use the Simien trademark. Within Ethiopia, small and medium sized funds are sometimes available through Embassies or Small Grants and there are a number of international funding organisation that could be approached with project proposals. Long term relationships with partner organisations, such as the ADC or FZS should also be fostered and supported. In addition, park expert capacity to apply for and manage external funds will be increased.

Action 3.1.2: Prepare and adopt a business plan for SMNP

Business plans lay out the potential and mechanisms for improved financial management and flows and are used for management, strategic planning and communication with key stakeholders. They are effective marketing instruments that should be widely utilized. The key elements of a protected area business plan include identifying the sustainable funding options for the sector with detailed elaboration of the funding situation, gaps and options; and a strategic framework for ensuring cost effectiveness through enhancing revenue generation and cutting costs. A business plan for SMNP will pull together the information and actions detailed elsewhere in this financing objective and build these into a comprehensive road map to sustainable financing. External expertise and finance will be required to implement this action and may be available from the GEF-SDPASE project and from BMNP.

Action 3.1.3: Investigate potential of obtaining payment for ecosystem goods and services

Although sustainable financing mechanisms for protected areas and payment for ecosystem services are beginning to be developed at the international level, these funding mechanisms have yet to be fully explored and implemented in Ethiopia. Potential funding opportunities might include payments for SMNP ecosystem services such as carbon sequestration, watershed protection and biodiversity/genetic conservation. However, with the realisation of these opportunities being a complex and technical task it is clear that additional external technical expertise and funding will be required to assess the feasibility of obtaining such payments, let alone their realisation.

F

Tourism Development and Management Programme



F Tourism Development and Management Programme

Programme Purpose: Tourism in SMNP developed, diversified and managed sustainably through community-government-private partnerships, thereby enhancing the conservation of the SMNP and contributing both to the livelihoods of local communities and the national economy.

Tourism Development and Management Strategy

Globally, tourism has been a major growth industry for some decades and has been an important means of economic development in many countries. In Ethiopia, the sector has grown over the last two decades, but it still seen to be underperforming given the considerable potential conferred by Ethiopia's unique cultural and biological heritage. The Ethiopian tourism sector now constitutes about 2 per cent of GDP, and accounts for 15 per cent of foreign currency earnings, which in 2003 amounted to $77 million. Underperformance of the sector stems from inadequate infrastructure, services and management of tourist attractions.

Currently, the development of the tourism sector is a focus of Ethiopian Government attention as a one means of assisting poverty alleviation. Culture and Tourism have been incorporated into their own Ministry (MoCT), in which the new Ethiopian Wildlife Conservation Authority is also positioned. Wildlife tourism is therefore seen as one a core element of tourism development in the country. Tourism policy is being drafted at both national and regional level, with specific objectives to increase the quality and quantity of tourism services, infrastructure, increase the participation of local communities and benefit flows to communities, develop human resources in the sector, improve tourism promotion nationally and internationally and finally, embrace the participation of the private sector. However, the policy also states that tourism development must not be done at the expense of the conservation of the cultural and natural heritage on which tourism depends and thus that development must be sustainable. This approach is further enshrined in the Environmental Policy of Ethiopia (1997) which seeks to ensure that essential ecological processes and life support systems are sustained, biological diversity is preserved and renewable natural resources are used only when their regenerative and productive capabilities are maintained and where possible enhanced, thereby avoiding compromising the needs of future generations.

Wildlife and environmental tourism in Ethiopia has been particularly under-developed. However, associated with investment by the Amhara NRS and the Austrian IDP, visitors to the Simien Mountains National Park have increased significantly since 1999 (Fig. F1) and there are now some 7000 arrivals per annum, with most visitors coming during the drier months, October-April. Correspondingly, revenue collected for the park and income generated for the local community have increased proportionately (Fig. F2). If the local annual growth rates of 16-19% continue, this figure could double to some 14,000 in five years time (although this is unlikely), if infrastructure development kept in pace.

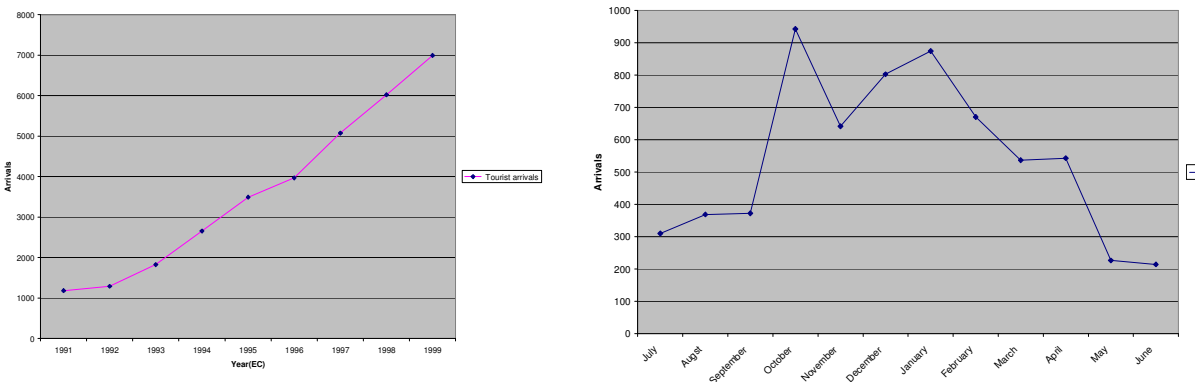


Figure F1: Temporal and seasonal trends in tourist arrivals in SMNP

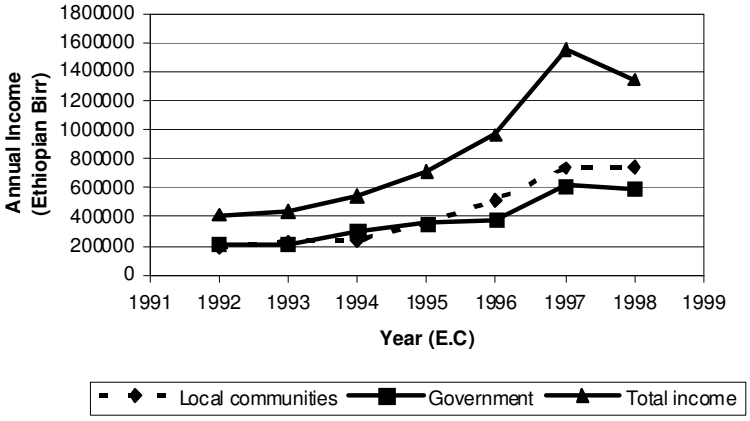


Fig F.2. Tourism revenue trends (SMNP Tourism Master Plan, 2007)

This potential growth presents both opportunities and challenges to the Simien Mountains National Park. Tourism should become an important tool for SMNP management, through generating income for the park and employment and economic opportunities for local communities, thus becoming a driver of the local economy. Currently park fees are very low, when compared to fees elsewhere in East Africa (Tourism Plan, 2007) and even Southern Africa where fees have been set to ensure the parks are accessible to the local middle class. However, in the last 3 years, the revenue direct received from visitors to SMNP, even with the current low park fees, have effectively covered the recurrent budget of the park, thus illustrating its potential as a financing tool (Table F1).

Table F1. Expenditure and Revenue Comparison Table

Year (E.C)	Revenue	Recurrent budget	Deficit/surplus (Revenue-expense)
1991	N.A	343,900	-
1992	216,303	353,600	-137,297
1993	209,579	371,400	-161,821
1994	302,614	511,200	-208,586
1995	357,444	N.A	
1996	380,001	N.A	
1997	616,147	566,079	50,068
1998	593,678	629,115	-35,437
1999	828,724	684,631	144,095

However, considerable capital costs are required to develop the park and it is unlikely that tourism income could cover this investment at the current time. As recurrent costs will also increase with park development and inflation, and as the tourism market is dependant on global security and economy, caution must be applied so that a protected area has diverse and sustainable income sources. Currently all revenue goes to the regional government, however potential exists, and is recommended by policy (see above), for revenue sharing with communities.

Tourism can, however, also have detrimental impacts in environmental and socio-cultural terms, for example through direct damage to the SMNP ERVs or through adverse cultural or social influence on local people (see table 2, SMNP Tourism Master Plan, 2007). Moreover a bad experience for visitors can also have an adverse effect on future visitor numbers. Thus tourism development and the visitor and community experience must be carefully managed in SMNP in order to recognise its great potential, whilst the avoiding pitfalls presented by a volatile industry and the destruction of the natural and cultural resources on which tourism and the visitor experience depends. The SMNP Tourism, Master Plan incorporates a SLOT (Strengths, Limitations, Opportunities, and Threats) analysis for SMNP tourism development, after consultation with stakeholders and experts (Table F2) and is reproduced here as it provides key points that have been taken into account during the development of this GMP programme.

Table F2. SLOT analysis for tourism development in SMNP

Strengths	**Limitations**
• Unique biodiversity, some easily visible • Spectacular and unique landscape • Location on Gondar, Lalibela, Axum circuit • Ras Dejen, Ethiopian highest peak • Some infrastructure for camping • Road access to some areas of park • Private lodge at Buit Ras • Debark information centre • Welcoming people • Local culture and traditions • Some contribution to community livelihoods and local economy	• Poor integration with some key stakeholders eg Ethiopian airlines • No revenue sharing scheme with communities • Poor campsite facilities • Infrastructure integration for access and services (roads, banks, telecommunications, air) • Poor promotion nationally and internationally • Poor accommodation and services around the park • Poor skills and capacity of SMNP staff • Seasonality of tourist arrivals • Poor facilities for tourism support staff • Little souvenir production • Fee structure out of date • No tourism management system, including databases
Opportunities	**Threats**
• Tourism growth in SMNP and internationally • Natural World Heritage site • Government interest and development of policy and strategy for tourism development • Economic incentives for private sector • Austrian Government commitment • Tourism potential to support for wildlife conservation and community development • Provision of agricultural products to tourists	• Increasing competition nationally and internationally • Security and economic-related volatility in world tourism markets • Expansion of settlements and human landuse in the park area • Deterioration in the SMNP ERVs • Cultural pollution of local communities

The Tourism Development and Management Programme, (TDMP), based on the SMNP Tourism Master Plan 2008-13, has been formulated from the issues highlighted in the SWOT analysis and has been developed in accordance with current and draft policy and legislation. Moreover, the following principles drawn from the above documents, will underpin the Programme design and implementation, policy and legislation development and discussions with stakeholders.

Guiding Principles

- Tourism in SMNP will provide a basis for economic development and employment locally and provide direct revenues for the conservation and management of the exceptional resource values and indirect community benefits
- Tourism will generate optimal benefits whilst being economically, socially and environmentally sustainable.
- Benefits to communities from tourism should be distributed widely geographically and equitably within communities
- Tourism will be developed to incorporate and promote socio-cultural aspects of the local communities
- Visitors, whether international tourists, members of the local community or the wider stakeholder community should have a learning and enriching experience
- Quality services and infrastructure development will be in keeping with the scale and character of the local landscape and aesthetically pleasing, thus enhancing the visitor experience
- New infrastructure should be built outside the park

Tourism Development and Management 10-year Objectives

In 2007/8 a 3-5 year Tourism Master Plan was developed for SMNP by national consultants under the SMNP-IDP. The Strategy, Objectives and Actions in this Tourism Development and Management Programme are extracted and adapted from the SMNP Tourism Master Plan.

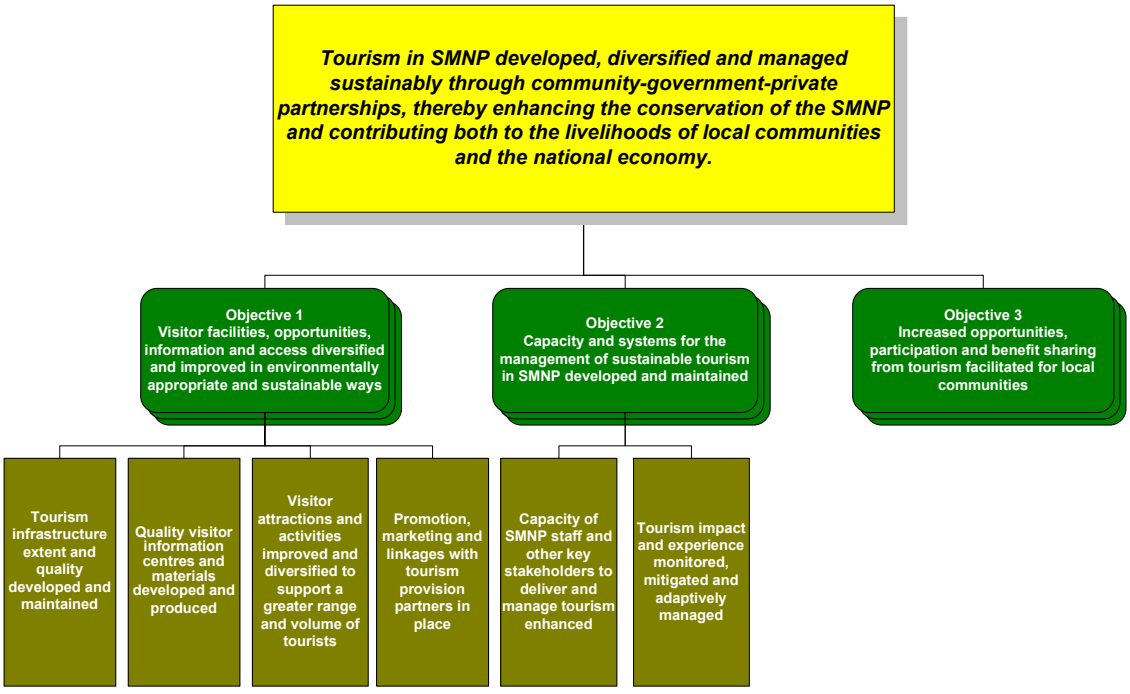


Figure F3: Logical framework for the Tourism Development and Management Programme, including programme purpose, objectives and sub-objectives.

Three 10-year objectives have been drawn up, using the guiding principles, to provide the strategy for achieving the programme purpose, thereby tackling the issues, challenges and opportunities identified by park stakeholders relevant to this programme. The objectives are:

Objective 1: **Visitor facilities, opportunities, information and access** diversified and improved in environmentally appropriate and sustainable ways

Objective 2**: Capacity and systems** for the management of sustainable tourism in SMNP developed and maintained

Objective 3: Increased **opportunities, participation and benefit-sharing** from tourism facilitated **for local communities**

A series of sub-objectives have been formulated where appropriate, with associated actions, for these management objectives and are described below. In addition, a brief description of the relevant management issue or challenge is included, providing the justification for the actions. The 3-year Action Plan for the TDMP, which lists the activities, input requirements, priority, responsibilities and timeframe for carrying out the actions, is included in Section H.

Objective 1: Visitor facilities, opportunities, information and access diversified and improved in environmentally appropriate and sustainable ways

To fulfil the potential for tourism in SMNP, visitors should be able to enjoy a variety of high quality tourist experiences, with minimal impacts on SMNP exceptional resources or the socio-cultural attributes of local communities. Four sub-objectives have been developed to achieve this objective, focussing on infrastructure, visitor information, diversifying tourism activities and improved promotion and access.

Sub-objective 1.1: Tourism infrastructure extent and quality developed and maintained

Tourism development in SMNP is ultimately dependant on the availability of infrastructure and facilities inside (e.g. camp sites, lodges, viewpoints, trekking routes) and outside the park area (e.g. banks, road and air networks, hotels. See also SO 1.4). The provision of quality and diverse facilities in the next 10-year thus underpins the potential carrying capacity and therefore revenue for SMNP as well as setting the quality of the tourism experience.

Currently most of SMNP tourism revolves around trekking between basic campsites and visitors have had to essentially be self-sufficient in providing camping equipment (although these can be rented locally from ecotourism societies). The construction of one private lodge just outside the park at Buyit Ras has significantly increased the range of accommodation and thus has opened it up to another tourism sector.

Tourists can currently camp at 7 outposts with basic facilities of water and toilets provided. (Table F3). Showers are available at Gich and a kitchen and communal shelter available at Chenek and Gich. In addition, the park runs a campsite and a bunkhouse with toilets, cold showers and kitchen at Sankaber and community lodges have been set up at Gich, Adisighe and Miligebessa, facilitated by the Austrian SMNP-IDP project. However, further development of less basic facilities at other sites in or around the park will be required to attract other sectors of the tourism market. In addition, where diversification of tourism activities is considered, additional infrastructure and

accommodation at appropriate sites will be required. Generally infrastructure for tourism or park management should be situated outside the park boundary, but in certain cases, where it does not conflict with the park purpose, infrastructure may be situated inside the boundary.

Throughout Ethiopia (and other developing countries) infrastructure maintenance, hygiene and service standards are a recurring problem and usually do not meet international standards, thereby reducing visitor satisfaction. Infrastructure is often poorly constructed, with poor quality fittings which are rapidly broken and then not repaired. Toilets are a recurring issue in tourism provision . In addition to hygiene problems, older tourists are unused to squat toilets and may not have the leg strength to use them. Infrastructure developed for market sector must be able to provide seated environmentally sensitive toilets. Maintenance of hygiene standards does not require capital investment, but just better training and management, along with clear codes of conduct and standards. Similarly, routine attention and maintenance is required of all infrastructure, often at low cost, but maintenance systems need to be developed.

The following actions have been formulated to achieve this sub-objective.

Action 1.1.1: Extend and maintain campsite network

The Tourism Master Plan identifies a further 17 sites that could be developed, particularly in the park extension area (Fig E4). These need to be prioritised for development and funds sought for infrastructure such as toilets, communal shelters and water provision. Additional infrastructure development, such as information points, or to provide camping supplies, should be concentrated at existing sites and outside the park. Campsites concessions may be given to community ecotourism associations to operate, both to optimise income to the communities and to minimise the burden on SMNP management. Waste disposal management will be improved.

Action 1.1.2: Extend and promote trekking route and viewpoint network

Trekking routes potentially have a major role in providing access to the whole park and in spreading the tourist load throughout the park, thereby spreading the impact of tourism. Routes need to be designed and promoted accordingly. Eleven highland trekking routes (six lasting for a week or more) and one long lowland route are detailed in the TMP, but their viability and impact on visitor loads needs assessed through further business planning. However, longer trekking routes are attractive to only a subsection of tourists, as many do not have the time or inclination to walk for over 6 days. In addition, method of easily re-supplying such expeditions is required, as carrying enough supplies for a long period is logistically challenging. Identification of viewpoints for both landscape and perhaps wildlife are also an important component of tourism provision. However little infrastructure is required at viewpoints and most international visitors would prefer them to be left in a natural state. Where infrastructure is developed it is essential that it is environmentally and aesthetically appropriate for both national and international visitors.

Action 1.1.3: Develop and implement lease concession procedures, standards and agreements for private and community stakeholders

Transparent procedures for determining the location and type of tourism concessions in SMNP, how they are made available and the full tendering procedure need to be developed with the relevant environmental socio-cultural and business communities. Prototype agreements with guidelines and a checklist of issues that need consideration and inclusion will be drawn up. In addition, development standards that ensure minimal environmental impact will be finalised and integrated environmental management implemented.

Action 1.1.4: Determine location for the construction of community-private partnership eco-lodges and facilitate development

The TMP identifies two potential sites for new lodges, at Anya Meda and Chenek. The model of a allocation of a concession to a community-private partnership has been proposed, with the idea that service standards and community benefit-sharing will be optimised. The role of SMNP is to facilitate and confirm the site selection, development and operation of these lodges and assist community negotiations for maximising benefits. However lessons learnt from the social and economic challenges of operating the existing lodge need to be considered when business planning and examining the viability of new businesses.

Action1.1.5: Establish and maintain standards for infrastructure and hygiene for all park-associated tourism infrastructure

A number of facilities in SMNP are directly managed by SMNP authorities, such as the visitor centre and toilets in Debark and the campsites throughout the park. Other facilities are community or privately managed. Triple bottom line development standards for tourism and all infrastructure are that they should be environmentally, socially and economically sustainable and detailed standards need to be developed for SMNP tourism infrastructure. It is essential that all facilities, under all ownership types, are maintained to a high material and hygiene standards. Enteric infections are common amongst travellers in Ethiopia and thus food preparation hygiene standards must be exemplary. Both park staff and staff in concessions will be made aware of the standards of hygiene required in tourism facilities. SMNP management will work with health services and tourism providers to raise standards, ensure all staff gain appropriate training and implement a hygiene management and inspection system. Moreover, building maintenance schedules will be drawn up, with checking and repair systems, and staff trained to implement these systems. Schedules then need to be integrated into job descriptions and annual operation plans.

Sub-objective 1.2: Quality visitor information centres and materials developed and produced

In order for visits to SMNP to be an educational and enriching experience for all visitors, whether national or international, good quality interpretation and information must be available in appropriate languages. High quality, easily accessible and relevant information will enhance park users' understanding and appreciation of the park's ERVs, stimulate users' interest on the issues facing the park and local communities, increase support for conservation, whilst also providing clear guidelines on park use. In determining how best to use visitor information and interpretation to build public support for conservation, managers may wish to consider (i) What should they be promoting (ii) Where are the key places where they should try to inform and educate visitors and (iii) Which are the most important visitor groups with which to communicate and interact?

Currently there is an information centre at the park HQ in Debark, develop in a previous phase of the Austrian-IDP project, but the displays are limited and could be greatly improved to international standards. Improved education and information materials can also be used for SMNP promotion, but considerable work and professional input is required to determine and clarify the messages that are put to visitors, whether national or international.

Action1.2.1: Plan and produce quality display materials for Debark interpretation centre

Upgrading the current interpretation centre to international standards and ensuring that it can also be used for the education of all park users (national and international visitors, government and policy makers, researchers) is a priority for this GMP, if funds can be raised. Materials need to be designed by experts and stakeholders to ensure the right messages are put across in appropriate media. Information will be displayed in Amharic and English at the very minimum.

Action 1.2.2: Plan and develop interpretation points in other areas of the park

Appropriate, small interpretation points at key sites, that might explain key features and the importance of sites could also enhance and diversify the visitor experience. For example, information could be available at the park gates and lodges/campsites and could take the form of leaflets or permanent displays. Up to date research on the ERVs should be incorporated into all information.

Action 1.2.3: Produce, update and distribute high quality visitor information and promotional materials, particularly a guidebook and map

Materials should be attractive and printed to a high quality standard. The content of materials should be appropriate for the target audience, but should encourage people to understand the rationale for SMNP and to take more active and responsible roles in how they interact with SMNP, its management and its resources. A new interpretative guidebook is a priority for the park that includes information on the park history, significance, local cultures etc., as well as a trekking map. In addition, brochures, postcards, film synthesis on DVD and souvenir products (caps, badges, T shirts, etc) are all potential informative and promotional materials that could be developed.

Brochures that outline tourism options in SMNP should then be distributed nationally to marketing institutions and also for the in-country market, including foreign embassies. Guidebooks and maps will be made available for purchase in the interpretation/visitor centre and distributed nationally for sale. A revolving fund, where revenue collected is put aside for future preparation and printing costs, is already in place for the sale of postcards, and will be expanded. Input will also be provided to the website developed under the Outreach Programme.

Action 1.2.4: Determine signposting needs and build and maintain appropriately

Signposting in SMNP is currently limited and existing signposts are poorly designed and illegible (TMP, 2007). With the development of branding for SMNP (see SO 1.4), signpost design should incorporate the new corporate identity, but should also be locally appropriate and aesthetically pleasing, as well as durable in weather conditions. However, it is vital that signposting in the park is restricted to key points only and that all signs are aesthetically pleasing to visitors and locals and meet environmental standards. In the United States of America, standards have been drawn up for signposting (http://www.nps.gov/hfc/products/waysides/wayproducts.htm) and similar standards must be developed for SMNP and other protected areas in Ethiopia. A list of key sites for signs needs to be drawn up, with an indication of the type of sign and information required and then sign construction can be carried out.

Sub-objective 1.3: Visitor attractions and activities improved and diversified to support a greater range and volume of tourists

Trekking on foot or on horses/mules, with landscape and wildlife viewing are the predominant activities of current SMNP tourists, although some tourists will only visit the park by vehicle on day trips. Greater diversification in attractions and activities might increase the type and number of tourists, their length of stay, whilst having limited effect on the SMNP resources and perhaps facilities. The Tourism Master Plan includes a number of suggestions for the diversification of tourism in SMNP, but little detail on their implementation. The feasibility of these activities must now be investigated and developed as appropriate and as funding permits.

Action 1.3.1: Determine feasibility and desirability of adventure activities such as paragliding and climbing in SMNP

Currently, Simien Lodge has mountain bikes for hire and these are used by some tourists, although guides and scouts have difficulties in accompanying cyclists. Both paragliding and rock climbing are adventure sports that need specialist situations and equipment to be conducted safely. It is likely that up and downdrafts from cliffs will render paragliding impossible in the area. For climbing, certain types of rock, that are not friable, are suitable and safe and the Simien Lodge is interested in developing a 'Via Ferrata' route along the escarpment where some 20- year old cables and rope ladders still exist close to Adarmaz camp. Detailed feasibility studies, including market assessment and a cost-benefit analysis on the need to provide rescue and medical services by experts will be solicited to assess feasibility before any further action can be taken.

Action 1.3.2: Improve and extend nature-based activities and facilities

The TMP suggests that wildlife viewing hides, star/planet watching, swimming and improved horse trekking could all be developed. SMNP will develop detailed plans to investigate the feasibility of these products in terms of market opportunities, cost-benefit assessments and the facilities that would be required to support them. Plans will then be implemented as resources allow. Visitors already comment adversely on horse quality and a more rigorous system of horse lending is required. In addition horse trekking, rather than walking with pack horses, could also be developed, but improvements in the quality of horses and equipment and the involvement of specialist operator would be needed to attract a niche market of horse enthusiasts.

Sub-objective 1.4: Promotion and marketing of SMNP, and linkages with tourism providers in place

SMNP marketing, which aims to maximise awareness and visitors to the park without adverse environmental or social effects, involves the promotion of the SMNP and its exceptional resources, development of an SMNP brand, in tandem with the development of tourism activities and facilities. To do this, and to use scare resources most efficiently, the targeted market segment must be defined and understood.

Although a full analysis of the type of tourists visiting SMNP is not available, given the type of facilities available, most tourists can be classified as backpackers (who travel cheaply for long periods and enjoy trekking) or general interest tourists (may be keen on nature and safe but adventurous activities, and will accept difficult conditions for short periods). A smaller number of special interest nature-orientated tourists, who are particularly interested in birds or other wildlife are also visitors. Facilities in SMNP are not really available for mass tourism, where visitors travel in large groups. Although most visitors come from overseas, particularly United Kingdom, USA, France, Holland, Germany and Spain, Ethiopia-resident expatriates also visit SMNP.

At present tourism marketing in SMNP is being carried out by private operators in the tourism industries (accommodation providers, tour operators, Ethiopian Airlines) and at different Government levels, namely the Woreda, Regional and Federal Culture and Tourism Offices, PaDPA the Park Administration and Austrian SMNP-IDP project), but marketing has not well coordinated. Different messages and features are being marketed by different stakeholders and more cooperation and the development of a brand image is required for the park, to give a consistent message to tourists.

The quality of existing promotional materials, both in terms of content and production, requires improvement so that the international significance of the SMNP as a World Heritage site and a premier natural heritage destination in Ethiopia can be recognised. Web-based information and communication technology is currently being underused and yet is the greatest opportunity for promoting tourism resources in the globalising world.

Marketing and promotion of SMNP will be developed using an SMNP brand that reflects the unique attractions of the park, with the overall aim of increasing visitor's length of stay and enhancing park revenues, without increasing visitor impacts on the park environment or on local communities. The following actions have been identified to contribute to this objective:

Action 1.4.1: Analyse current SMNP tourist market and define future target market

A thorough survey of current visitors will be carried out to define and underpin future tourism development in SMNP. This could provide an analysis of visitor types, expectations, needs, satisfaction and spending levels and also incorporate ideas for improvements in tourism provision. Using this data, SMNP can explore potential markets and define their primary target (which may be current visitor type, or more diversified sectors), based on the vision for SMNP tourism and the desired visitor experience. This decision will then feed into initiatives to develop appropriate facilities.

Action 1.4.2: Develop a brand for SMNP and use in all marketing and promotion

SMNP branding, underpinned by agreement on the messages to be communicated, will ensure that a consistent story is used in all marketing and promotion. Brainstorming and professional help may be required to develop the brand and its components, from core features, logos, and to develop appropriate materials. Brand image must then be distributed to all tourism marketers (see 1.4.2) and incorporated into promotional materials.

Action 1.4.3: Liaise and coordinate marketing and promotion by tourism providers, SMNP, PaDPA, ANRS BoCT and the FDRE MoCT

Promotion and marketing of SMNP must be coordinated with tourism development activities so that the levels and segments of tourist arriving match the provision of services. This will also required close liaison with tourism providers and government marketing agencies at different levels. A workshop will be held to determine and liaise with all relevant stakeholders to analyse problems and issues for marketing, define marketing objectives, and develop actions to improve and coordinated SMNP marketing. This should be regularly updated and incorporated into the GMP.

Any promotional materials, developed under SO 1.2 will be published in Amharic, English, German, French and Spanish.

Action 1.4.4: Work with key local stakeholders to improve access to SMNP

SMNP will drive the formation of a lobby group to interact with transport, telecommunications and service providers such as banks, to improve the access and coordination of tourism services in Debark and the provision of quality camping food and services. Lobbying to develop an airstrip at Debark for charter aircraft from Addis Ababa is also a priority. Further work might involve encouraging the development and linkages with other current and potential tourist destinations in the area.

Objective 2: Capacity and systems for the development and management of sustainable tourism in SMNP strengthened and maintained

In the future, SMNP will put in place the institutional and human capacity and systems to effectively manage tourism and ensure that any negative effects are detected and mitigated. Currently, neither capacity nor systems are available and thus 2 sub-objectives and associated actions have been formulated to meet this overall objective and thus contribute to the programme purpose.

Sub-objective 2.1: Capacity of SMNP staff and other key stakeholders to deliver and manage tourism enhanced

Generally, the number of SMNP staff and their skill set is not sufficient to develop and manage tourism in the park. There is currently no expert with a background in ecotourism provision and other staff, including scouts, have very limited experience in understanding and meeting the needs and aspirations of international tourists. Moreover, staff do not currently see themselves as part of quality service provision, but as enforcers. Tourists presently complain about a number of frustrations, for example about arrival at the park office, not able to buy tickets at Sawre gate, inconsistencies in charging camping fees when they sleeping at the lodge, about arriving in the late afternoon and but still having to pay for the scout for a full day, etc. Overall the image is given on arrival is often one of obstruction rather than assistance and staff have little understanding with regard to interacting positively with visitors. Considerable capacity building and system development is required to rectify this situation and change the approach to tourism provision. Community understanding of tourism issues is addressed in Objective 3.

Action 2.1.1: Assess human capacity required for tourism management and recruit accordingly

A needs assessment will be conducted to identify specific staffing needs and on the job or external training required for SMNP staff responsible for tourism development and management. Ideally two tourism specialists within SMNP management should be trained and available to meet the SMNP tourism challenges. Short courses in other areas, institutions, and countries will also be identified and funding opportunities sought for park staff to receive appropriate training outside of SMNP. This could be facilitated through the partner project.

Action 2.1.2: Ensure all SMNP staff undertake and regularly update training on tourism awareness, service standards and customer care

Park staff must understand the expectations of tourists and be able to interact and provide a professional and welcoming service to all visitors, so that visitors have a positive experience of the park and its managers. The traditional park management role of regulators of park activities is gradually changing to one of service providers and staff must understand that they are increasingly seen as the cornerstone of tourism provision. Short term training and retraining will be provided on these aspects, but considerable effort is required.

Action 2.1.3: Update training for guiding and other service providers

Considerable training has already been carried out for guides, horse-lenders and cooks by the IDP project. Further training needs must be identified to train new entrants, keep current service providers up to date and ensure recommendations from visitors are articulated back to providers through the ecotourism associations. Upgrading of the knowledge and skills of guides to handle international tourists has been identified as a one priority.

Sub-objective 2.2: Tourism impact and experience monitored, mitigated and adaptively managed

In order to meet the programme purpose effective and adaptive tourism administration and management systems must be in place. An accurate record and profile of all visitors and their activities underpins adaptive tourism management and tourism management systems must incorporate the development, communication and implementation of codes and conduct and park regulations. In addition, as visitor numbers have increased, trekking routes and campsites are increasingly at determined visitation levels. Thus, to avoid visitor disappointment, a booking system must now be implemented as part of tourism management.

Finally, the Tourism Master Plan identifies a range of potential negative impacts of tourism (Table F3). A monitoring system with mitigation measures needs to be devised to minimise potential detrimental impacts and determine whether positive impacts are maximised.

Table F3. Positive and Negative Impacts of Ecotourism Activities in SMNP

Category	Impact	Description of the Impact
Environmental	Positive	• Income from tourism can contribute to conservation of ERVs
	Negative	• Soil erosion around infrastructure • Firewood • Water source pollution from washing • Littering and poor waste disposal, particularly of plastics around campsites and infrastructure • Aesthetic impact of views of infrastructure • Noise around campsites • Feeding of wildlife from waste and directly
Socio-cultural	Positive	• Livelihood diversification • Increased income to local communities • Improved access to facilities and services. • Improved level of understanding of external world: broadening of horizons • Promotion of cultural exchange • Strengthening of culture due to reaffirmation of value and interest from tourists
	Negative	• Increased social problems (e.g. begging, harassment) • Loss of culture • Erosion of core community values
Economic	Positive	• Provides government revenue • Provides employment opportunities for professionals and local communities • Business opportunities in support industries • Goods and service provision increase and diversification for tourism • Improved infrastructure

Category	Impact	Description of the Impact
	Negative	• Increased price of goods and services to locals • Inequitable share of benefits accrue outside local area and also internationally • Dependency on volatile industry

The following actions have been identified to meet this sub-objective:

Action 2.2.1: Develop and implement computerised tourist monitoring, administration and information system

A range of useful statistics could be collected regularly to assist adaptive park and tourism management and to identify changes in park visitation and use. Potential basic data are outlined in Table E4 and the implementing of such data collection will underpin a comprehensive tourism monitoring system. Some information such as detailed visitor profiles could be undertaken biannually. A computer database to store the information collected will be developed and updated monthly and annual summary reports produced.

Table F4: Tourism visitation information and sources (Walpole 2004)

Data	Potential Source	Use	Currently collected?
Daily overnight visitor numbers in each camp. Can be aggregated weekly/monthly/annually	Campsite records, questionnaire on payment of park fees campsite records	Monitor tourism growth, seasonality, evaluate campsite capacity limits, predict trends, identify peaks	Yes
Visitor nationality, group size, composition, type, length of stay	Questionnaire on payment of park fees	Monitor market niches and trends, identify market gaps and evaluate performance of marketing strategies and GMP implementation	Some, not complete
Daily number of visitors undertaking different activities	Questionnaire on payment of park fees	Monitor use of different elements of the park, predict trends, evaluate capacity limits, evaluate GMP implementation and diversification, adaptive management of product, activity provision and promotion	No
Visitors attitudes and evaluation of the SMNP tourism experience	New questionnaires, campsite comment books	Monitor satisfaction and visitor suggestions, adaptive management, of product quality and provision, and visitor regulations.	No
Tourism expenditure to park and community services	Questionnaire on payment of park fees	Monitor expenditure and benefit flows to communities and park	Information available from receipts, but not collated

Action 2.2.2: Develop health and safety guidelines and evacuation procedures

With a growing climate of litigation by international visitors, visitor security is now another key issue and clear procedures will be developed for emergency situations. Health and safety guidelines will also be developed and incorporated into visitor permits. Currently visitors often have better knowledge of first aid than local scouts or guides, and a communication system to expert advice

should be developed. First aid stations at outposts and camps must be regularly checked and resupplied.

Action 2.2.3 Devise and maintain campsite booking system

The current established visitor limits of SMNP depend on the number of beds available either in lodges or campsites, but until now, there has not been a campsite booking system. In peak season, campsites can be oversubscribed and which adversely affects the tourist experience. Thus to both maximise visitor numbers within current bed constraints and avoid negative tourism experiences, an advance booking mechanism will be developed and implemented be developed under this action. The TMP recommends that each campsite can hold up to 20 visitors.

Action 2.2.4: Design and establish systems for monitoring and mitigating the environmental and cultural impacts of tourism facilities and activities

Whilst tourism can clearly bring enormous economic benefits, a number of adverse effects (see table can stem from an influx of wealthy visitors in environmental, socio-cultural and economic terms (Table F3 above). Currently, little work has been carried out to identify the negative impacts of tourism in SMNP, although evidence of environmental degradation around heavily used campsites and litter are reported. Tourism development will therefore be planned and regulated so that mitigation measures for adverse effects are introduced. An auditing system, drawing on data collected under Action 2.2.1, will review current impact through baselines surveys and will be embedded in future SMNP tourism management. As part of this action, visitor codes of conducts and park regulations will also be reviewed and distributed.

Objective 3: Increased opportunities, participation and benefit-sharing from tourism facilitated for local communities

Providing revenue streams and livelihood diversification for local communities is a key purpose of the development and marketing of tourism in the SMNP. Communities' interests must be at the core of any partnerships between SMNP and private investors. Communities require increased capacity to engage in tourism opportunities and require coordinated institutional development to fully take advantage of these opportunities. Whilst the benefits from tourism will never meet community aspirations, given the limited number of visitors, maximising tourism-associated benefits and distributing those benefits that do accrue in an equitable fashion, will be explored.

To increase and extend tourism-derived benefits to the wider SMNP area, attempts must be made to spread tourists wider within SMNP and diversify the activities and services that can be delivered. This will, however, be challenging given that tourists enter from Debark. Ecotourism societies have been set up in nine areas, covering some 2196 households, with help from SMNP-IDP and will be extended under this GMP. Technical assistance to these societies was provided through organising training, provision of accounting ledgers and vouchers and mules. However, further effort is required to strengthen these associations and also to expand them to the new park extension area.

Another area of development will be cultural tourism into local communities and these could be combined with ecotourism in the park. There are a number of such initiatives within Ethiopia and the wider region. For example, TESFA, an Ethiopian NGO, have developed visits to communities around Lalibela in northern Ethiopia and GTZ have been involved in developing community horse-trekking in the Adaba-Dodola and Wenchi areas.

Action 3.1: Provide tourism awareness training and publicity campaigns for the local communities in and around SMNP

Lessons learnt from other initiatives illustrate that considerable capacity building within communities needs to be carried out in order for them to participate in an equitable and sustainable way. Steps to ensure that local communities have the knowledge and skills to become proactive and equal stakeholders and partners are laid out below.

A 'Tourism Awareness' programme for the communities in and around SMNP will be instigated in partnership with the Zonal and Woreda tourism bureau and SMNP partner projects. The attitude of children to tourists is a key focus of this action. SMNP must work with local teachers to develop tourism friendly behaviour in children in the area, their approach must change from begging and shouting to one where they greet visitors politely and do not crowd and stare when tourists are in public places. Working with community leaders, youth and women's groups will help to reinstate traditional values and attitudes. In addition, dialogue at park-kebele committees should cover topics to increase understanding of the lives and origins of tourists and how to deal with cultural differences. This will ensure that tourists are seen as people with shared rights rather than just financial opportunities.

Action 3.2: Assist communities in setting up and running Community Tourism Associations with appropriate tourism management, governance and benefit-sharing structures

Prioritised and Interested communities will be facilitated in setting up Community Tourism Development Committees (CTAs) with the capacity to govern and manage tourism concessions and benefit-sharing mechanisms. A range of training and skills development will be required from basic financial management, general business skills, interaction with tourists, hygiene maintenance, food provision etc. Communities could also provide food items such as local bread, drinks and eggs to private, government and community-run tourist accommodation Experience sharing visits to and from other community enterprises such as TESFA initiatives around Lalibela will be valuable . In addition, links and opportunities provided by initiatives of other actors in the ecosystem, particularly the Zonal tourism office, need to be closely coordinated.

Efforts must be made to try and spread the benefits from tourism across the park area, not just the Debark area. For example, tourism service hubs, provided by the local ecotourism association, has already been set up at Sankaber and Chenek, where horses and cooks can be obtained. These initiatives need to be strengthened and extended. New trekking routes and campsites in the park extension area and less-benefited woredas (such as Janamora and Tselemt) will be developed and new tourism service hubs established by CTAs.

Action 3.3: Support equitable benefit sharing within CTAs

Ecotourism societies draw up their own set of rules when they are established, and these are critical in setting the baseline for access to the provision of services, and therefore income-generating opportunities. All members of the communities, particularly disadvantaged groups, such as female-headed households should have potential access to service provision or benefit flows, although this is often challenging to implement. New and existing societies will need facilitation to understand and set up such institutional arrangements and benefit-sharing mechanisms and to monitor accounting procedures, which can be used to evaluate their benefit-sharing mechanisms. Moreover, provision of support for these new ecotourism societies could be provisional on them establishing equitable benefit sharing arrangements.

Action 3.4: Work with CTAs to develop tourism opportunities, particularly accommodation concessions

A number of initiatives, including cultural tourism development (Action 3.2.4) could lead to increased economic benefits to communities. One important method will be to involve communities in tourism provision partnerships through private-community or government-community concession holding. Currently community run tourism accommodation is available in Gich, Chenek and Adsige-Milligebsa inside SMNP and further community run campsites will be developed for example in Lamo, Sonna, Ambiko. Possible concessions must meet the needs of the tourists and the community to have a chance of success and they must have accessible and transparent structures and booking systems. Specific concession agreements for proposed tourism developments will be drafted. These will detail quality standards and have implementation and monitoring systems for achieving and maintaining quality. The purchasing of local produce and services, employment of local staff and benefit sharing and this must be built into concession agreements (see also Action 1.1.3). These should be tied to natural resource management agreements (see Settlement programme) where appropriate. The next stage will be to support the CTAs to find partners and funding for developing the identified tourism concessions. Potential donors and partners will be identified and technical advice and help with application procedures given.

Action 3.5: Investigate and facilitate development of cultural tourism opportunities

Cultural tourism is one area that is currently undeveloped and yet offers great potential, particularly for sharing benefits with local communities: particularly with women and the poorer sections of society. Cultural tourism could also take additional advantage of community events, whether national or religious, as appropriate to cultural traditions. SMNP management will investigate the feasibility of a number of activities suggested in the TMP, including household visits, agro-tourism ((where visitors learn and share the experience of local crop production), local food preparation, roof thatching, weaving and traditional house building, and the development of a number of small community centres outside the park (where these activities could be undertaken or demonstrated and products sold). SMNP will also facilitate the formation of entertainment groups at Sankaber and elsewhere in coordination with the Outreach Programme. SMNP management will then facilitate communities to set up appropriate facilities and activities. A review of the cultural sites in the park and of cultural aspects of the community livelihoods that could be of interest to tourists is also required in order to plan cultural tourism development.

Action 3.6: Work with local communities to explore and exploit the potential for marketing local artefacts and agricultural products

Additional economic opportunities for local communities include the sale of local artefacts, such as basketware, woollen hats and other products, cotton weaving and cow horn spoons and decorations. Guidance will be needed on appropriateness and quality assurance. Opportunities for tourists to buy these artefacts in a mutually respectful way must be identified. Production of artefacts could be incorporated into culture tourism opportunities (Action 3.2.4) and in cultural centres (Action 1.3.2)

G Outreach Programme



G Outreach Programme

Programme Purpose: Stakeholder support for SMNP secured and pressure on its exceptional resource values minimised

Outreach Programme Strategy

SMNP is a small park, with its own inhabitants, surrounded by a dense impoverished and rural community that are unsustainably dependant on the its land natural resources and that has few livelihoods options. Moreover, the national and international socio-political contexts have considerable influence on the area. To ensure the park purpose is met, SMNP must therefore actively embrace the outside world and ensure that is has the support of stakeholders, from the community to international level, which is required for effective conservation management.

The Outreach Programme aims to ensure that SMNP is embedded in a network of actors working to secure the park through alleviation of many of the threats and challenges, ultimately driven by human population growth, that affect the park. This requires SMNP to act as a catalyst for, and work synergistically with, development and other initiatives outside its boundaries that aim to meet the needs of the local communities. This strategy will ensure that there is a positive flow of benefits from the park, including information, ideas, education opportunities, development initiatives and, where possible, revenue.

The Outreach strategy provides a general statement of policy and principles that will guide the outreach activities of SMNP within this GMP. This strategy is aligned with federal and regional legislation and policies, including the National Environmental Policy (1997), the National Conservation Strategy (1997), the National Rural Development Policy (2002), the National Biodiversity Conservation and Research Policy (1998) and Action Plan (2005) and Access to Genetic Resources and Community Knowledge and Community Rights Proclamation (2006) and Regulations (2007). The Amhara Regional Conservation Strategy and proclamation of PaDPA (2003) also includes policy statements that communities must receive economic benefits from protected areas.

The following guiding principles for programme implementation were formulated from a consideration of the situation in the SMNP, policy, legislation and best field practice elsewhere.

Guiding Principles

- All initiatives are undertaken principally to support the development and security of SMNP itself: whilst the needs of the SMNP communities are great, SMNP has only the capacity and remit to be a catalyst rather than an implementer of community development initiatives
- SMNP management recognises that community participation is essential for effective park management and is a positive factor
- Benefit sharing is required for increasing the community sense of ownership and commitment to SMNP
- Good coordination between stakeholders is fundamental for effective park management

Outreach Programme 10-Year Objectives

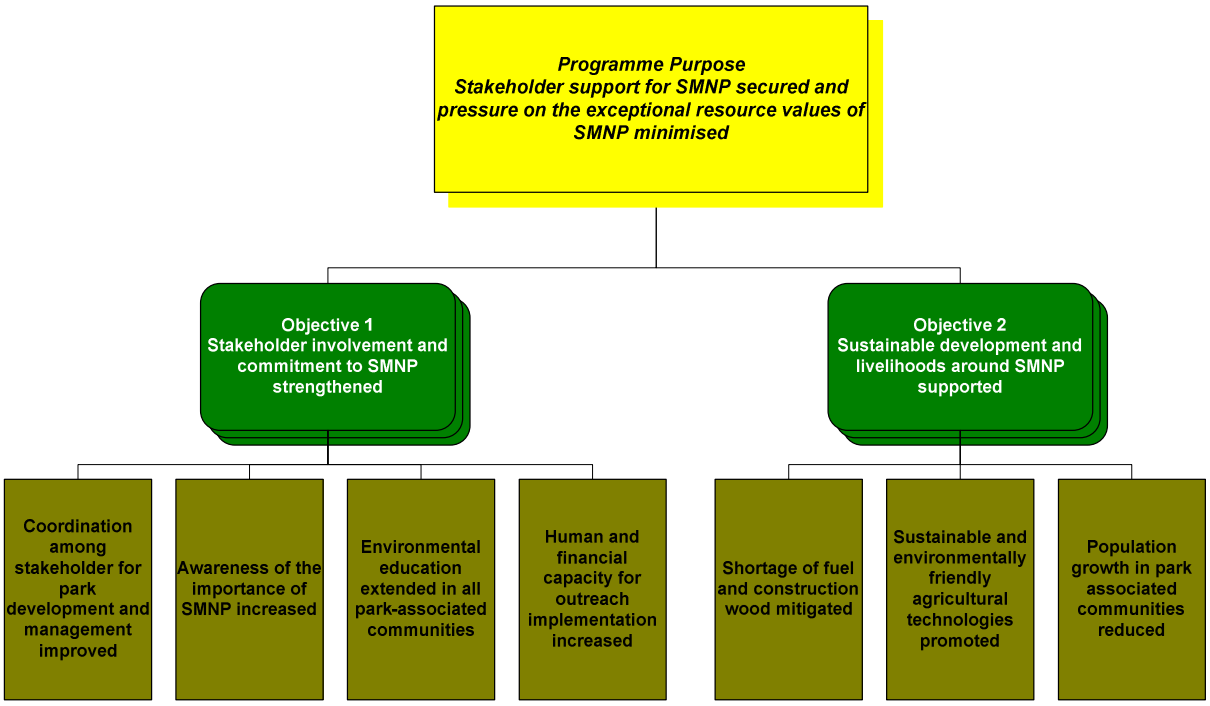


Figure G1: Logical framework for the Outreach Programme, including the programme purpose, objectives and sub-objectives.

Three 10-year objectives have been drawn up for the Outreach Programme to tackle the issues, challenges and opportunities identified by park stakeholders relevant to this programme. The objectives are:

Objective 1: **Stakeholder involvement and commitment** to SMNP strengthened

Objective 2: **Sustainable development** and **livelihoods** around SMNP supported

A series of 10–year sub-objectives and associated actions have been formulated for these management objectives, and are described below. In addition, a brief description of the relevant management issue or challenge is included, providing the justification for the actions. The 3-year Action Plan for the Outreach Programme, which lists the activities, input requirements, priority, responsibilities and timeframe for carrying out the actions, is included in Section H.

Objective 1: Stakeholder involvement and commitment to SMNP strengthened

Globally, there has been a tendency in the past to view national parks as islands and to operate without reference to the wider context, both locally and nationally. This view is now redundant and protected area managers are adopting the ecosystem approach that incorporates the socio-economic and political context in which protected areas exist. This is done by trying to deliver management and development that is coordinated in the wider ecosystem and ensure that communities live sustainably within their environmental constraints.

In the relatively small SMNP, that also has park residents and is surrounded by extremely impoverished communities, park management have involved local and other stakeholders for some

years. The Austrian SMNP-Integrated Development Project (SMNP-IDP) has assisted management in setting up community liaison mechanisms and soliciting support from other government stakeholders, particularly for agricultural and development initiatives in the area. Progress has been made, with systems designed and operational and now attitudes to SMNP amongst stakeholders are much more positive than a decade ago. Local communities acknowledge the existence of the park and are willing to engage with initiatives. This GMP will build on this base and recognises that local communities are positive partners in the future management of SMNP.

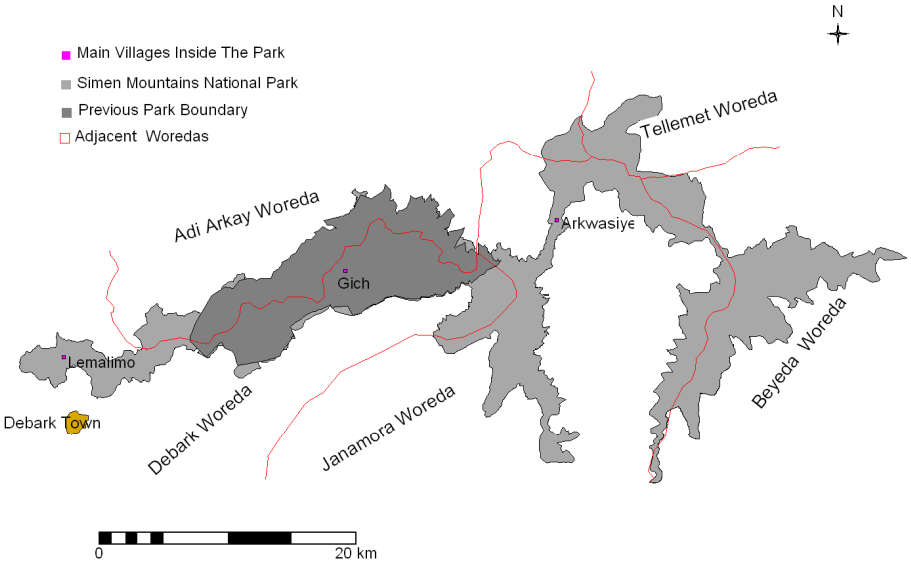
More widely, SMNP, as a World Heritage Site, has been actively supported within the ANRS and internationally. The listing of the site as being "In Danger" has enabled SMNP to obtain financial and technical support by UNESCO and IUCN that has helped to improve SMNP management and support the development of PaDPA. This support needs to be maintained and strengthened nationally and internationally.

This objective therefore aims to integrate SMNP management with the activities of local communities, development organisations, and government and non-government actors in the area, as well as to obtain support nationally and internationally.

Sub-objective 1.1: Coordination among stakeholders for park development and management improved

In the last few years, initiated by the SMNP-IDP, park advisory committees at both woreda and kebele level have been set up to enable 2-way communication between local stakeholders and park management as well as providing a link to the regional authorities. The Woreda Park Advisory Committee (WPAC) appointed by the Regional Park Management Board is responsible for preparing, implementing and evaluating the annual operations plan. The WPAC is comprised of the Head of Administration for the 5 park-adjacent woredas (who hold the chairmanship in turn), with representatives from each woreda Rural Development Office and the Austrian IDP. The SMNP warden acts as the secretary. This committee is meant to meet quarterly and can also use the authority and jurisdiction of the local woredas to enforce and implement decisions or activities that affect the communities around the park. This has been particularly important for implementation of the SMNP-IDP project where integration with agriculture and development programmes have been important.

The WPAC established 17 kebele park advisory committees (KPAC); one in each kebele bordering the park. These KPACs are meant to meet monthly to provide a forum for discussion and awareness-raising, organise experience and benefit sharing opportunities, prepare bye-laws with the communities and assist the park by dealing with any bye-law, boundary and encroachment issues. Any substantive issues raised at KPAC meetings are referred to the WPAC, otherwise the park office usually deals with any issues or queries that arise. The relevant kebele chairman chairs each committee, with other members including the scout head for the nearest outpost, the assistant chairman, a teacher, health and agricultural extension worker, any elected community scouts and honorary park wardens in the communities.



These KPACs have not, however, been as useful or functioned as well as was anticipated for a number of reasons. KPACs have not always met, nor reported to the park office as regularly as desired, follow-up on issues raised has not been enacted, communication with the WPAC has been poor (not least because nobody from the KPAC attends the WPAC) and the committees generally lack capacity and awareness.

Action 1.1.1: Improve and maintain communication between woreda and kebele park advisory committees

The principal means proposed of improving communication between these 2 committees is to invite the chairman of each kebele PAC to attend the WPAC, perhaps twice a year. With a total of 42 kebeles now bordering SMNP, this would mean that 7 KPAC members would attend every WPAC. Moreover, efforts must be made to ensure that the minutes and reports from the WPAC are distributed to the outposts and are taken to KPAC meetings by the scouts.

Action 1.1.2: Strengthen existing kebele park advisory committees (KPACs)

The existing committees need additional help to ensure that they function effectively. One means of achieving this is to train the executive committee of the KPACs in the management, monitoring and evaluation of committee activities, park protection and facilitation and participation in KPAC. A series of activities, training and discussion sessions with the existing KPACs needs to be arranged and dovetailed with training for the new KPACs.

Action 1.1.3: Set up and support new KPACs in extension areas

Additional KPACs need to be set up in the park extension area, where 25 new kebeles are involved. Formation and training of the new KPACs should follow a similar process as that used for setting up the existing KPACs, that includes discussion forums about the format and function of the KPACs and facilitation of initial meetings and follow up as required. In addition, appropriate stationary will need to be provided to new committees.

Action 1.1.4: Improve and maintain regularity of KPAC meetings

Maintaining regular kebele PAC meetings requires improved reporting and follow-up to and form the park office. Reports from meetings much be submitted to the park office in a timely fashion, but then feedback on any issues raised needs to be rapidly provided. Evaluation and feedback by the KPAC on the park office and its activities needs to be encouraged. Lastly, some sort of incentive scheme for KPAC committee members should be considered, although with 42 committees and at least 7 members on each committee, the financial implications need to be carefully investigated.

Action 1.1.5: Facilitate implementation of kebele bye-laws by agricultural development agents

Land use outside the park has a huge impact inside the park. Human population growth is driving the conversion of communal grazing and woodlots to agricultural fields, and as these decline, more pressure is exerted on the park's resources. In some kebeles local bye-laws govern the allocation and use of forestry and grazing land and this has helped to alleviate this problem. Allocation of land for woodlots and grazing are then discussed in a kebele, thereby raising awareness. Land is then formally allocated for these uses and enshrined in bye-law. The SMNP office needs to check with each kebele land use committee whether bye-laws exist and then encourage the kebele development agents to facilitate their formulation where they are absent. In addition, land use planning will be included in community awareness workshops and discussion forums. The park office will liaise with woreda agriculture officials to promote land use planning and bye-law enactment in the training and monitoring and evaluation of development agents. Finally, SMNP scouts will also be trained in landuse planning and bye-law formulation so that they can drive and facilitate this process.

Action 1.1.6: Train stakeholders in conflict management

Conflicts between and within communities and park management and between different government agencies is not uncommon, and is currently a particular problem in some villages. This can occur when immigrants attempt to move into the park or where communities put pressure on officials to issue land certificates for agriculture inside the park. Whilst specific solutions to specific problems may need particular tactics, all stakeholders would benefit from training on how to resolve or manage conflict. Trainers will be found to implement this action and then training of park scouts, and relevant judiciary and kebele and woreda administrators carried out. Discussions with community elders will reveal the best way to facilitate their role in managing conflict, as will engagement with women and youth groups.

Sub-objective 1.2: Awareness of the importance of SMNP increased

Whilst SMNP, with its World Heritage Site status, is better known nationally and internationally than many other protected areas in Ethiopia, it is clear that wider awareness of SMNP will significantly increase support for conservation and management activities by creating a sense of ownership, pride and responsibility among all stakeholders (international, national and local). This is especially important to increase the Ethiopian constituency of support as increased recognition will strengthen political support and fundraising efforts at all levels. Implementation of a number of different actions will enable park manager to meet this sub-objective.

Action 1.2.1: Develop materials that outlines and promote the importance of SMNP

Although some information describing the importance of SMNP is available, further high quality materials are required. SMNP will therefore engage with partners and other stakeholders with publicity experience to create a publicity campaign to improve understanding of socio-economic and natural services provided by the area, its biodiversity importance, its global importance as a World Heritage Site, and its potential as a tourism site. These should make us of a range of media such as videos, flyers and posters and websites. The first step in development is to collate information on the importance and features of the SMNP, before appropriate materials are designed and developed. The needs of national and international visitors to the park (see Tourism M&D Programme, Action 1.2.3) should also be considered when designing and planning materials.

Action 1.2.2: Hold workshops and discussion forums for police and judiciary

Local stakeholders in each woreda, including administration, communities, police and judiciary are essential partners and supporters of effective park management. Better support from the police and judiciary at all levels will be most obtained if they understand the importance and functions of the park as well as all resource protection operations, modes of activity, legal and technical issues. There must also be full agreement and understanding of the prosecution system and procedures by all parties. Up-to-date material must be produced for a new workshop with kebele police and judiciary officers and then replicated upwards at all levels through woreda, zonal and the region, as difficult cases are routinely referred to higher bodies.

Action 1.2.3: Host workshops and discussion forums with stakeholder groups

Other stakeholders from whom SMNP management need support include park-associated kebele administrators, agricultural and health workers as well as culture and tourism and rural development and agricultural offices. These groups will therefore be the focus for discussion forums. In addition, elders, women and youth discussion forums will be held in park-associated communities, perhaps targeting those in the park extension area initially. Church priests are also strong members of communities and should be fully aware of the importance of the exceptional resources of the park.

Action 1.2.4: Arrange visits to park for woreda and zonal stakeholders

The support and understanding of woreda and zonal level stakeholders will be much enhanced by conducting a series of park visits by officers from the agricultural and rural development offices, the culture and tourism office, and the woreda and zonal administrators.

Action 1.2.5: Increase national publicity for SMNP

Using the materials developed in Action 1.1.1 as a basis, coordinated with promotional materials from the Tourism MDP (TMDP Action 1.2.3), a number of initiatives could increase the profile and understanding of SMNP nationally. The radio is a powerful medium, and park staff will visit the Gondar and Bahir Dar radio stations to investigate possibilities to increase coverage of SMNP as well as conservation and environmental education issues at local and regional levels. Then, a series of programming opportunities could be jointly designed and additional funding sought to increase radio programming time. Increased use of special events at the park could be useful, with representatives from radio, television and journalists invited, after press releases had been distributed. Further advice from professional marketing experts must also be solicited in coordination with the Tourism MDP.

Action 1.2.6: Prepare regular SMNP newsletter

A regular (perhaps quarterly) SMNP newsletter would help to keep stakeholders informed of issues and events in the SMNP. A format (as part of the corporate image) needs to be chosen, an SMNP staff member assigned responsibility and then contributions regularly solicited for quarterly publication both on the website and as a hard copy to stakeholders.

Action 1.2.7: Design and maintain website

The internet is now the first port of call for many people, including international visitors, who either require further information on an area or who are contemplating a visit. An official park website, with domain name will be set up and launched in the first year of this GMP and is already currently under design. PaDPA also have their own website at www.padpa.org where park information is already held. This website will be developed and maintained as a publicity tool for a wide range of audiences, including tourists, conservationists, researchers, and donors. A broad range of easily understood information about the park and its management will be provided as well as images from the Simien Mountains, news items, publications, and links to partner projects, tour companies and other relevant information on the world wide web.

Action 1.2.8: Design corporate image, including logo

SMNP does not currently have a logo or its own unique corporate image. A logo is a priority that should be incorporated into a corporate and marketing image for SMNP must be created and used consistently in all forms of communication, such as uniforms, signs, literature and the website. Activities under this action must therefore be carried out in conjunction with activities under tourism and park operations programmes. Creating a brand for SMNP is also a priority under the TMDP (Action 1.4.2) and thus liaison must be ensured between staff responsible for both these actions.

Sub-objective 1.3: Environmental education extended in all park-associated communities

Environmental education programmes aim to improve understanding and share information in order, ultimately, to change behaviours and produce responsible action. However transforming knowledge into action is challenging when more immediate needs are uppermost for individuals. SMNP is an important environmental education resource that can be used to explain the principles

and need for conservation, particularly in the context of unsustainable resource use in an increasingly over-utilised world, as well as to restore cultural links with the environment and traditional ecological knowledge. Environmental education will also encourage people to understand the rationale for the existence of the SMNP and to take more active and responsible roles in how they interact with SMNP, its management and its resources.

Currently, environmental activities are carried out both formally and informally but are relatively limited. The knowledge of park staff is limited and the position for EE in the park structure is not filled. Moreover, with the limited number of park staff, and insufficient funds, environmental education activities have primarily been undertaken by partner projects to SMNP. Both FZS-AECP (6 schools) and the ADC-IDP have set up and supported school EE clubs and workshops to train teachers. More informally the ADC-IDP has worked with women and youth associations in the park associated kebeles, principally on gender and youth issues. In addition, whole village conferences have been held, where the importance of the SMNP has been discussed with associated environmental issues. Finally, some limited informal consultations occasionally take place between scouts or the park office and mosque or church personnel. This is a particular area for expansion, although the limited capacity and knowledge of the scouts is a limiting factor (see Action 1.2.3).

In 2007, the new Woreda Culture and Tourism Office was formed and has responsibility for similar types of activities. Clearly synergy can be attainted by close liaison between the park office and this office.

Action 1.3.1: Increase capacity of park staff for environmental education

To improve staff knowledge of EE, gaps in current capacity need first to be identified. Options for filling these capacity gaps then need to be explored, whether through training courses such as those at the Menegesha Suba Environmental Training Centre, or through visits to other projects, or mentorship from technical experts. Once a training plan has been drawn up, it can be implemented as finances allow. Knowledge of scouts will be a particular focus area as they have most contact with communities.

Action 1.3.2: Extend school environmental education (EE) club programme

Environmental clubs should be set up and supported in all schools associated with SMNP. With further funds, schools without clubs should be prioritised for support and then teacher training workshops held to give them ideas of the sort of activities that can be undertaken. PaDPA have already produced manuals for environmental clubs and these will be distributed to each participating school. Start up materials will be required, for example shovels and watering cans for tree nurseries.

Action 1.3.3: Strengthen existing environmental clubs

Existing EE clubs need continual support and encouragement to introduce new ideas and keep operating. A refresher course for teachers and clubs should be run, and further materials provided, depending on the prioritised activities of the clubs.

Action 1.3.4: Organise visits to the park from school environmental clubs and community leaders

Visits to the SMNP, with accompanying interpretative activities are an important method of increasing environmental awareness and awareness of the importance of the exceptional resources of the SMNP. Community elders and indigenous leaders will also be targeted by this management action, as they have great influence in forming attitudes to wildlife and conservation in their communities

Action 1.3.5: Organise local cultural music and/or drama club at Sankaber

Recently, there has been interest in setting up and local music and or drama club at Sankaber, which would be able to perform to visiting tourists. Talented and interested individuals in the villagers around Sankaber need to be identified and then the formation of the group facilitated. Training may be required for the group and facilitation in developing appropriate repertoires. Once functioning, further help may be required to carry out shows at the Sankaber centre and also to extend the group's activities to the communities. Such drama and music groups can be powerful conduits for the environmental and conservation message. If this group can be integrated into

overall EE activities, its success should be assessed and monitored to see whether similar initiatives should be set up elsewhere. This action should be coordinated with the TMDP (Action 3.3.2) to make the most of opportunities for income generation from shows to tourists.

Action 1.3.6: Improve educational materials

Posters on SMNP and EE are a priority for this programme but need to be designed and resources found for publication. An internal desktop publishing system at the SMNP office would enable some of this to be done 'in house' although professional help may be required. This would also allow local newsletters and educational materials to be written, published in-house and disseminated. New materials can be sourced from relevant conservation and development organisations and, where appropriate, write new or adapt existing materials.

Videos are a key educational media although difficult to provide in the environment of the SMNP, due to poor road access and power supplies. However, SMNP has been operating some video/DVD programme and these are popular, thus management action will attempt to extend this programme by obtaining more EE films as extend the scope of shows as far as resources will allow.

Action 1.3.7: Encourage increased coverage of environmental education in radio programming

Radio is the most accessible media in the SMNP area and should be used as much as possible (see also Action 1.2.5). The park office already liaises with local broadcasters in Gondar region and should continue to lobby for further programming by visiting the office. Guidelines have been produced on EE for radio, so SMNP could prepare base materials and provide ideas for programmes. In addition, the radio station should be periodically invited to SMNP to stimulate their interest.

Action 1.3.8: Explore and test innovative environmental education techniques

In other countries, ways of integrating EE into other parts of the school syllabus have been explored and used with great success. For example, sections of prose, which introduce or give information on EE, or the SMNP can be used for teaching English grammar. Environmental concepts can be introduced into maths teaching. This and other innovative EE techniques should be explored to develop a fully comprehensive and exciting EE programme.

Sub-objective 1.4: Human and financial capacity for outreach implementation increased

The number of staff in the SMNP office and their knowledge basis has been identified as a barrier to implementing and extending outreach activities in the Simien Mountains. Currently activities that are carried out are driven by partner projects, particularly the ADC-IDP and FZS. A variety of actions need to be implemented to try and increase the department's capacity to deliver this Management Programme.

Action 1.4.1: Improve capacity of staff to implement outreach programme

A capacity needs assessment for existing staff, and an assessment of required staff structures will be carried out and then a capacity building programme designed and implemented. Thereafter, funds can be raised or allocated appropriately.

Action 1.4.2: Approach regional Civil Service Commission to increase team members

Recently, an application for a new member of staff (for the vacant post of buffer zone development expert), was refused by the Amhara Civil Service Commission, whose permission is required before appointments can be made. However, before a reapplication can be made, the park should determine why the previous application was refused and then develop counter arguments. A more extensive justification for more Outreach team members also needs prepared, that includes the need to reach the expanded park, and submitted to the CSC.

Action 1.4.3: Liaise and coordinate with partners and potential donors for implementation of park outreach activities and additional funding

Even with increased budget or human capacity, SMNP will require partner support to implement this Outreach programme. SMNP should however be the pivotal organisation for coordinating outreach activities by existing or potential partners and should hold coordination and activity planning meetings regularly to ensure all activities are synergistic. In addition current partners need encouragement to extend their programmes. In addition, they need to identify other organisation that are carrying out similar activities both nationally and internationally and encourage them to implement projects in the Simien Mountains. Fundraising for outreach activities is also a priority over the lifetime of this GMP and should be done both directly by SMNP and in partnership with other organisations. Moreover, if the Community Development Fund (see below) becomes operational, this programme will be a key beneficiary.

Action 1.4.4: Establish community development fund

In many protected areas worldwide, schemes have been adopted that add community levies to park tourist fees, with the levy then being collected, managed and dispersed by a Community Development Fund (CDF). These schemes are typically well accepted by visitors and options for introducing such a scheme in SMNP will be investigated in the Ethiopian context – including the appropriate mechanism for collecting the community levy, managing the CDF and distributing revenues. Monitoring the effectiveness of the scheme will include examination of the equitability of benefit flows. Conducting a 'willingness-to-pay' study of visitors is a vital first step and could be initiated quickly and cheaply by park staff. Moreover, exploring contacts with local businessmen and wealthier Simien–bred individuals both nationally and in the diaspora, may well be worthwhile.

Objective 2: Sustainable development and livelihoods around SMNP supported

A combination of poverty, poor education and few livelihood opportunities underpin the high rate of population growth in the SMNP-associated communities. Unfortunately these problems are the most challenging to resolve and are outwith the direct jurisdiction of park management and their technical expertise. However, whilst the SMNP office is not a development actor, it must play its role in addressing these fundamental issues by facilitating livelihood development and diversification of livelihoods and reducing pressure on the park's resources and mitigating costs. Thus whilst is may take a leading role in activities that directly mitigate natural resource use, such as those dealing with fuel and construction wood, its role may be purely facilitative and catalytic when dealing with human reproductive health, or livestock improvement. Recently, the SMNP-IDP project has focussed on many development actions, particularly those relating to livestock in the SMNP-associated communities. This project has worked with the relevant woreda offices, particularly rural development and agriculture, that have the direct mandate to implement many activities in the IDP project areas.

Sub-objective 2.1: Shortage of fuel and construction wood mitigated



Reducing resource use within SMNP requires enhanced resource management and adoption of alternative livelihoods whenever possible, as well as reducing reliance on natural resources by introducing appropriate alternative energy options. The SMNP-IDP project has been developing tree nursery initiatives in the SMNP area since 2001 and has set up 12 model nurseries that provide seedlings to homesteads and woodlots. The programme has been very successful and demand from farmers now exceeds supply, as farmers are obtaining cash for selling wood. Moreover, the initiative has apparently reduced encroachment of the park and the cutting and gathering of firewood. In

additions, private nurseries have also been established with help of the SMNP-IDP through the provision of materials and training. This programme will be strengthened and further extended. Aside from increased use of sustainable fuel supplies, sustainable energy use is also a priority for SMNP management as the park's energy needs increase and as each organisation's carbon footprint is further scrutinised for CO_2 emission mitigation. SMNP must be a model of best practice in all conservation-related activities, including sustainable energy use.

Action 2.1.1: Coordinate strengthening of existing nurseries and establish new model nurseries in buffer zones

The park will work and encourage the agricultural office to extend and fence the existing and new model nursery areas, including those in the new woredas of Bayeda and Tselemt, as well as assisting with the provision of basic materials and refresher training as required. In addition, annual farmers' field days, where experience is shared between different kebeles will be coordinated and supported in selected kebeles. A combination of exotic and indigenous tree species have been used in nurseries up to now, with the fast-growing exotics such as eucalyptus proving an asset in providing wood in a short time. In existing nurseries more emphasis will now be placed on raising indigenous trees, thus an effort will be made to encourage farmers to collect additional seeds of specific type for use in the nurseries. Finally, follow-up activities to record and improve annual survival rates of seedlings issued from all nurseries and woodlots will be prioritised.



Action 2.1.2: Support new private nursery formation, including site selection

Many private farmers are keen to start tree nurseries as an income-generating initiative and there are already over 830 private nurseries in the kebeles of Debark woreda. Interested individuals may be able to obtain training and in some cases start-up materials from the woreda. SMNP management will assist by prioritising kebeles for intervention, woodlot establishment and training. It will also facilitate the coordination of the allocation of degraded communal land for tree plantation, particularly to young landless farmers.

Action 2.1.3: Increase awareness and reduce the effect of exotic trees in park areas

The success of the afforestation programme has led to some exotic species which are fast growing and of commercial value (e.g. eucalyptus) being illegally grown in the park, for example at Gich. Awareness of the problem of exotic species will be improved in target communities. Efforts will be made to ensure no further exotics are planted.

Action 2.1.4: Promote and support household fuel-efficient stove use

Fuel-efficient and improved stoves (*e.g.* for injera, wat) have been introduced to the area by the SMNP-IDP, and stoves have been made in 2 kebeles, Miligibsa and Dibir Bar. This programme was however been somewhat limited by the lack of expertise and commitment in the woreda agricultural offices. PaDPA distributed 260-300 dual purpose stoves in the Debark woreda in 2007, which were bought from local IDP groups through an overseas donation. Unfortunately there is some resistance to their use as fires serve an additional cultural role and also provide warmth. In addition, they cost some 120 EB, and this deters households from buying them, particularly as many have been donated. A number of activities may ameliorate the situation, including promotion and demonstration of stoves at market days throughout the buffer zone, and holding demonstration days in targeted kebeles. In Gich, where resistance is greatest, further discussion forums will be facilitated. In addition, existing programmes will be supported by the facilitation of refreshment training, monitoring of stove quality and stove use. Moreover, as technology is improving all the time, efforts will be made to explore the feasibility of new stove or other forms of fuel-saving methods.

Action 2.1.5: Advocate the introduction of legislation to ensure the use of fuel-efficient stoves and legal wood/energy sources for commercial purposes/premises and other large institutions

SMNP has the potential to act as an advocate for the introduction of regulations that ensure the use of fuel-efficient stoves in commercial premises and other institutions that use large amounts of fuelwood in local towns, particularly Debark.

Action 2.1.6: Maximise SMNP use of sustainable energy and promote and implement awareness of alternative energy sources and energy saving methods

SMNP also has a role in exhibiting best practice in conservation and natural resource use and thus should demonstrate and practice conservation-related practices wherever possible. To demonstrate alternative energy sources and energy saving methods the park must partner with experienced organisations to ensure that these messages are incorporated in the education/interpretation/resource centre. The Outreach Programme should also lobby for these to be incorporated in any new SMNP developments.

Sub-objective 2.2: Sustainable and environmentally friendly livelihood diversification and agricultural technologies promoted

With an acute shortage of land for Simien households, diversification and potentially intensification of agriculture could have a significant effect on community livelihoods, thereby reducing pressure on the natural resources of the SMNP in the long term. For example, improved or alternative grain species or varieties, such as triticale or some species of fruit trees might flourish in the area. Government and some projects have had initiatives to encourage farmers to adopt new technologies and improved varieties of crops and livestock breeds, but these have not always been successful. Sometimes conservative attitudes have played a role, whilst in other, supply of new varieties such as triticale has been the limiting factor. Nevertheless such activities are vital and whilst the SMNP management is not the main actor in such initiatives, it still has a role to play in facilitating other government agencies, or partner projects to carry out such work.

Action 2.2.1: Coordinate introduction and expansion of improved crop varieties

The SMNP should assist and encourage the agriculture office or partner projects in promoting new crop varieties, selecting and establishing pilot and demonstration sites, providing technical advice, running farmers' field days and promoting credit for the purchase of new seed varieties. Perhaps most directly, the park could help in providing logistical support to make seeds available.

Action 2.2.2: Support initiatives to reduce grazing pressure in and around park

Park outreach staff will again assist and encourage the agricultural office and partner projects to increase the awareness of problems associated with overgrazing, the promotion of improved breeds and fodder systems and animal health programmes.

Action 2.2.3: Promote and support introduction of horticultural systems

Park outreach staff will also assist and encourage the agricultural office and partner projects to introduce new fruit and vegetables to the area, such as apples in the highland area, or lowland fruits below the escarpment and also develop and establish small scale irrigation schemes. SMNP will be a more direct actor in monitoring the impact of any irrigation schemes, particularly on downstream users.

Action 2.2.4: Persuade Woreda Agricultural offices to promote physical and biological land stabilisation methods

Soil conservation activities such as terracing or gully management are often not maintained as they were only built due to the provision of food aid or other incentives. Communities have therefore not been active in maintaining basic methods, on the expectation that they would be paid or given food aid to do so. The SMNP will include soil conservation as a topic in the environmental education programme.

Sub-objective 2.3: Population growth in park-associated communities reduced

Human population growth is a serious problem for everyone in the Simien Mountains with local communities themselves aware that they cannot provide for their families. Basic reproductive health education by the government and projects has increased awareness of the availability of free contraceptives, even though the Orthodox church does not actively support family planning. Recently the SMNP-IDP project has provide refresher training for over 250 reproductive health officers in conjunction with Woreda Health Office in 16 kebeles, so that there are now 2 such agents in each kebele. However this initiative needs strengthening and expanded to the new park areas.

The SMNP is not a reproductive health agency and yet is directly affected by the rising human population in the Simien area. Thus it is torn between the need the address this issue but not having the mandate, resources or expertise to tackle it. Thus, for the foreseeable future, SMNP will increase awareness of the issue and facilitate efforts by other agencies to implement family planning programmes.

Action 2.3.1: Increase family planning awareness in park-associated communities

In order to increase awareness and to explore ways in which the community can be supported to implement family planning, SMNP management will include topics on family planning in their environmental education programmes for all sectors of the community, scout training programmes and also introduce it as a topic in park kebele discussion forums.

Action 2.3.2: Facilitate efforts by woreda health offices to implement family planning programmes

Facilitation through assistance in the coordination of training of reproductive health agents (RHA) in the new park extension area will be conducted by SMNP management, as well as refreshment training for RHA in current kebeles. Monitoring and evaluation of family planning initiative is essential to ensure the best programme can be delivered, and SMNP staff will assist where appropriate.

Action 2.3.3: Increase logistical and material support for family planning

Much more work and resources are needed to address this issue. SMNP staff will explore with PaDPA whether it is appropriate for conservation budget to be spent on such initiatives, but will otherwise attempt to increase the support for family planning in other ways. The park will liaise and encourage the woreda health office to prioritise work in areas around the park and also approach both NGOs and donors interested in family planning to encourage them to implement projects in and around SMNP.

H 3-year Action Plans

This GMP should guide the management of the SMNP over the next 10 years, by laying out the vision for SMNP and the strategies by which that vision might be achieved. In addition to providing this long-term vision and strategy, this GMP must also be directly applicable to the day-to-day management needs of SMNP and the people who are primarily responsible for its implementation. These 3-year action plans have therefore been designed to provide further detailed activities that need to be accomplished as part of the overall identified action. This structuring should help facilitate understanding and implementation of both park managers and other stakeholders. Each 3-year action plan also clearly lays out park roles and responsibilities for implementing each action and identifies potential partners that might be involved. This GMP is also ambitious and its implementation is beyond the current capacity of the park or its partners. Input required for implementation can include technical advice, human and/or financial capacity, data, and/or equipment and the level of external support necessary for implementation of each action has been ranked (none, some, most, all). A prioritisation process has also been undertaken to facilitate GMP implementation within the confines of limited resources and a

Abbreviations

E = Ecologist, IDP = SMNP-Integrated Development Project, CD = Community Development Expert, TE = Tourism Expert, W = Warden, WPDP = Wild plant development and protection expert, WADP = wild animal development and protection expert, WRADO/WAO = woreda rural and agricultural development offices, WC= Woreda Council, SRMP-NG= Austrian Sustainable Resource Management Programme in North Gondar, SDPASE= Sustainable Development of Protected Area System, Pro SRA= Road Authority, MSO = Meterological Service Organisation, LEA = Law Enforcement Authorities, KA= Kebeles, SNRMP-NG = Sustainable Natural Resource Management Programme-North Gondar, WHO=Woreda Health Office

F=Financial input, H= Human capacity, T= Technical Advice, M= Material

C: Ecological Management Programme

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
Objective 1: Threats to PECs reduced or resolved through interventions based on adaptive management																		
1.1: Human impacts from settlement, cultivation,	**1.1.1: Provide knowledge to facilitate mitigation of ecological impacts of settlement, cultivation, grazing and natural resource use**	**FHT**	**High**	**High**	**E**	**WCs, PaDPA, SRMP-NG, FZS,**												

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
grazing, and unsustainable natural resource use reduced or eliminated	a.Investigate extent of ecological damage due to settlement, cultivation, grazing, and produce map					**UNESCO, KAs**												
	b.Identify ecological resources that are illegally exploited in SMNP, estimate amounts and areas, and map																	
	c. Identify and map fragile habitats susceptible to settlement, cultivation and grazing																	
	d. Set up monitoring of effect of grazing reduction on vegetation and wildlife in different habitats																	
	e. Produce report for other Programmes and partners to provide knowledge on above points																	
	Action 1.1.2: Develop soil and water conservation plan in partnership with other stakeholders	**FHT**	**High**	**High**	**E**	**WAOs, PaDPA, SRMP-NG, FZS, UNESCO, KAs**												
	a. Identify areas, types and amounts of physical and biophysical erosion control mechanisms needed in different area with special attention to watershed and wetlands																	
	b. Liaise with other programmes to train park and communities in erosion control mechanisms																	
	c. Liaise with other programmes to construct suitable erosion control mechanism as per identification above and selected priority areas in first 3 years																	
	d. Assess implementation of erosion control mechanisms for suitability and effect																	

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
							Year 1				Year 2				Year 3			
					Park	Partners	1	2	3	4	1	2	3	4	1	2	3	4
	e. Monitor water and soil quality as per monitoring plan and report back																	
	1.1.3: Develop fire monitoring and control mechanisms	**FHTM**	**High**	**Medium**	**E**	**WCs, WAOs, PaDPA, SRMP-NG, FZS, UNESCO, KAs**												
	a. Identify factors affecting fire risk, including fuel load and vegetation type, and causes of fire																	
	b. Determine incidence of fire in SMNP (past and present) using questionnaires, field survey and remote sensing data																	
	c. Develop fire control mechanisms, train park and community fire brigades, provide equipment to control fire outbreaks																	
	d. Establish fire breaks and fire monitoring towers in key areas																	
	f. Identify alarm protocols and long term monitoring protocol																	
	1.1.4: Develop regulations for sustainable water resource utilisation	**FT**	**Medium**	**Medium**	**E**	**WCs, WAOs, PaDPA, SRMP-NG, FZS, UNESCO, KAs**												
	a. Identify the users, amount of use, and problems/issues with water resource use in SMNP																	
	b. Assess water availability and quality, including seasonal fluctuations																	
	c. Conduct workshop with stakeholders (including users) to assess issues and solutions and create awareness of sustainable water use																	

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	d. Negotiate and agree rules and regulations for water use in SMNP with different users in partnership with other stakeholders																	
	e. Monitor and enforce water use based on agreements in partnership with resource protection team																	
1.2. Degraded habitats rehabilitated	**1.2.1: Devise and implement soil rehabilitation measures**	**FHT**	**High**	**High**	**E**	**WCs, WAOs, PaDPA, SRMP-NG, FZS, UNECO, Kas**												
	a. Identify and map areas of soil degradation and types of soil that may require rehabilitation																	
	b. Develop and implement protocols to assess degree of degradation by field survey, soil sampling and laboratory analysis where necessary																	
	c. Review existing literature from SMNP and other areas on methods for soil restoration																	
	d. Select and apply suitable methods for soil restoration for relevant habitats/altitudes in partnership with research institutes and relevant woreda or zonal agriculture offices																	
	e. Monitor soil rehabilitation to determine effectiveness of methods, as per monitoring plan																	
	1.2.2: Devise and implement reforestation programme with indigenous trees	**FHTM**	**High**	**High**	**E, WDPD**	**WCs, WAOs, PaDPA, SRMP-NG, FZS, UNECO, KAs**												
	a. Identify and map areas and vegetation types in each PEC (Afroalpine, Sub-Afroalpine, montane forest) that may require reforestation and quantify severity of degradation																	

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
							Year 1				Year 2				Year 3			
					Park	Partners	1	2	3	4	1	2	3	4	1	2	3	4
	b. Determine and quantify which species and how many seeds/seedlings are required for reforestation in different areas																	
	c. Acquire seeds and seedlings for indigenous tree species for reforestation from nurseries operated by woreda agricultural offices near the park																	
	d. Raise funds for establishing suitable nurseries within the park for seed germination of indigenous trees																	
	e. Build infrastructure, acquire materials (including quality seeds), and train park staff in methods and protocols for nursery management and begin nursery programme																	
	f. Develop workplan for re-aforestation in different habitats/areas based on priority setting and undertake training for park staff on re-aforestation protocol																	
	g. Undertake reforestation in priority areas																	
	h. Develop and implement protection (guarding) and management plan for seedlings in reforestation areas																	
	i. Monitor reforestation areas to determine effectiveness for rehabilitating each area and revise methods if necessary																	
	1.2.3: Develop mitigation measures for negative ecological impacts of road	**FHTM**	**Medium**	**Medium**	**EM**	**Drivers, SRMP-NG,**												

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	a. Facilitate or conduct Environmental Impact Assessment to identify the habitats/areas and wildlife that are negatively affected by the road and the type/severity of impact					**UNESCO, FZS, KAs, LEAs**												
	b. Develop some rules and regulations for vehicle/truck access through the park on the road																	
	c. Create awareness about the negative impacts of the road and the rules and regulations for road users (communities, drivers, etc) - e.g. pamphlets, signposts, leaflets																	
	d. Liaise with law enforcement authorities to assist with enforcing the rules and regulations concerning use of the road																	
	e. Discuss with roads authority about controlling the quarries in the park as per the rules and regulations that exist for the park already																	
	f. Discuss with roads authority and other stakeholders about the need for speed bumps along the road to limit road kill and build speed bumps as necessary																	
	g. Lobby roads authorities and other stakeholders to construct a public road outside the park boundary to limit public traffic on the existing park road																	
	h. Alternatively, discuss feasibility of realigning the existing road to avoid habitats for key species, based on feasibility/costing study already conducted and agree on solutions with stakeholders																	

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	i. Promote and facilitate construction of drainage systems to reduce erosion and waste/pollution due to presence of road/vehicles																	
	j. Undertake soil/habitat rehabilitation in areas along the road that were degraded during road construction																	
	k. In partnership with Outreach and Park Operations Programme, discuss and negotiate solutions with communities around Bwahit to limit the number of people/animals congregating at the road inside the park or to change the place of congregation entirely to Chiroleba																	
	1.2.4: Establish methods to identify and control alien species	**FHTM**	**Low**	**Low**	**WPDP**	**WCS, KAS, PaDPA, WAOS, FZS, SRMP-NG, UNESCO**												
	a. Identify and map current type and extent of alien species in SMNP																	
	b. Train all park staff in identification of alien species and develop systems for reporting sighting of alien species by any staff member																	
	c. Develop and implement control physical and biological mechanisms to control alien species inside the park																	
	d. Develop protocols for continuous monitoring of alien species in SMNP as per monitoring plan																	
1.3: Threats to endemic and threatened wildlife	**1.3.1: Devise wildlife disease monitoring and management system**	**FHTM**	**High**	**High**	**AH, E**	**WCS, KAS, PaDPA, WAOS,**												

10-Year Management Objectives and Sub-Objectives mitigated	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	a. Determine types and incidence of domestic diseases and animal populations affected using questionnaire (communities and veterinary authorities), field surveys, post-mortems and serological sampling.					FZS, SRMP-NG, UNESCO, EWCP												
	b. Devise and implement educational programme on disease prevention and response, including posters, pamphlet, group discussion in partnership with Outreach programme																	
	c. Liaise with vet authorities, woredas agriculture office, and other partners (EWCP) to devise and implement vaccination and treatment programme for domestic animals in/around SMNP																	
	d. Develop the protocol, acquire necessary equipment, and train park staff in post-mortem and other sample collection for monitoring disease in wildlife																	
	e. Assess, develop, and implement mechanisms to limit disease transmission from domestic to wild animals (e.g. excluding from grazing walia areas and restricting free-ranging dogs)																	
	f. Develop partnerships with national and international laboratories and experts in sample analysis and diagnosis																	
	g. Develop task force with stakeholders and relevant disease experts and hold working groups to devise monitoring and response strategy for outbreaks when they are detected																	

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
							Year 1				Year 2				Year 3			
					Park	Partners	1	2	3	4	1	2	3	4	1	2	3	4
	h. Review and support research on other potential preventative measures to limit disease outbreaks (e.g. oral vaccination of Ethiopian wolves)																	
	1.3.2: Develop mechanism to conserve genetic integrity and viability of Walia ibex and Ethiopian wolf, especially prevention of hybridization	**FHTM**	**High**	**Medium**	**E**	**WCS, KAS, PaDPA, WAOS, FZS, SRMP-NG, UNESCO, EWCP**												
	a. Review existing data and/or conduct research to assess genetic variation and genetic structure of Ethiopian wolf and Walia ibex																	
	b. Develop and implement park rules and regulations to restrict dogs from Ethiopian wolf habitat and to restrict goats from Walia ibex habitat																	
	c. Assess and monitor overall distribution and dispersal (genetic exchange) of both species as per monitoring plan																	
	1.3.3: Manage human-wildlife conflict	**FT**	**Medium**	**High**	**E, CD**	**WCS, KAs, PaDPA , WAOS, FZS, SRMP-NG, UNESCO, EWCP**												
	a. Identify the type of wild animals creating human-wildlife conflict and the amount of damage using questionnaire/interview, field surveys, and group discussions with concerned bodies (Woreda, zonal) and local communities																	
	b. Ensure sightings of predators are included in RBM and community monitoring systems																	

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
							Year 1				Year 2				Year 3			
					Park	Partners	1	2	3	4	1	2	3	4	1	2	3	4
	c. Develop task force among park, other specialists, and affected communities to discuss problem and agree possible solutions, as well as roles and responsibilities of each stakeholder																	
	d. Implement solutions based on task force findings and monitor effectiveness in limiting and resolving conflict																	
	1.3.4: Ensure wildlife corridors are maintained in partnership with other programmes	**FHTM**	**High**	**High**	**E**													
	a. Identify and map existing wildlife corridors for large mammals (particularly walia ibex and Ethiopian wolf) within SMNP and to areas outside																	
	b. Identify and map known isolated subpopulations inside and near the park that require corridors for dispersal																	
	c. Conduct large mammal transects to identify unknown isolated subpopulations																	
	d. Provide information to Park Operations Programme for future boundary demarcation initiatives that includes necessary wildlife corridors					**All**												
	e. Develop research and monitoring plan to assess suitability of wildlife corridors for wildlife dispersal																	
	f. Feedback and advise Park Operations Programme on limitations (e.g. settlement, cultivation) to wildlife dispersal in corridors and discuss/develop solutions																	
	g. Liaise with other Programmes to develop and implement solutions to limit																	

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
							Year 1				Year 2				Year 3			
					Park	Partners	1	2	3	4	1	2	3	4	1	2	3	4
	barriers to dispersal																	
1.4. Strategy to mitigate effects of global warming	**1.4.1: Increase understanding of likely climate change impacts in SMNP**	**FHTM**	**High**	**Low**	**E**	**PaDPA, FZS, SRMP-NG, UNESCO, EWCP, MSO**												
	a. Review relevant literature on climate change predictions for Ethiopian highlands																	
	b. Assess available climate data in SMNP and data requirements for simulation modelling																	
	c. Establish links with other research bodies to undertake simulation modelling of climate change impacts																	
	d. Create and test model																	
	e. Disseminate results to stakeholders, including donors, policy makers and government																	
	f. Assess data needs to monitor climate change and/or improve model accuracy and incorporate into monitoring plan as necessary																	
	1.4.2: Minimise local climate change and investigate potential mitigation measures for global climate change impacts	**FT**	**Medium**	**Low**	EM, CD	**PaDPA, FZS, SRMP-NG, UNESCO, EWCP, MSO, KAs, WCS, WAOs**												
	a. Liaise with other experts and organisations working on climate change issues in Ethiopia																	
	b. Promote the importance of forest and watershed protection as a priority for mitigating climate change impacts on communities among development organisations working in Simien Mts																	

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	elsewhere in Ethiopia																	
	c. Hold workshop to discuss climate change impacts and mitigation measures with stakeholders (including local communities, donors and government) and appropriate climate change experts																	
Objective 2: Research and monitoring of PECs and KEAs carried out																		
2.1: Ecological monitoring plan developed and implemented	**2.1.1: Develop and implement protocols for PEC and KEA monitoring in SMNP**	**FHTM**	**High**	**High**	**E**	**PaDPA, FZS, SRMP-NG, UNESCO, EWCP, KAs, WCS, WAOs**												
	a. Review existing literature and other studies of relevance to SMNP ecological monitoring, including studies from other areas to learn from other studies																	
	b. Draft protocols for each PEC and KEA, including methods, timeframe, materials/equipment required, with partners if relevant																	
	c. Seek comments on monitoring protocols from relevant experts both inside and outside the park to improve protocol																	
	d. Acquire equipment, materials and staff (e.g. field assistants) needed																	
	e. Train personnel involved as necessary																	
	f. Collect and analyse data as per protocol (and systems developed above)																	

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	2.1.2: Analyse monitoring data and report back on intervention management effectiveness and ecosystem health	**FHTM**	**High**	**High**	**E**	**PaDPA , FZS, SRMP-NG, UNESCO, EWCP, KAs, WCS, WAOs**												
	a. Regularly analyse monitoring data collected to assess effectiveness and develop recommendations for management (to be discussed in working groups above)																	
	b. Establish working groups for different management issues/threats that include ecologists and maybe other Programme/partners to discuss issues & results of monitoring work and provide feedback																	
	c. Decide on meeting schedule and hold meetings/field surveys if necessary																	
	d. Change or continue intervention if necessary based on results/findings/discussion																	
	2.1.3: Review monitoring plan and protocols based on existing data and change as necessary	**FT**	**High**	**High**	**E**	**PaDPA, FZS, SRMP-NG, UNESCO, EWCP, KAs, WCs, WAOs**												
	a. Assess the limitations/effectiveness of existing protocols based on new data and new literature in SMNP and elsewhere																	
	b. Continuously review SMNP data and scientific literature to keep up to date on scientific advances																	
	c. Change/modify the monitoring plan and protocols as necessary based on experience and results of data analysis																	

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
2.2. Modern data acquisition, management, and distribution systems developed	**2.1 Develop and maintain database for previous and ongoing research and monitoring data, including GIS database**	**FHTM**	**High**	**High**	**E**	**PaDPA, FZS, SRMP-NG, UNESCO, EWCP**												
	a. Identify data needs for research and monitoring, including existing data																	
	b. Review existing spatial data and acquire for database																	
	c. Organise previous data and document what currently exists																	
	d. Identify gaps in existing data and conduct field surveys to collect missing data																	
	e. Produce maps needed for ongoing work																	
	f. Acquire necessary equipment (computer hardware and software)																	
	g. Hire consultant for initial database development and training of park staff																	
	h. Undertake training of basic GIS skills for appropriate park staff																	
	i. Decide on the necessary database format (e.g. SQL, Access, etc) and structure/complexity																	
	j. Create database (by consultant in partnership with park expert)																	
	k. Enter data into database and any analyses																	
	l. Develop system for database management (maybe external to begin with) and data dissemination																	

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	m. Assign responsibility for data management and quality (hard copies and electronic data)																	
	n. Communicate with users of database to develop methods of data dissemination and feedback for future																	
	o. Conduct training of park staff in database management to enable internal future management of database																	
	2.2 Devise systems for data analysis and dissemination/reporting	**FHTM**	**High**	**High**	**E**	**PaDPA, FZS, SRMP-NG, UNESCO, EWCP**												
	a. Establish research and monitoring office with appropriate personnel and equipment, files, reports, maps, raw data sheets for all studies previously or currently conducted (including database developed above)																	
	b. Assign one person with responsibility for monitoring office management																	
	c. Acquire literature from Simien of related studies and file (hard or electronic) for easy access of staff																	
	d. Acquire available hardware and software for data analysis and train experts/partners as necessary in data analysis methods																	
	e. Develop and discuss plan for dissemination of results/reports on research and monitoring studies on regular basis by all staff or partners conducting research and monitoring																	
	f. Organise quarterly seminar for technical experts (park and partners) to present research, discuss problems and issues and solution																	

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	2.3 Implement Ranger-Based Monitoring (RBM)	**FHTM**	**High**	**Low**	**E, W, CS**	**UNESCO, PaDPA , FZS, SRMP-NG, EWCP**												
	a. Investigate options for ranger based monitoring based on systems in other parks (e.g. Serengeti)																	
	b. Develop protocols for RBM in SMNP																	
	c. Train staff in data collection protocols and field techniques (GPS, binoculars, etc)																	
	d. Develop databases for data storage, management, and analysis																	
	e. Implement RBM and regularly evaluate data collection and data reliability																	
	2.4 Train and employ para-ecologist team to support research and monitoring in SMNP	**FHTM**	**High**	**High**	**E**	**UNESCO, PaDPA, FZS, SRMP-NG, EWCP, KAs ,WCs**												
	a. Advertise para-ecologist position in local communities in/around SMNP																	
	b. Interview and select para-ecologists from men and women applicants																	
	c. Train para-ecologists in field protocols for research and monitoring and data compilation (e.g. computer training for data entry)																	
	d. Provide equipment as necessary and engage para-ecologists in data collection as per monitoring plan and research priorities																	
	e. Investigate funding options for para-ecologists to further their education (e.g. university scholarships)																	

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	2.5 Develop systems for minimizing community fatigue and improving accuracy of information for socio-economic data	**FHTM**	**High**	**Medium**	**E, CD**	**UNESCO, PaDPA, FZS, SRMP-NG, EWCP, KAs,**												
	a. Identify and organise (in database) existing socio-economic data to prevent duplication in future																	
	b. Identify source of problem of fatigue and information inaccuracy through community questionnaire, focus group discussion, and key informants and discuss potential solutions with communities and other stakeholders																	
	c. Review existing literature and solutions from other areas for ideas																	
	d. Identify missing and required socio-economic data and prioritise according to management and/or community needs (this should be done in partnership with PaDPA, communities and stakeholders,)																	
	e. Disseminate and promote research gaps among researchers, PaDPA, park and partners																	
	f. Devise rules and regulations for researchers/park/partners wishing to conduct socio-economic studies, and system for allocating permits from PaDPA and park office																	
	g. Coordinate collection of required data to prevent duplication and unnecessary studies																	
	h. Update socio-economic data needs and re-prioritise as necessary																	

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
2.3: Partnerships for research and monitoring promoted and developed	**3.1 Promote and guide development of research and monitoring centre for SMNP using external support and funding**	**FHTM**	**High**	**Medium**	**E**													
	a. Establish small working group to discuss and develop a concept of the "SMNP research and monitoring centre" including wish-list for facilities, equipment, materials, and methods of coordination/management					**UNESCO, PaDPA, FZS, SRMP-NG, EWCP**												
	b. Identify required budget for establishing research and monitoring centre																	
	c. Identify sources of funding and support (e.g. potential partners and donors)																	
	d. Apply for funds and begin establishing centre infrastructure/materials																	
	e. Assign responsibility for promoting and guiding centre establishment																	
	f. With previous working group, plan for future development of research centre and securement of necessary funds																	
	g. Promote the research centre among other research bodies and researchers that come to SMNP																	
	h. Integrate all research and monitoring activities in the park with existence of research and monitoring centre																	
	i. Establish small management committee with appropriate partners (SMNP, FZS, IDP, Gondar University) to make decisions on R&M centre																	

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	3.2 Create links with universities and research institutes, government and NGOs to acquire and share expertise for R&M	**FT**	**Medium**	**High**	**E**													
	a. Identify potential partners regionally, nationally and internationally					**UNESCO, PaDPA , FZS, SRMP-NG, EWCP**												
	b. Prepare and establish means of regular communication (quarterly meetings, newsletters, reports, seminars)																	
	c. Assign one or more park person to communicate regularly with other institutions																	
	d. Communicate regularly through identified means																	
	3.3 Promote and facilitate research priorities by regional, national and international bodies	**FHTM**	**High**	**Medium**	**E**													
	a. Identify research requirements/gaps and prioritise					**UNESCO, PaDPA , FZS, SRMP-NG, EWCP**												
	b. Disseminate and promote research priorities among potential researchers/partners by newsletter, emails, seminars, website																	
	c. Facilitate and provide assistance for priority research studies as much as possible (e.g. use of facilities, permit applications, office space, transport and other help as much as possible)																	
	d. Update research priorities list regularly and disseminate new list																	
Objective 3: Financial, human and material capacity for ecological management built																		
	3.1 Fulfil staff requirements and undertake necessary training	**FHTM**	**High**	**High**	**W, E**	**UNESCO, PaDPA,**												

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
							Year 1				Year 2				Year 3			
					Park	Partners	1	2	3	4	1	2	3	4	1	2	3	4
	a. Undertake staff and training needs assessment to fulfil management interventions (Obj 1) and research/monitoring (Obj 2)					**FZS, SRMP-NG, EWCP**												
	b. Prioritise personnel required based on needs assessment and discussion																	
	c. Identify potential alternative solutions to fulfil personnel requirements for Ecological Management Programme																	
	d. Hire personnel required if funding allows																	
	e. Identify short-, medium-, and long-term training needs and opportunities for building capacity in Ecological Management																	
	f. Identify potential personnel/institutions (including focal person for communication) that can provide training and funding sources (nationally and internationally)																	
	g. Organise training courses (short and long term)																	
	3.2 Improve infrastructure, facilities and equipment for ecological management	**FHTM**	**High**	**High**	**E**	**UNESCO, PaDPA , FZS, SRMP-NG, EWCP**												
	a. Identity infrastructure and facility needs and required budget																	
	b. Establish and equip herbarium																	
	c. Acquire field equipment (e.g. tents, GPS, sleeping bags, binoculars, raingear, digital camera, compass, dog catching stick, etc)																	

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	d. Establish and equip library																	
	e. Identify potential sources of funding for infrastructure development and equipment purchase																	

D: Settlement Management Programme

10-Year Management Objectives	3-Year Management Actions/ Activities	External inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
Objective 1: Voluntary resettlement plan implemented																		
	Action 1.1: Implement direct relocation of targeted park residents	**F**	**Most**	**High**	**PW**	**UNESCO, FZS, ADC**												
	a. Liaise with woredas to determine if new land registration and certification procedure is a potential tool for controlling settlement																	
	b. Consult with regional office with responsibility for land distribution and ownership office on administration of settlements and ultimate authority to understand options for resettlement agreements																	
	c. Investigate possibility of provision of free land plots in urban areas and rural areas outside park to permanent park residents willing to emigrate fromSMNP																	

10-Year Management Objectives	3-Year Management Actions/ Activities	External inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	d. Form task force for relocation of Arkuasiye village (PaDPA, SMNP, Zonal, woreda and kebele representatives, community members)																	
	e. Estimate costs of relocation from Arkuasiyeand submit funding proposals to donors																	
	f. Draw up detailed action plan to establish mechanisms for Arkuasiye relocation																	
	g. Draw up and sign agreements for terms and conditions of resettlement between householders, PaDPA/SMNP and local government																	
	h. Implement action plan as funds are raised																	
	Action 1.2: Develop alternative livelihoods for SMNP residents in Gich	**FTHM**	**All**	**High**	**PaDPA**													
	a. Prepare and submit funding proposals for the PaDPA sustainable livelihoods project document					**Donors**												
Objective 2: Cultivation reduced, controlled and negative environmental impacts mitigated																		
	Action 2.1: Halt expansion and reduce extent of agricultural fields	**FT**	**Some**	**High**	**PW**													
	a. Collect baseline data and map distribution, extent, and impact of agriculture within SMNP and ownership of fields																	
	b. Liaise with zone, woredas, kebele to agree on policies and action plans for controlling agriculture development																	
	c. Initiate two-way dialogue to discuss with communities problems and issues with respect to environmental impact of cultivation																	

10-Year Management Objectives	3-Year Management Actions/ Activities	External inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	d. Discuss with communities the historical pattern of agriculture use and facilitate them to determine rightful users																	
	e. Discuss, negotiate, and agree on agriculture extent, consolidation, boundaries and practices with communities, with associated rights and responsibilities, monitoring and enforcement system																	
	f. Sign user agreements between SMNP and field users																	
	Action 2.2: Rehabilitate degraded agricultural and grazing areas	**FTHM**	**Some**	**Medium**	**EM**													
	a. Assess and map area, extent and location of environmental degradation associated with human use																	
	b. In liaison with EM programme, develop soil and water conservation plan with key stakeholders such as agriculture offices and communities																	

E: Park Operations Programme

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
Objective 1: Park resource management and protection strengthened																		
1.1: Park staff and institutional	**Action 1.1.1: Build the institutional capacity of SNMP**	**HTF**	**Low**	**High**	**W**	**PaDPA, IDP, FZS**												

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
capacity improved	a. Critically review park organisational structure, assess whether fit-for-purpose and create appropriate management and operations structure																	
	b. Implement revised structure with new posts if needed, new staff recruited and revised job descriptions as necessary																	
	c. Identify and prioritise the equipment needs for each department																	
	d. Procure the necessary field and office equipment as resources allow																	
	Action 1.1.2: Facilitate short term and long term training for SMNP staff	**HTF**	**High**	**High**	**W**	**PaDPA, IDP, FZS**												
	a. Identify the training needs for all SMNP staff and develop training plan with appropriate training schemes, courses and study tours																	
	b. Implement training plan as resources allow																	
	c. Implement initial scout training of trainers and overall training of all scouts																	
	d. Review scout training needs and create annual retraining programme with biannual trainings																	
	e. Implement ongoing scout retraining programme																	
	f. Organise experience sharing trips where appropriate																	
	Action 1.1.3: Create an incentive mechanism for staff, including community scouts	**TF**	**Low**	**High**	**W**	**PaDPA**												
	a. Develop clear and transparent performance-related evaluation procedures																	

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	b. Provide incentive based on performance / merit																	
	c. Develop and implement strategies to strengthen staff morale including internal competition for good performance																	
1.2 Systems and framework for resource protection strengthened	**Action 1.2.1: Maintain an effective patrolling system for resource protection**	**HT**	**Low**	**High**	**W**													
	a. Prepare annual patrolling plans based on outpost distribution, scouts numbers, terrain and threat distribution, amongst others					**PaDPA, FZS**												
	b. Devise and continually review and update resource protection monitoring systems																	
	c. Implement resource protection patrolling including at least monthly feedback and planning systems																	
	Action 1.2.2: Create a mechanism for local community participation in resource protection	**HT**	**Low**	**High**	**W, CD**													
	a. Agree working guidelines for community scout (CS) operations within the KPACs																	
	b. Develop and agree modalities for CS selection and monitoring within the KPACs					**Kas, IDP, FZS**												
	c. Select, equip and train community scouts within scout training system																	
	d. Develop and implement a mechanism for evaluation and monitoring of community participation effectiveness																	
	Action 1.2.3: Review and reform existing laws	**HTF**	**Medium**	**Low**	**W**	**PaDPA, IDP, FZS**												
	a. Organise workshop at Regional/Federal level to identify gaps in resource protection laws																	

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	b. Consult policy and law makers at regional and federal level																	
	c. Prepare draft legislation to strengthen laws																	
	d. Submit legislation to Regional/Federal Parliament																	
	Action 1.2.4: Solicit support from judiciary and police	**HTF**	**Medium**	**Medium**	**W**	**PaDPA, WCs, Kas, Police**												
	a. Hold local workshops with police, judiciary and other local leaders to improve awareness of legal framework pertaining to SMNP																	
	b. Set up regular meetings with judiciary and police to reinforce effectiveness of collaboration																	
	Action 1.2.5: Improve awareness in local communities of SMNP legal framework	**H**	**Medium**	**Low**	**W, CD**	**WCs, Kas, IDP**												
	a. Ensure awareness of laws regarding SMNP and natural resource use is included in KPAC meetings																	
1.3: Park boundary secured	**Action 1.3.1: Demarcate new and existing park boundary**	**HF**	**Medium**	**High**	**W, CD**	**PaDPA, WCs, WAOs, Kas, IDP**												
	a. Locate agreed boundary beacon sites, and make record of GPS and land features																	
	b. Erect boundary beacons																	
	Action 1.3.2: Prepare and submit park gazettement document	**HT**	**Medium**	**High**	**W**	**PaDPA, EWCA, SDPASE, UNESCO, FZS**												
	a. Establish gazettement process with appropriate authorities																	
	b. Prepare new boundary description of SMNP to include extension areas and areas excised from park																	

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	c. Submit gazettement document to appropriate authorities																	
	d. Consult UNESCO and reconcile newly gazetted boundaries with UNESCO WHS boundaries																	
1.4: Synergistic, collaborative and adaptive planning and review system operational	**Action 1.4.1: Review and implement GMP Monitoring and Evaluation Plan**	**TF**	**High**	**High**	**W**													
	a. Hold workshop to review GMP monitoring and evaluation plan and to identify and prioritise indicators					**PaDPA, FZS, IDP**												
	b. Develop methods for indicator verification, assign responsibility and embed in monthly task planning and job descriptions																	
	c. Hold 6-monthly management meetings to report activity and action implementation progress																	
	d. Produce progress report annually, that includes analysis of achievements and obstacles																	
	Action 1.4.2: Improve annual and quarterly operational planning and budgeting	**T**	**Low**	**High**	**W**	**PaDPA, IDP, FZS**												
	a. Set up planning meetings with complete management team for quarterly and annual activity planning																	
	b. Assign responsibility to a staff member for each developed activity, during quarterly and annual planning																	
	c. Ensure budgeting is in line with activities																	
	d. Refer to GMP 3-year Action Plan when drawing up annual work plans																	

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	e. Liaise with partners on allocation of responsibilities for planned actions annually																	
	f. Establish and maintain contact with planning office in PaDPA with responsibility for budget defence																	
	Action 1.4.3: Develop next 3-year Action Plan for 10-year GMP	**TF**	**Medium**	**High**	**W**													
	a. Liaise with partners on involvement in next cycle of action planning					**PaDPA, IDP, FZS, WAOs, Kas**												
	b. Review problems and issues for SMNP																	
	c. Evaluate 10-year objectives and sub-objective in each management programme for continued relevance																	
	d. Evaluate current 3- year action plan for completion and continued relevance																	
	e. Develop new actions and activities as required																	
Objective 2: SMNP infrastructure developed and maintained																		
	Action 2.1.1: Construct, rehabilitate and equip outposts	**FM**	**High**	**High**	**W**													
	a. Construct and equip sub-headquarters at Sankaber, Dilyibza and At Mekane Birhan					**PaDPA, IDP**												
	b. Construct new outposts at Debark, (Limalimo, Sugsug), Beyeda (Bashaye, Abari, Sabra, Salawa, Adi-lemlem) and Janamora (Barna, Kilil, Majji)																	
	c. Upgrade the existing outposts at Dirni, Chenek and Gich																	
	d. Provide each outpost with solar power and																	

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	water																	
	Action 2.1.2: Develop an efficient transport system in the park	**FM**	**High**	**Medium**	**W**													
	a. Equip each of the 3 sub-headquarters with a pick-up					**PaDPA, IDP**												
	b. Procure one station wagon and 2 pick-ups for HQ																	
	c. Construct garage facilities at HQ																	
	d. Employ appropriate staff to maintain vehicles																	
	e. Develop and implement maintenance schedules for vehicles																	
	Action 2.1.3: Develop an efficient communication network	**FM**	**High**	**High**	**W**													
	a. Install HF base radios at each sub-headquarters and at the HQ					**PaDPA, IDP**												
	b. Design a VHF radio system that maximizes park coverage																	
	c. Procure and install radio and communication support equipment																	
	d. Train staff in radio communication and radio maintenance																	
	e. Install fast internet connection at the HQ																	
	Action 2.1.4 Provide modern field equipment to staff	**FM**	**High**	**High**	**W**	**PaDPA, IDP, FZS**												
	a. Prepare a check list of equipment required for scouts and experts, with prioritisation and replacement schedules																	

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	b. Research quality and price of required equipment																	
	c. Procure equipment as funds allow																	
Objective 3. Sustainable financial mechanisms explored and established																		
	Action 3.1.1: Explore and capitalise on immediate options for revenue generation	**TF**	**Medium**	**High**	**W**	**PaDPA, FZS, IDP, PDSAPE**												
	a. Investigate and capitalise on opportunities for national commercial sponsorship from companies that use the Simien trademark																	
	b. Investigate potential for revenue retention mechanism for SMNP																	
	c. Liaise with economist to develop economic models to examine optimal revenue system for SMNP																	
	d. Investigate remit of potential donors and areas of interest, including Embassy or Small Grant Funds both inside and outside Ethiopia																	
	e. Arrange training for experts on proposal, report, paper, use of logframe writing etc.																	
	f. Prepare and submit donor packages and proposals to appropriate organisations																	
	Action 3.1.2: Prepare and adopt a business plan for SMNP	**TF**	**High**	**High**	**W**	**PaDPA, FZS, IDP, PDSAPE**												
	a. Review business plans for other protected areas and liaise with PDSAPE for concurrent initiatives																	
	b. Decide on planning process and find financial and technical help																	
	c. Facilitate formulation of business plan																	

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	d. Integrate accepted recommendations into 3-year GMP actions plans																	
	Action 3.1.3: Investigate potential of obtaining payment for ecosystem goods and services	**TF**	**High**	**Medium**	**W**	**PaDPA, FZS, IDP, PDSAPE**												
	a. Liaise with the PDSAPE on initiatives for valuing ecosystem goods and services																	
	b. Carry out institutional and stakeholder assessment of local, national (e.g. tourism) and international (carbon sequestration, water) beneficiaries of ecosystem goods and services in SMNP																	
	c. Value the ecosystem goods obtained from SMNP using livelihoods assessment and economic valuation methods																	
	d. Value the environmental services provided by SMNP through water provision, flood prevention, climate stabilisation, biodiversity maintenance *etc.*																	
	e. Develop an economic benefits model																	
	f. Investigate feasibility of obtaining payment for ecosystem services																	

F: Tourism Development and Management Action Plan

10-Year ManagementObjectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4

10-Year ManagementObjectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
Objective 1: Visitor facilities, opportunities, information and access diversified and improved in environmentally appropriate and sustainable ways																		
1.1: Tourism infrastructure extent and quality developed and improved	**Action 1.1.1: Extend and maintain campsite network**	**FHTM**	**Most**	**Med**	**TD**	**BOCT, PaDPA, SNRMP-NG, WCTO**												
	a. Prioritise proposed camping sites for development																	
	b. Work with communities to develop concession and management structures for each site.																	
	c. Develop environmentally sustainable infrastructure designs including toilet provision																	
	d. Seek funding to develop campsites																	
	e. Facilitate each CTA to develop site according to infrastructure plan, once funding available																	
	f. Review facilities at existing campsites and draw up prioritised action plan to maintain and improve in line with new infrastructure standards																	
	g. Improve and maintain existing campsite facilities as funding allows																	
	Action 1.1.2: Extend and promote trekking route and viewpoint network	**FHTM**	**Most**	**Med**	**TD, E**	**BoCT, WoCTO, SNRMP-NG**												
	a. Review proposed trekking routes and assess feasibility																	

10-Year ManagementObjectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	in light of results from visitor surveys																	
	b. Ensure promotion of trekking sites is consistent with prioritisation of campsite development																	
	c. Explore potential options for resupplying long treks at key sites																	
	d. Draw up description of all trekking routes and distribute to all SMNP tourism providers and promoters																	
	e. Identify viewpoints, map and distribute in all promotional materials and publications																	
	f. Determine whether infrastructure is required at any viewpoint (including signposts).																	
	g. Ensure all viewpoint infrastructure is environmentally and aesthetically appropriate for visitors by testing design options on visitors																	
	Action 1.1.3: Develop and implement lease concession procedures, standards and agreements for private and community stakeholders	**HT**	**Some**	**Med**	**TD, E**	**SNRMP-NG**												
	a. Review models of concession agreements and regulations from Ethiopia and																	

10-Year ManagementObjectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	the wider region																	
	b. Review procedures for granting leases to private and community investors																	
	c. Review and draw up environmental standards, criteria and regulations for potential concessions																	
	d. Draft procedures, standards and agreements for SMNP and consult with stakeholders																	
	e. Finalise procedures and standards and prototype agreements																	
	Action 1.1.4: Determine location for the construction of community-private partnership eco-lodges and facilitate development	**FT**	**Some**	**High**	**PaDPA**													
	a. Review, with key stakeholders the appropriateness of a community-private partnership and develop stepwise plan for implementation					**BoCT**												
	b. Confirm potential sites for eco-lodges and survey for environmental suitability																	
	d. Tender concessions, in line with outputs of Action 1.1.3																	

10-Year ManagementObjectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	Action 1.1.5: Establish and maintain standards for infrastructure and hygiene for all park users	**FHTM**	**Some**	**High**	**TD, E, CD**	**PaDPA, BoCT**												
	a. With technical experts, draw up hygiene standards and guidelines for all tourism and other park infrastructure																	
	b. With technical experts, develop standards for infrastructure that ensure environmental and aesthetic sustainability (see also 1.1.3.c)																	
	c. Review current infrastructure and hygiene standards and procedures against new guidelines and develop plan to upgrade and maintain as necessary																	
1.2: Quality visitor information centres and materials developed and produced	**Action 1.2.1: Plan and produce quality display materials for Debark interpretation centre**	**FHTM**	**Most**	**High**	**TD,CD**	**PaDPA, BoCT, SNRMP-NG**												
	a. Review existing displays in interpretation centre and obtain expert advice on gaps																	
	b. Obtain conservation, design and educational expert advice in designing new materials, taking into account SMNP brand/corporate image and ensuring high standards of production will be achieved																	

10-Year ManagementObjectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	c. Obtain expert advice for technical content of new materials and ensure appropriate for local and international visitors																	
	d. Prepare proposal and seek funding for new displays																	
	e. Produce materials to highest standard, once funding secured																	
	Action 1.2.2: Plan and develop interpretation points in other areas of the park	**FHTM**	**Most**	**Med**	**TD, E**													
	a. Brainstorm ideas for interpretive centres with stakeholders, including tourism, conservation and education experts																	
	b. Draw up detailed plans for designs and consult with stakeholders					**PaDPA**												
	c. Ensure all signs meet environmental and aesthetic standards																	
	d. Prepare funding applications for development of interpretation points																	
	e. Develop interpretation points as funding allows																	
	Action 1.2.3: Produce, update and distribute high quality visitor information and promotional materials, including a guidebook and	**FHTM**	**Most**	**Med**	**TD**	**PaDPA, BoCT**												

10-Year ManagementObjectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	map																	
	a. Review existing materials, identify gaps and prioritise future materials																	
	b. Obtain expert assistance in designing new materials, taking into account SMNP brand/ corporate image																	
	c.Produce new materials, once funding secured, according to prioritisation																	
	Action 1.2.4: Determine signposting needs and build and maintain appropriately	**F,M**	**Some**	**Med**	**TD**	**PaDPA, BoCT, SNRMP-NG**												
	a. Decide on signpost design in line with brank/corporate image and meet SHW requirements and aesthetical and environmental standards																	
	b. Assess whether signposting on roads/park boundary need installation or renovation and implement as appropriate																	
	c. Determine key areas for management signposting																	
	d. Install direction/informational signpost in key areas																	
	e. Install park regulation signposts in key areas																	

10-Year ManagementObjectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
1.3: Visitor attractions and activities improved and diversified to support a greater range and volume of tourists	**Action 1.3.1: Determine feasibility and desirability of adventure activities such as paragliding and climbing in SMNP**	**FT**	**Some**	**Low**	**TD**	**PaDPA, BoCT**												
	a. Seek expert advice on safety and feasibility of paragliding and climbing in SMNP through contacts with international enthusiasts and tourism providers																	
	b. Obtain legal advice on liability of SMNP in case of accidents, where such activities have been promoted by SMNP																	
	c. Assess desirability of adventure activies																	
	d. If desirable, develop promotion plan with enthusiasts and tourism providers																	
	e. Investigate feasibility of developing Via Ferrata route with Simien Lodge and take action as decided																	
	Action 1.3.2: Improve and extend nature-based activities and facilities	**FHTM**	**Most**	**Med**	**TD**	**PaDPA, BoCT**												
	a. Consult with visitors and tourism providers on how nature-based activities and facilities could be improved or extended																	
	b. Consult with experts on how horse trekking could be																	

10-Year ManagementObjectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	improved and developed																	
	c. Develop detailed plan to extend cultural tourism activities in and around SMNP																	
	d. Write and submit proposals with relevant stakeholders for funding for nature-based activities development																	
	e. Implement plan as funding allows																	
	f. Establish informal report and suggestion forms from tourists and method of submitting to management																	
	g. Prepare and conduct a (twice) yearly questionnaire using random sampling techniques to ascertain visitor attitudes and experiences																	
	h. Integrate results from questionnaire analysis and informal feedback into annual operations plans and GMP 3-Year Action Plans																	
Objective 2: Capacity and systems for the development and management of sustainable tourism in SMNP strengthened and maintained																		
2.1: Capacity of SMNP staff and other key stakeholders to deliver and manage tourism in	**Action 2.1.1: Assess human capacity required for tourism management and recruit accordingly**		**None**	**Med**	**W**	**PaDPA, BoCT, WCTO**												

10-Year ManagementObjectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
the SMNP enhanced	a. Conduct needs assessment for staff to fulfil SMNP TDMP objectives						X	X										
	b. Prioritise personnel required based on needs assessment and discussion							X										
	b. Liaise with PaDPA to create staff posts and hire as posts available							X	X									
	d. Conduct skills and training needs assessment for current and proposed SMNP tourism staff							X	X									
	d. Identify training opportunities/ personnel/institutions and funding requirements to meet needs assessment								X									
	e. Organise training as funding allows																	
	Action 2.1.2: Ensure all SMNP staff undertake and regularly update training on tourism awareness, service standards and customer care	**FHTM**	**Some**	**High**	**W,TD**	**PaDPA, BoCT**												
	a. Identify components of tourism awareness, service standards and customer care training required, including first aid and hygiene standards																	
	b. Find appropriate organisations or individuals to undertake training																	

10-Year ManagementObjectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	c. Conduct training courses																	
	d. Review need for updating training annually and conduct as appropriate													X				X
2.2: Tourism impact and experience monitored, mitigated and adaptively managed through improved management systems	**Action 2.2.1: Develop and implement tourist monitoring, administration and information system**	**FHTM**	**Some**	**High**	**TD**	**PaDPA, BoCT, WCTO**												
	a. Develop computer database to collate data on tourists, their activities and use of zones and key habitats and update monthly																	
	b. Improve financial management system for tourist revenue																	
	c. Develop system of reporting tourist numbers, activities and revenue on a daily, weekly, monthly and annual basis																	
	d. Produce and disseminate annual reports of the information collected to relevant stakeholders																	
	Action 2.2.2: Develop and implement health and safety guidelines and evacuation procedures for tourists and staff	**T**	**Some**	**High**	**W, TD**	**PaDPA, BoCT, WCTO**												
	a. Investigate current government health and safety standards																	
	b. Review evacuation procedures in other mountain																	

10-Year ManagementObjectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	parks, internationally and nationally																	
	c. With stakeholders, develop SMNP tourism health and safety policy, regulations and procedures																	
	d. Conduct training for all staff, and distribute procedures to sub-HQ, outposts, guiding associations and tourism providers																	
	e. Ensure first aid kits at outposts and camps are adequate and regularly resupplied						Throughout											
	f. Set up communication system and protocols for obtaining expert first aid advice																	
	Action 2.2.3: Devise and maintain campsite booking system	**FTM**	**Some**	**Med**	**TD, E**	**PaDPA, BoCT, WCTO**												
	a. Examine booking systems for other national parks in East Africa																	
	b. Devise spreadsheet/database system to be maintained at SMNP and if possible, on new website																	
	c. Provide training to system-keepers on operation and maintenance of new system																	

10-Year ManagementObjectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	d. Disseminate information on operation of new system to relevant tourism providers																	
	Action 2.2.4: Design and establish systems for monitoring and mitigating the environmental and sociocultural impacts of tourism facilities and activities	**T**	**Some**	**High**	**TD, E**	**EPLUA,PADPA,BOCT**												
	a. Conduct Knowledge, Attitudes and Practices (KAP) survey in target communities to establish baseline cultural impacts																	
	b. Conduct risk assessment to highlight sociocultural and environmental impacts of different tourism initiatives																	
	c. Draw up guidelines for tourists regarding interactions with local community members																	
	d. Disseminate guidelines to tourists, tour operators and other tourism actors																	
	e. Reassess KAPs after 2-3 years in target communities																	
	f. Ensure environmental impact assessments are applied to all tourism development and activities (see Park Operations)																	
	g. Ensure all developers adhere to environmental guidelines and undertake																	

10-Year ManagementObjectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	environmental mitigating measures																	
Objective 3: Increased opportunities, participation and benefit-sharing for local communities from SMNP tourism facilitated																		
	Action 3.1: Provide tourism awareness training and publicity campaigns for the local communities in and around SMNP	**T,H**	**Some**	**Med**	**TD, CD**	**BOCT, PaDPA, SNRMP-NG, WCTO**												
	a. Identify tourism experts who might be able to undertake a series of discussions and training with communities																	
	b. Identify knowledge and understanding gaps in community members, by gender and age sectors																	
	c. Design and implement appropriate training provision and schedule, using markets, and KPAC																	
	Action 3.2: Assist communities in setting up and running Community Tourism Associations with appropriate tourism management, governance and benefit-sharing structures	**FHTM**	**Most**	**Med**	**CD, TD**	**BOCT, PaDPA, SNRMP-NG, WCTO**												
	a. Carry out stakeholder analysis for tourism of local communities to identify beneficiary groups, potential partners *etc.*																	

10-Year ManagementObjectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	b. Assess the capacity and willingness of communities to work with tourism and become fully involved in concession management and service provision																	
	c. Drawing together information from a,b design of prospective activities and trekking routes, identify priority areas for CTA formation																	
	d. Discuss potential governance structures of CTAs with communities																	
	e. Discuss potential benefit-sharing arrangements that do not disadvantage marginalised groups																	
	f. Facilitate experience sharing visits to and from other community enterprises if appropriate																	
	g. Facilitate communities to set up CTA using participatory methodology																	
	h. Facilitate CTAs to set up governance and benefit-sharing structures																	
	i. Carry out assessment of capacity gaps CTAs, the wider communities and other key stakeholders for tourism management and identify training needs																	

10-Year ManagementObjectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	j. Liaise with other actors in community tourism development to identify appropriate training and trainers																	
	k. Conduct further training as per capacity needs assessment																	
	l. Review needs assessment annually and adjust actions accordingly																	
	Action 3.3: Work with CTAs to develop tourism opportunities, particularly accommodation concessions	**FT**	**Most**	**Med**	**TD, CD**	**BOCT, PaDPA, SNRMP-NG, WCTO**												
	a. Review models for community managed tourism enterprises in Ethiopia and the wider region																	
	b. Discuss models and their suitability in the SMNP context with CTAs																	
	c. Facilitate CTAs to plan realistic development options																	
	d. Obtain example concession agreements from other initiatives in Ethiopia and the greater region																	
	e. Discuss types of concession agreements with CTAs and facilitate identification of key points to be included in SMNP																	

10-Year ManagementObjectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	f. Draft an agreement that is compatible with community agreements, legal framework, SMNP and local government																	
	g. Discuss draft agreement with other actors and stakeholder in the area																	
	Action 3.4: Develop and implement detailed plan to for communities to provide cultural tourism opportunities	**FHT**	**Most**	**High**	**TD,CD**	**BOCT, PaDPA, SNRMP-NG, WCTO**												
	a. Liaise with Outreach programme to support entertainment group at Sankaber																	
	b. Discuss and review, with experts such as TESFA and stakeholders, the potential for cultural tourism activities																	
	c. Develop detailed plan to extend cultural tourism activities in and around SMNP																	
	d. Write proposals with relevant stakeholders to obtain funding for cultural tourism development																	
	e. Implement plan as funding allows																	
	Action: 3.5: Work with local communities to explore and exploit the potential for marketing local artefacts	**FHT**	**Some**	**Med**	**TD**	**BOCT, PaDPA, SNRMP-NG, WCTO**												

10-Year ManagementObjectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	a. Undertake survey of traditional artefacts potentially marketable to tourists																	
	b. Assess potential market by surveying visitors and national outlets, including quality standards required																	
	c. Identify potential marketing and selling opportunities																	
	d. Identify people engaged in artefact production and work with them to understand quality requirements																	
	e. Undertake training needs assessment and identify methods to meet those needs																	
	f. Ensure that product marketing does not cause unsustainable resource use																	
	g. Facilitate formation of local outlets and producers to access all markets																	

G: Outreach Programme Action Plan

10-Year Management Objectives and Sub-	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe		
					Park	Partners	Year 1	Year 2	Year 3

							1	2	3	4	1	2	3	4	1	2	3	4
Objective 1: Stakeholder involvement and commitment to SMNP strengthened																		
1.1: Coordination among stakeholders for park development and management improved	**Action 1.1.1: Improve and maintain communication between woreda and kebele park advisory committees (KPACs)**	**F**	**Some**	**Top**	**CD**													
	a. Invite chairman of each kebele PAC to attend woreda PAC twice yearly					**SMNRP-NG**		■		■		■		■		■		■
	b. Develop process that ensures 2-way communication between PAC and WAC, e.g. by including in job descriptions and including in staff evaluations							■		■		■		■		■		■
	Action 1.1.2: Strengthen existing KPAC	**F**	**Most**	**Top**	**CD**													
	a. Train executive committee of KPAC in management, monitoring and evaluation of committee activities, park protection and facilitation and participation in KPAC					**SMNRP-NG**	■				■				■			
	Action 1.1.3: Set up and support new KPACs in extension areas	**F**	**Most**	**Top**	**CD**													
	a. Hold discussion forums with new kebeles about format and function of new committees					**SMNRP-NG**	■											
	b. Provide stationary for new PACs						■											
	c. Facilitate initial meetings and follow up as required							■										
	Action 1.1.4: Improve and maintain regularity of KPAC meetings		**Low**	**Top**	**CD**	**SMNRP-NG**												
	a. Ensure reports are submitted to park office in timely fashion						Throughout											
	b. Give timely feedback on reports to KPAC						Throughout											
	c. Improve follow up and evaluation of park office by KPAC							■		■		■		■		■		■

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	d. Consider incentive scheme for KPAC and implement as appropriate e.g. umbrellas, raincoats																	
	Action 1.1.5: Facilitate implementation of kebeles bye-laws by agricultural development agents	**FT**	**Most**	**Top**	**EC / WPDP**	**ARDO**												
	a. Check with kebele land use committees whether bye-laws exist in every kebele that govern forestry and grazing land																	
	b. Where no bye-laws, encourage DA to facilitate the formulation of bye-laws by kebele land use committee																	
	c. Ensure land use planning is included in awareness workshops and discussion forums in communities																	
	d. Promote training and monitoring and evaluation of Development Agents in implementing bye-laws with woreda ARD office																	
	e. Ensure scout training includes land use planning and bye-law formulation																	
	Action 1.1.6: Train stakeholders in conflict management	**FT**	**Most**	**Top**	**WPDP, WAD**	**SMNRP-NG, WC**												
	a. Find trainers from Woreda Administration and Security Offices																	
	b. Ensure ongoing scout training and retraining includes conflict management and relevant community associated modules																	
	c. Discuss with elders and facilitate their role in reconciling conflict in relevant villages																	

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	d. Train kebele judiciary and administrators in conflict management in relevant villages																	
	e. Engage women's and youth group on issues of conflict and potential solutions in relevant villages																	
1.2: Awareness of importance of SMNP increased	**Action 1.2.1: Develop materials that outlines and promote the importance of SMNP**	**F**	**Most**	**Top**	**TE**													
	a. Collate information on importance of SMNP e.g. results of economic valuation study					**PaDPA, SMNRP-NG**												
	b. Engage with stakeholders and experts on marketing and information dissemination																	
	c. Design appropriate materials through workshops and discussion forums																	
	d. Distribute materials as available																	
	Action 1.2.2: Host workshops and discussion forums for police and judiciary	**F**	**Most**	**Top**	**W**													
	a. Ensure value and importance of park for e.g. economics/tourism included in workshop					**PaDPA, SMNRP-NG**												
	b. Hold new kebele workshop for police and judiciary																	
	c. Hold workshop for woreda police and judiciary																	
	d. Hold workshop for zonal police and judiciary																	
	e. Hold workshop for regional police and judiciary																	
	Action 1.2.3: Host workshops and discussion forums with stakeholder	**F**	**Most**	**Top**	**W**	**SMNRP-NG**												

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	groups																	
	a. Conduct workshops for park-associated kebele administrators, and agricultural and health workers																	
	b. Conduct workshops for Rural Development and Agricultural and Culture and Tourism Offices																	
	c. Conduct discussion forums with elders, women and youth groups in park-associated communities																	
	d. Conduct discussions with church priests																	
	Action 1.2.4: Arrange visits to park for woreda and zonal stakeholders	**F**	**Most**	**Medium**	**TD**													
	a. Arrange visits for Agricultural and Rural Development officers					**SMNRP-NG**												
	b. Arrange visits for Culture and Tourism Office																	
	c. Arrange visits for woreda and zonal administrators																	
	Action 1.2.5: Increase national publicity for SMNP	**FT**	**All**	**Top**	**TD**	**PaDPA, IDP**												
	a. Visit office of radio station in Gondar to investigate possibilities																	
	b. Visit office of regional radio station in Bahir Dar and Gondar to investigate possibilities																	
	c. Seek funding to support regional radio programming																	
	d. Invite radio, television and journalism representatives for special events in park regularly																	

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	e. Prepare and distribute press releases for special park events regularly						Throughout											
	f. Give interviews as requested						Throughout											
	g. Obtain further marketing advice for SMNP																	
	Action 1.2.6: Prepare regular SMNP newsletter	**F**	**Most**	**Medium**	**TD**	**PaDPA, SMNRP-NG**												
	a. Choose format for newsletter																	
	b. Solicit contributions																	
	c. Publish quarterly, or as funds allow																	
	d. Disseminate to stakeholders and on website																	
	Action 1.2.7: Design and maintain website	**FT**	**All**	**Top**	**TD**	**PaDPA, SMNRP-NG**												
	a. Obtain domains for website																	
	b. Decide on initial content and layout of website																	
	c. Find software designer to construct sites																	
	d. Obtain suitable photos with copyright permission for site																	
	e. Write contents of the web pages																	
	f. Launch site and maintain and update regularly																	
	Action 1.2.8: Design corporate image, including logo	**FT**	**All**	**Top**	**W**	**PaDPA, SMNRP-NG**												
	a. Liaise with Tourism MDP on corporate image and logo design																	

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
1.3:Environmental education extended in all park-associated communities	**Action 1.3.1: Increase capacity of park staff for implementing environmental education**	**FT**	**All**	**Top**	**CD**													
	a. Identify gaps in staff knowledge					**PaDPA, SMNRP-NG**												
	b. Explore option for environmental training in Ethiopia, for example Menegesha Suba Environmental Training Centre																	
	c. Implement training plan																	
	Action 1.3.2: Extend schools environmental education programme	**F**	**Most**	**Top**	**CD**													
	a. Identify which schools do not have clubs					**SMNRP-NG, FZS**												
	b. Prioritise schools for starting clubs																	
	c. Train teachers in environmental education methods																	
	d. Distribute PaDPA manuals for environmental clubs																	
	e. Obtain start up materials for new clubs, such as shovels, watering cans etc for tree nurseries																	
	f. Follow up and facilitate as necessary																	
	Action 1.3.3: Strengthen existing environmental education clubs	**F**	**Most**	**Top**	**CD**													
	a. Provide refreshment training to clubs and teachers					**SMNRP-NG, FZS**												
	b. Provide further materials for club																	
	Action 1.3.4: Organise visits to the park from school EE clubs	**F**	**Most**	**Medium**	**CD**	**SMNRP-NG, FZS**												

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	a. Arrange vehicle and guiding services to support visit as possible																	
	b. Follow up visits after park visits																	
	Action 1.3.5: Organise local cultural music and/or drama club at Sankaber	**FT**	**All**	**Medium**	**CD**	**SMNRP-FZS**												
	a. Identify talented and interested individuals in villages around Sankaber																	
	b. Train and facilitate																	
	c. Facilitate shows at Sankaber centre																	
	d. Facilitate dramas groups performances in community and communities to come to centre																	
	e. Assess success																	
	Action 1.3.6: Improve educational materials	**FT**	**All**	**Medium**	**CD**	**SMNRP-NG, PaDPA**												
	a. Design and print posters																	
	b. Distribute to DA and kebele offices around park																	
	c. Obtain more videos on environmental education																	
	d. Extend video shows as resources allow																	
	Action 1.3.7: Encourage increased coverage of EE in radio programming	**FT, legal**	**Most**	**Top**	**CD**	**PaDPA**												
	a. Visit office of radio station in Gondar to investigate possibilities																	
	b. Prepare radio programme and base materials according to guidelines																	

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	c. Invite and facilitate radio station to SMNP																	
	Action 1.3.8: Explore and test innovative environmental education techniques	**FT**	**All**	**Low**	**CD**	**PaDPA**												
	a. Convene workshop with teachers to explore integrating environmental issues into other subjects																	
1.4: Park outreach team strengthened	**Action 1.4.1: Increase capacity of staff to implement outreach programme**	**FT**	**Most**	**Medium**	**W**	**PaDPA, IDP**												
	a. Conduct training needs assessment																	
	b. Train as per needs assessment																	
	c. Identify need for refreshment training																	
	Action 1.4.2: Approach regional Civil Service Commission to increase team members		**None**	**Medium**	**PaDPA**													
	a. Determine why application for Buffer Zone Development Expert refused																	
	b. Prepare justification for more team members, including the expansion of the park																	
	c. Submit application for further team members																	
	Action 1.4.3: Liaise and coordinate with partners and potential donors for implementation of park outreach activities and additional funding		**None**	**Top**	**PaDPA**													
	a. Identify organisations carrying out highlighted activities nationally and internationally																	

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	b. Approach identified organisations for funding or for extending programmes in SMNP area																	
	c. Liaise with potential donors to establish fields of funding						Throughout											
	d.Encourage current partners to extend funding for outreach activities						Throughout											
	e. Promote establishment of Community Development Fund and ensure identified outreach projects are included in funding remit						Throughout											
	Action 1.4.4: Establish community development fund	**FT, legal**	**Some**	**Medium**	**PaDPA**													
	a. Explore possibility of community development fund.																	
	b. Conduct willingness-to-pay study of visitors for community development fund					**FZS**												
	c. Set up SDF as feasible																	
	d. Explore contacts with wealthy Simien-bred individuals nationally and internationally																	
Objective 2: Sustainable development and livelihoods around SMNP supported																		
2.1: Shortage of fuel and construction wood mitigated	**Action 2.1.1: Coordinate strengthening of existing nurseries and establish new model nurseries in buffer zones**	**FT**	**Most**	**Top**	**WPDP, WRAD**	**ARDO, SMNRP-NG**												
	a. Promote and inform farmers that more indigenous seeds of specific types are required																	
	b. Collect indigenous seeds from farmers																	

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	c. Facilitate provision of additional materials for model and private nurseries e.g. spades, watering cans						Throughout											
	d. Coordinate annual farmers field days in buffer zone kebeles to share experience in selected kebeles																	
	e. Work with agricultural office to extend areas of model nurseries and fence						Throughout											
	f. Work with agricultural office to provide refreshment training to model nursery foremen and workers						Throughout											
	g. Facilitate provision of refreshment training and follow-up for existing private nurseries						Throughout											
	h. Liaise with Bayeda and Tselemet woredas as to status of model nurseries and gaps																	
	i. Liaise with Bayeda and Tselemt woreda agricultural offices to situate new model nurseries in buffer zone kebeles																	
	j. Facilitate establishment of nurseries with woreda agricultural offices																	
	k. Assist with follow-up of survival rates of seedlings in all nurseries and woodlots																	
	Action 2.1.2: Support new private nursery formation, including site selection	**FT**	**Most**	**Top**	**WPDP, WRAD**	**ARDO, SMNRP-NG**												
	a. Liaise with woreda offices for provision of training to farmers in nursery management and tree planting																	
	b. Prioritise kebeles for intervention																	

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	c. Assist development agents in registering interested individuals																	
	d. Facilitate provision of materials to private farmers						As required											
	e. Assist with follow up and implementation of private woodlots establishment																	
	f. Coordinate allocation of degraded communal land to young farmers without land for tree plantations					**Youth and ARDO**												
	g. Assist with follow-up of survival rates of seedlings in all nurseries and woodlots																	
	Action 2.1.3: Increase awareness and reduce effect of exotic trees in park areas		**None**	**Medium**	**CD**	**SMNRP-NG, FZS**	Throughout											
	Action 2.1.4: Promote and support household fuel-efficient stove use	**FT**	**All**	**Medium**	**CD**	**ARDO, SMNRP-NG**												
	a. Promote and demonstrate fuel efficient stoves at market days in buffer zone																	
	b. Conduct demonstration days in selected buffer kebeles, particularly Abergina, Sakeba, Debar Bir																	
	c. Support agricultural office in strengthening fuel efficient stove programme						Throughout											
	d. Conduct discussion forum in Gich to promote stove use																	
	e. Facilitate refreshment training in improved stove production																	
	f. Facilitate quality monitoring																	

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	g. Gather information on stove uptake in target areas																	
	h. Explore potential of new fuel-efficient stoves and other fuel-saving methods																	
	Action 2.1.5: Advocate the introduction of legislation to ensure the use of fuel-efficient stoves and legal wood/energy sources for commercial purposes/premises and other large institutions	**H**	**Some**	**Low**	**CD**													
	a. Contact partners already doing this and support them where possible					**PaDPA**												
	b. Write letters in support of this to Bureau/decision makers																	
	c. Participate in media briefings about this issue																	
	d. Work with partners to produce publicity material on this and how it effects the park																	
	Action 2.1.6: Maximise SMNP use of sustainable energy sources and promote awareness of alternative energy sources and energy saving methods	**FTH**	**All**	**Low**	**W**	**SMNRP-NG**												
	a. Identify local/international partners with experience in alternative energy sources/energy saving methods																	
	b. Compile a simple report on alternative energy sources/energy saving methods that can be used in the SMNP																	
	c. Compile a simple report on alternative energy sources/energy saving methods that can be																	

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	demonstrated in the SMNP Interpretation centre																	
	d. Try to engage partner in demonstrating alternative energy sources/energy saving in the Interpretation centre and SMNP HQ																	
	e. Lobby for using alternative energy sources/energy saving methods within SMNP HQ, all Park Operations and the Interpretation centre																	
2.2: Sustainable and environmentally friendly agricultural technologies promoted	**Action 2.2.1: Coordinate introduction and expansion of improved crop varieties**	**FT**	**All**	**Top**	**CD**	**ARDO, SMNRP-NG**												
	a. Assist agricultural office in promoting new crop varieties																	
	b. Assist agricultural office in selection and establishment of farmer demonstration sites																	
	c. Assist agricultural office in providing technical assistance to farmers																	
	d. Hold farmer field days in buffer zone kebeles and promote availability of credit for purchase of new seed varieties																	
	e. Provide logistical support to ensure seed availability																	
	Action 2.2.2: Support initiatives to reduce grazing pressure in and around park	**FT**	**Most**	**Top**	**CD**	**ARDO, SMNRP-NG**												
	a. Increase awareness of problems associated with overgrazing						Throughout											

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	b. Promote use of improved breeds and fodder systems and animal health programmes						Throughout											
	c. Support projects and agricultural office in implementing improved breeds and fodder provision systems and animal health programmes																	
	Action 2.2.3: Promote and support introduction of horticultural systems	**FT**	**All**	**Top**	**CD**													
	a. Assist projects introducing new fruit and vegetables to area, e.g. apples, lowland fruits					**ARDO, SMNRP-NG**												
	b. Support establishment of small scale irrigation schemes for horticultural products																	
	c. Monitor environmental impact of small scale irrigation schemes																	
	Action 2.2.4: Persuade woreda Agricultural offices to promote and implement physical and biological land stabilisation methods		**None**	**Top**	**EC**	**ARDO**												
	a. Ensure soil conservation and land stabilisation issues included in all environmental education activities																	
2.3 Population growth in park-associated communities reduced	**Action 2.3.1: Increase family planning awareness in park-associated communities**	**FHT**	**Low**	**Top**	**CD**	**WHO**												
	a. Facilitate design and organisation of family planning awareness creation conferences in all sectors of the community																	
	b. Include family planning awareness in environmental education programme																	

10-Year Management Objectives and Sub-Objectives	3-Year Management Actions/ Activities	External Inputs	Level of external support	Priority	Responsibility		Timeframe											
					Park	Partners	Year 1				Year 2				Year 3			
							1	2	3	4	1	2	3	4	1	2	3	4
	c. Include family planning awareness programme in park kebele conferences and explore ways of supporting community in family planning																	
	d. Include family planning training in scout training programme																	
	Action 2.3.2: Facilitate efforts by woreda health offices to implement family planning programmes	**FH**	**Low**	**Top**	**CD**													
	a. Coordinate training of reproductive health agents in new park extension areas					**WHO**												
	b. Coordinate refreshment training of current RHAs in current kebeles																	
	c. Devise monitoring and evaluation programme for family planning initiatives																	
	Action 2.3.3: Increase external support for family planning	**FH**	**Low**	**Top**	**CD**													
	a. Liaise with woreda health offices to work in areas around the park					**WHO**												
	b. Discuss with PaDPA whether RH initiative should be assigned park budget																	
	c. Approach donors/NGOs interested in family planning to have projects in and around SMNP																	

Appendix 1: Monitoring and Evaluation: SMNP and GMP Implementation

Objectives of Monitoring and Evaluation

Monitoring and evaluating the GMP implementation and associated impacts, is a key aspect of assessing whether the GMP has been used and whether it has achieved its stated purposes and objectives. Monitoring and evaluation are also a key component of future adaptive management; so that the overall benefits from GMP implementation are maximised and any negative impacts are mitigated, through the adjustment of 3-Year Action Plans.

A multi-tiered framework has been developed to enable monitoring and evaluation to be carried out at several different levels: from Park Purpose, through Programme Purposes and Objectives, to Actions and Activities. This draws on best practice elsewhere and is integrated with the GEF Protected Area Systems Project that is commencing implementation in Ethiopia in 2007. Monitoring and evaluation (M&E) is therefore an integral activity for all GMP components.

The M&E framework has a number of objectives:

- Provide stakeholders and partners with information to measure progress
- Determine whether expected impacts have been achieved
- Provide timely feedback in order to ensure that problems are identified early in implementation and that appropriate actions are taken
- Assess the GMP's effectiveness in meeting the park purpose and thus conserving biological diversity and ecological systems
- Evaluate the benefits accruing to communities and other beneficiaries
- Appraise the underlying causes of GMP outcomes, whether positive or negative
- Track the level and quality of community consultation and participation in SMNP activities

i. Park Purpose Monitoring

Monitoring progress in achieving the Park Purpose and thus at the ultimate impact or outcome level, relies heavily on implementing SMNP Ecological Monitoring Plan. This Ecological Monitoring Plan (EMP) focuses on determining the status of SMNP Priority Ecosystem Components, the components of SMNP ecosystem that have been prioritised and together should represent the unique biodiversity and ecological processes in the whole ecosystem. Indicators and Means of Verification have been drawn up by technical experts and detailed methods determined. Periodic evaluation of monitoring data needs to be embedded in adaptive management systems and embedding such a system is an integral part of the Ecological Management and the Park Operations Programme. As it stands, the EMP is overambitious. Effort should there be made to review the priority ratings of each indicator and KEA and ensure the plan is implemented according to that prioritisation. One indicator for each PEC should be chosen and baseline information obtained before further indicators from each PEC are selected.

Table A1.1: SMNP Ecological Monitoring Plan of the Principal Ecosystem Components (PECs) and their Key Ecological Attributes

SMNP Ecological Monitoring Plan						
PECs and KEAs	**Indicator of change**	**Method of measurement**	**Collection frequency**	**Potential Partners**	**Already being collected?**	**Priority**
PEC: Hydrological system						
Extent and seasonal dynamics of rivers and wetlands	Size of wetlands, rivers, and seasonality	Sampling plots, change detection in remote sensing	Every 3 years	PaDPA, EPLAUA	No	High
Diversity and density of indicator species (Invertebrates, butterflies, amphibians)	Increase/decrease in species and distribution	Plot sampling	Every 3 years	PaDPA	No	Medium
River flow and discharge	Discharge volume	Guage stations at designated rivers	Daily or often enough to provide continuous records of change	Amhara Bureau of Water Resources	No	High
	Rainfall	Daily rain guages	Daily		Yes	High
	Evaporation	Evaporation pans	Daily		No	High
Water quality	Air and water temperature	Field thermometers at guage stations	Daily or often enough to provide continuous records of change	ARARI	No	High
	Dissolved oxygen	DO meter at gauge stations				High
	pH	pH meter at guage stations				High
	Conductivity (salinity)	Conductivity pen at gauge stations				High

	Turbidity	Visual estimate of water visibility (in meters) at gauge stations				High
	Suspended sediment	Sampling of suspended particles with filtration equipment	Monthly			Medium
	Bedload sediment	Coring of bedload for sand and gravel	Every 5 years			Low
Soil properties of watershed	Bulk density	Soil sampling and laboratory analysis	Seasonally every 3 years to include inter-annual variation	ARARI	No	Medium
	Soil pH	pH meter			No	Medium
	Soil nutrients	Soil sampling and laboratory analysis			No	Medium
	Soil profile	Soil sampling and laboratory analysis			Some - need data	Medium
	Soil water content	Soil sampling and laboratory analysis			No	Medium
PEC: Afroalpine						
Vegetation composition and structure	Regeneration	Sampling plots and fixed-point photography	Every 3 years	PaDPA, FZS	No	High
	Age structure					High
	Species cover/density					High
	Vegetation height					High
	Species diversity and richness					High
Extent of habitat and fragmentation	Total area	Remote sensing and field mapping	Every 3 years	PaDPA, EWCP, FZS	Yes	High
	Patch size and spatial distribution					High
	Rate of change					High
Rodent diversity, distribution and abundance	Number of active holes	Sampling plots	Yearly	FZS, EWCP	Some before, but stopped	High
	Species composition and density	Rodent trapping in sampling grids				High
Large mammal density and distribution	Encounter rates	Line transects	Seasonally	PaDPA, FZS, EWCP	Yes	Low
	Density index	Sample counts	Yearly			Low
		Sign counts	Yearly			Low
	Number of sightings	RBM	Ad hoc			Low
PEC: Sub-Afroalpine						

Extent and fragmentation of habitat	Total area	Remote sensing	Every 3 years	PaDPA	No	High
	Patch size and spatial distribution					High
	Rate of change					High
Species composition and structure (particularly for dominant tree species)	Regeneration	Plot sampling	Every 3 years	PaDPA	No	High
	Age structure					High
	Species diversity and richness	Plot sampling	Every 3 years	PaDPA	No	High
	Species density					High
	% cover					High
	Average height					High
	Distribution of key species					High
Mammal density and distribution	Encounter rates	Line transects	Seasonally	PaDPA, FZS, EWCP	Yes	Low
	Density index	Sample counts	Yearly			Low
	Number of sightings	RBM	Ad hoc			Low
PEC: Montane forest						
Extent and fragmentation of habitat	Total area	Remote sensing	Every 3 years	PaDPA	No	High
	Patch size					High
	Rate of change					High
Forest composition and structure	Species richness (no. and type)	Plot sampling	Every 3 years	PaDPA	No	High
	Density change					High
	Distribution of key species					High
	Regeneration level					High
	Age structure change					High
	Canopy cover	Transects				High
Indicator species	Abundance	Transects, point sampling	Every 3 years	PaDPA		Low
	Species richness (no. and type)					Low
Bird and mammal composition, density and distribution	Mammals - encounter rates and density index	Line transects, sign counts	Every 3 years	PaDPA, FZS	Yes	Low

	Mammals - number of sightings	RBM				Low
	Bird diversity and richness	Point sampling				Low
PEC: Walia ibex						
Population size, structure, and distribution	Number of animals	Total counts (block method)	Seasonally	PaDPA, FZS	Yes	High
	No. groups/age&sex composition	Repeated observation points for focal watches	Seasonally	PaDPA, FZS	Some	High
Habitat and food availability	Habitat extent	Remote sensing	Every 3 years	PaDPA, FZS	No	High
	Forage types	Transects	Seasonally			High
	Forage biomass	Sample plots	Seasonally			High
Density of predators (e.g. leopard)	Number of observations and and encounter rate	Line transects and RBM	Yearly	PaDPA	Some	Low
Genetic diversity	Allelic diversity, heterozygosity	Sampling	Every 10 years	External laboratories/institutions	No	Low
PEC: Ethiopian wolves						
Population size, structure, and distribution	Age/sex structure	Focal pack observation	Regularly	EWCP, FZS	Yes	High
	Number of animals and packs	Line transects	Seasonally	EWCP, FZS	Yes	High
	Distribution	Field surveys	Ad hoc	EWCP, FZS	Yes	High
Habitat and rodent availability	Extent of habitat	As above	Every 3 years	EWCP, FZS, PaDPA	Yes	High
	Rodent species composition and density			EWCP, FZS	Yes but stopped	High
Genetic diversity	Allelic diversity, heterozygosity	Sampling	Every 10 years	EWCP, external laboratories/institutions	Yes	Low

ii. Management Effectiveness Monitoring

Progress towards achieving the Purposes devised in each Management Programme, which essentially are a part of measuring management effectiveness, can be monitored in a number of ways. Recently initiatives to develop a number of management effectiveness assessment tools have been undertaken. The World Bank/WWF Alliance for Forest Conservation and Sustainable Use ('the Alliance') was formed in April 1998, in response to the continued depletion of the world's forest biodiversity and of forest-based goods and services essential for sustainable development. The Alliance has developed a simple site-level tracking tool to facilitate reporting on management effectiveness of protected areas within WWF and World Bank projects that is being adopted by the PASP project and thus is appropriate for SMNP. The tracking tool has been built around the application of a World Commission for Protected Areas (WCPA) Framework for assessing protected area management effectiveness (Hockings *et al.*, 2000).

The Alliance has designed the Management Effectiveness Tracking Tool (METT) to be:

- Capable of providing a harmonised reporting system for protected area assessment within donor organisations
- Suitable for replication
- Able to supply consistent data to allow tracking of progress over time
- Relatively quick and easy to complete by protected area staff, so as not to be reliant on high levels of funding or other resources
- Capable of providing a "score" if required
- Based around a system that provides four alternative text answers to each question, strengthening the scoring system
- Easily understood by non-specialists
- Nested within existing reporting systems to avoid duplication of effort.

The tracking tool has been developed to provide a quick overview of progress in improving the effectiveness of management in individual protected areas, to be filled in by the protected area manager or other relevant site staff. It is ***not*** an independent assessment, nor should it be used as the sole basis for adaptive management. Moreover, the tracking tool is too limited to allow a detailed evaluation of *outcomes* and is really aimed at providing a quick overview of the management steps identified in the WCPA Framework up to and including *outputs*. Thus, even if management is excellent, but biodiversity is continuing to decline, then protected area objectives are not being met. Therefore the Ecological Monitoring Programme is the key component that will inform SMNP managers on whether the condition of the biodiversity and ecological processes through the Priority Ecosystem Components.

In 2005 a METT analysis was conducted as part of the PASP project, to set a baseline for SMNP management and is included below. On GMP draft completion, a new METT analysis will be conducted for future comparison. Thereafter annual assessments will be conducted**.**

Table A1.2: METT Table; Management Effectiveness Tracking Tool

Issue	Criteria	Score	Next steps
1. Legal status Does the protected area have legal status? *Context*	The protected area is not gazetted	0	
	The government has agreed that the protected area should be gazetted but the process has not yet begun	1	
	The protected area is in the process of being gazetted but the process is still incomplete	2	
	The protected area has been legally gazetted (or in the case of private reserves is owned by a trust or similar)	3	
2. Protected area regulations Are inappropriate land uses and activities (e.g. poaching) controlled? *Context*	There are no mechanisms for controlling inappropriate land use and activities in the protected area	0	
	Mechanisms for controlling inappropriate land use and activities in the protected area exist but there are major problems in implementing them effectively	1	
	Mechanisms for controlling inappropriate land use and activities in the protected area exist but there are some problems in effectively implementing them	2	
	Mechanisms for controlling inappropriate land use and activities in the protected area exist and are being effectively implemented	3	
3. Law enforcement Can staff enforce protected area rules well enough? *Context*	The staff have no effective capacity/resources to enforce protected area legislation and regulations	0	
	There are major deficiencies in staff capacity/resources to enforce protected area legislation and regulations (e.g. lack of skills, no patrol budget)	1	
	The staff have acceptable capacity/resources to enforce protected area legislation and regulations but some deficiencies remain	2	
	The staff have excellent capacity/resources to enforce protected area legislation and regulations	3	
4. Protected area objectives Have objectives been agreed? *Planning*	No firm objectives have been agreed for the protected area	0	
	The protected area has agreed objectives, but is not managed according to these objectives	1	
	The protected area has agreed objectives, but these are only partially implemented	2	
	The protected area has agreed objectives and is managed to meet these objectives	3	
5. Protected area design Does the protected area need enlarging, corridors etc to meet its objectives? *Planning*	Inadequacies in design mean achieving the protected areas major management objectives of the protected area is impossible	0	
	Inadequacies in design mean that achievement of major objectives are constrained to some extent	1	
	Design is not significantly constraining achievement of major objectives, but could be improved	2	
	Reserve design features are particularly aiding achievement of major objectives of the protected area	3	

Issue	Criteria	Score	Next steps
6. Protected area boundary demarcation Is the boundary known and demarcated? *Context*	The boundary of the protected area is not known by the management authority or local residents/neighbouring land users	0	
	The boundary of the protected area is known by the management authority but is not known by local residents/neighbouring land users	1	
	The boundary of the protected area is known by both the management authority and local residents but is not appropriately demarcated	2	
	The boundary of the protected area is known by the management authority and local residents and is appropriately demarcated	3	
7. Management plan Is there a management plan and is it being implemented? *Planning*	There is no management plan for the protected area	0	
	A management plan is being prepared or has been prepared but is not being implemented	1	
	An approved management plan exists but it is only being partially implemented because of funding constraints or other problems	2	
	An approved management plan exists and is being implemented	3	
Additional points *Planning*	The planning process allows adequate opportunity for key stakeholders to influence the management plan	+1	
	There is an established schedule and process for periodic review and updating of the management plan	+1	
	The results of monitoring, research and evaluation are routinely incorporated into planning	+1	
8. Regular work plan Is there an annual work plan? *Planning/Outputs*	No regular work plan exists	0	
	A regular work plan exists but activities are not monitored against the plan's targets	1	
	A regular work plan exists and actions are monitored against the plan's targets, but many activities are not completed	2	
	A regular work plan exists, actions are monitored against the plan's targets and most or all prescribed activities are completed	3	
9. Resource inventory Do you have enough information to manage the area? *Context*	There is little or no information available on the critical habitats, species and cultural values of the protected area	0	
	Information on the critical habitats, species and cultural values of the protected area is not sufficient to support planning and decision making	1	
	Information on the critical habitats, species and cultural values of the protected area is sufficient for key areas of planning/decision making but the necessary survey work is not being maintained	**2**	
	Information concerning on the critical habitats, species and cultural values of the protected area is sufficient to support planning and decision making and is being maintained	3	
10. Research	There is no survey or research work taking place in the protected area	0	

Issue	Criteria	Score	Next steps
Is there a programme of management-orientated survey and research work? *Inputs*	There is some *ad hoc* survey and research work	1	
	There is considerable survey and research work but it is not directed towards the needs of protected area management	2	
	There is a comprehensive, integrated programme of survey and research work, which is relevant to management needs	3	
11. Resource management Is the protected area adequately managed (e.g. for fire, invasive species, poaching)? *Process*	Requirements for active management of critical ecosystems, species and cultural values have not been assessed	0	
	Requirements for active management of critical ecosystems, species and cultural values are known but are not being addressed	1	
	Requirements for active management of critical ecosystems, species and cultural values are only being partially addressed	2	
	Requirements for active management of critical ecosystems, species and cultural values are being substantially or fully addressed	3	
12. Staff numbers Are there enough people employed to manage the protected area? *Inputs*	There are no staff	0	
	Staff numbers are inadequate for critical management activities	1	
	Staff numbers are below optimum level for critical management activities	2	
	Staff numbers are adequate for the management needs of the site	3	
13. Personnel management Are the staff managed well enough? *Process*	Problems with personnel management constrain the achievement of major management objectives	0	
	Problems with personnel management partially constrain the achievement of major management objectives	1	
	Personnel management is adequate to the achievement of major management objectives but could be improved	2	
	Personnel management is excellent and aids the achievement major management objectives	3	
14. Staff training Is there enough training for staff? *Inputs/Process*	Staff are untrained	0	
	Staff training and skills are low relative to the needs of the protected area	1	
	Staff training and skills are adequate, but could be further improved to fully achieve the objectives of management	2	
	Staff training and skills are in tune with the management needs of the protected area, and with anticipated future needs	3	
15. Current budget Is the current budget sufficient?	There is no budget for the protected area	0	
	The available budget is inadequate for basic management needs and presents a serious constraint to the capacity to manage	1	
	The available budget is acceptable, but could be further improved to fully achieve effective management	2	

Issue	Criteria	Score	Next steps
Inputs	The available budget is sufficient and meets the full management needs of the protected area	3	
16. Security of budget Is the budget secure? *Inputs*	There is no secure budget for the protected area and management is wholly reliant on outside or year by year funding	0	
	There is very little secure budget and the protected area could not function adequately without outside funding	1	
	There is a reasonably secure core budget for the protected area but many innovations and initiatives are reliant on outside funding	2	
	There is a secure budget for the protected area and its management needs on a multi-year cycle	3	
17. Management of budget Is the budget managed to meet critical management needs? *Process*	Budget management is poor and significantly undermines effectiveness	0	
	Budget management is poor and constrains effectiveness	1	
	Budget management is adequate but could be improved	2	
	Budget management is excellent and aids effectiveness	3	
18. Equipment Is equipment adequately maintained? *Process*	There is little or no equipment and facilities	0	
	There is some equipment and facilities but these are wholly inadequate	1	
	There is equipment and facilities, but still some major gaps that constrain management	2	
	There is adequate equipment and facilities	3	
19. Maintenance of equipment Is equipment adequately maintained? *Process*	There is little or no maintenance of equipment and facilities	0	
	There is some *ad hoc* maintenance of equipment and facilities	1	
	There is maintenance of equipment and facilities, but there are some important gaps in maintenance	2	
	Equipment and facilities are well maintained	3	

Issue	Criteria	Score	Next steps
20. Education and awareness programme Is there a planned education programme? *Process*	There is no education and awareness programme	0	
	There is a limited and *ad hoc* education and awareness programme, but no overall planning for this	1	
	There is a planned education and awareness programme but there are still serious gaps	2	
	There is a planned and effective education and awareness programme fully linked to the objectives and needs of the protected area	3	
21. State and commercial neighbours Is there co-operation with adjacent land users? *Process*	There is no contact between managers and neighbouring official or corporate land users	0	
	There is limited contact between managers and neighbouring official or corporate land users	1	
	There is regular contact between managers and neighbouring official or corporate land users, but only limited co-operation	2	
	There is regular contact between managers and neighbouring official or corporate land users, and substantial co-operation on management	3	
22. Indigenous people Do indigenous and traditional peoples resident or regularly using the PA have input to management decisions? *Process*	Indigenous and traditional peoples have no input into decisions relating to the management of the protected area	0	
	Indigenous and traditional peoples have some input into discussions relating to management but no direct involvement in the resulting decisions	1	
	Indigenous and traditional peoples directly contribute to some decisions relating to management	2	
	Indigenous and traditional peoples directly participate in making decisions relating to management	3	
23. Local communities Do local communities resident or near the protected area have input to management decisions? *Process*	Local communities have no input into decisions relating to the management of the protected area	0	
	Local communities have some input into discussions relating to management but no direct involvement in the resulting decisions	1	
	Local communities directly contribute to some decisions relating to management	2	
	Local communities directly participate in making decisions relating to management	3	
Additional points Additional points *Outputs*	There is open communication and trust between local stakeholders and protected area managers	+1	
	Programmes to enhance local community welfare, while conserving protected area resources, are being implemented	+1	
24. Visitor facilities Are visitor facilities	There are no visitor facilities and services	0	
	Visitor facilities and services are inappropriate for current levels of visitation or are under construction	1	

Issue	Criteria	Score	Next steps
(for tourists, pilgrims etc) good enough? *Outputs*	Visitor facilities and services are adequate for current levels of visitation but could be improved	2	
	Visitor facilities and services are excellent for current levels of visitation	3	
25. Commercial tourism Do commercial tour operators contribute to protected area management? *Process*	There is little or no contact between managers and tourism operators using the protected area	0	
	There is contact between managers and tourism operators but this is largely confined to administrative or regulatory matters	1	
	There is limited co-operation between managers and tourism operators to enhance visitor experiences and maintain protected area values	2	
	There is excellent co-operation between managers and tourism operators to enhance visitor experiences, protect values and resolve conflicts	3	
26. Fees If fees (tourism, fines) are applied, do they help protected area management? *Outputs*	Although fees are theoretically applied, they are not collected	0	
	The fee is collected, but it goes straight to central government and is not returned to the protected area or its environs	1	
	The fee is collected, but is disbursed to the local authority rather than the protected area	2	
	There is a fee for visiting the protected area that helps to support this and/or other protected areas	3	
27. Condition assessment Is the protected area being managed consistent to its objectives? *Outcomes*	Important biodiversity, ecological and cultural values are being severely degraded	0	
	Some biodiversity, ecological and cultural values are being severely degraded	1	
	Some biodiversity, ecological and cultural values are being partially degraded but the most important values have not been significantly impacted	2	
	Biodiversity, ecological and cultural values are predominantly intact	3	
Additional points *Outputs*	There are active programmes for restoration of degraded areas within the protected area and/or the protected area buffer zone	+1	
28. Access assessment Are the available management mechanisms working to control access or use? *Outcomes*	Protection systems (patrols, permits etc) are ineffective in controlling access or use of the reserve in accordance with designated objectives	0	
	Protection systems are only partially effective in controlling access or use of the reserve in accordance with designated objectives	1	
	Protection systems are moderately effective in controlling access or use of the reserve in accordance with designated objectives	2	
	Protection systems are largely or wholly effective in controlling access or use of the reserve in accordance with designated objectives	3	
29. Economic benefit assessment	The existence of the protected area has reduced the options for economic development of the local communities	0	

Issue	Criteria	Score	Next steps
Is the protected area providing economic benefits to local communities? *Outcomes*	The existence of the protected area has neither damaged nor benefited the local economy	1	
	There is some flow of economic benefits to local communities from the existence of the protected area but this is of minor significance to the regional economy	2	
	There is a significant or major flow of economic benefits to local communities from activities in and around the protected area (e.g. employment of locals, locally operated commercial tours etc)	3	
30. Monitoring and evaluation	There is no monitoring and evaluation in the protected area	0	
	There is some *ad hoc* monitoring and evaluation, but no overall strategy and/or no regular collection of results	1	
	There is an agreed and implemented monitoring and evaluation system but results are not systematically used for management	2	
Planning/Process	A good monitoring and evaluation system exists, is well implemented and used in adaptive management	3	
TOTAL SCORE			

iii. GMP Impact Monitoring and Evaluation

Monitoring the impact of the GMP implementation, including impacts at the outcome level, can be achieved by both assessing the potential positive and negative impacts of the achievement of objectives and specific objectives and by monitoring changes in the severity of the identified threats, which will be reduced through the implementation of management actions in the GMP. A framework for monitoring the severity and impact of threats was drawn up as part the Ecological Monitoring plan and is outlined below.

Table A1.3: Monitoring framework for the highest priority threats to SMNP Priority Ecosystem Components and their Key Ecological Attributes

Threat Monitoring Plan						
Threat	**Indicator of change**	**Method of measurement**	**Collection frequency**	**Potential partners**	**Already being collected?**	**Priority**
Agricultural expansion	Extent of cultivated land	Remote sensing and field mapping	Every 3 years	FZS, EWCP, PaDPA, EPLAUA	Yes	High
	Crop yield	Household structured interviews	Seasonally	WAO,SNRP-NG,BoARD		Medium
Expanding settlement	Number of households, population size, and distribution	Remote sensing	Every 3 years	KAs,PaDPA	Yes	High
		RBM	Ad hoc	WAO,PaDPA		
		Household interviews	Every 3 years	EPLAUA		
Livestock overgrazing	Livestock numbers	Dung count plots	Seasonally	KAs,WAO, FZS, EWCP, PaDPA, SNRP-NG		High
		Point counts, line transects				
		Household structured interviews			Yes	
		CBM	Monthly	BoARD		
		RBM	Ad hoc			
Wood extraction	Forest cover/extent	Remote sensing	Every 3 years	EPLAUA		High
	Number of stumps	RBM, CBM	Ad hoc			Low
	Household fuel use	Household structured interviews	Monthly/Annually	PaDPA,WAO,	No	Medium
	Market sales	Interviews and watches		SMNP-NG		Low

Threat Monitoring Plan						
Threat	**Indicator of change**	**Method of measurement**	**Collection frequency**	**Potential partners**	**Already being collected?**	**Priority**
Grass cutting	Presence of grass cutters	RBM, CBM	Ad hoc	KAs,WLEO	No	Low
Poaching and persecution	Incidence of reports	RBM, CBM	Ad hoc			Low
		Community interviews	Annually	WLEO,WAO	No	
	Population status	Line transects, focal sampling		KAs		Medium
Alien and invasive species	Numbers and extent	Surveying and mapping		FZS,PaDPA	No	Medium
Uncontrolled fire	Incidence levels	RBM	Ad hoc			Medium
		CBM	Monthly	KAs, PaDPA	Yes	
		Remote sensing alerts	Daily			
	Extent of burned area	Remote sensing				Medium
Erosion, runoff and soil compaction	Extent of bare ground	Remote sensing, plot sampling	Every 3 years	BoARD, EPLAUA, PaDPA,FZS	No	Medium
	Water infiltration	Soil sampling	Seasonally	SMNP-NG		Medium
Illegal plant collection	Incidence of reports	RBM, CBM	Ad hoc	KAs,WAO,PaDPA		Low
		Community interviews	Annually		Yes	
Negative impact of road	Road kill	Incidence reports - RBM	Ad hoc	RRA,EPLAUA		Low
		Transects	Monthly	PaDPA,EWCP	Yes	
		Incidence reports – radio, CBM	Ad hoc	FZS,SMNP-NG		
	Erosion	As above	As above	WAO,EPLAUA		High
Human wildlife conflict	Crop raiding and livestock predation	Incidence reports - RBM, CBM	Ad hoc	KAs,WAO,PaDPA	Yes	High
		Interviews	Seasonally	FZS,EWCP		
Disease	Incidence	Community interviews	Annually	BoARD,FZS		Medium
		Reports – RBM, RMG	Ad hoc	SMNP-NG,PaDPA	Yes	
		Serosampling	Every 5 years	FZS,EWCP,BoARD		
Small isolated populations	Area/location of habitat fragments	Remote sensing and mapping	Every 3 years	EPLAUA,PaDPA		Low
	Genetic diversity	Genetic sampling	Every 10 years	SMNP-NG		Low
Pollution (fertilizers, vehicles, litter)	Soil and water quality	Plot sampling	Every 3 years	ARARI,BoWD	Yes	Medium

Threat Monitoring Plan						
Threat	**Indicator of change**	**Method of measurement**	**Collection frequency**	**Potential partners**	**Already being collected?**	**Priority**
Climate change	Land cover classification	Remote sensing and mapping	Every 3 years	EPLAUA,EWCP, PaDPA, ARARI, FZS		Medium
	Rainfall and temperature	Weather stations	Monthly		No	Low
	Humidity					Low
Hybridization	Genetic diversity	Genetic sampling	Every 10 years	EWCP, FZS	Yes	Low
	Observatons of hybrids	RBM, CBM, photo records	Ad hoc	Tour companies, KAs	No	Low
		Incidence reports		EWCP,ARARI	Yes	

ARARI: Amhara Regional Agricultural Research Institute, BoARD, Bureau of Agriculture and Rural Development, BoWD: Bureau of Water Development, EPLAUA: Environmental Protection, Land Administration & Utilisation Authority, KAs Kebele Association, RRD: Rural Road Authority, SMNP-NG: Simien National Park , WARDO: Woreda Agriculture & Rural Development Office, WLEO: Woreda Law Enforcement Organisation,

iii. GMP Impact Monitoring and Evaluation *contd.*

In addition, the framework outlined below will provide easily assessable indicators for measuring the impact of plan implementation. A table has been drawn up for each management programme setting out the monitoring framework, with a set of indicators for easily measuring the results of implementing the proposed actions and potential sources of information. The potential positive impacts (and related indicators) resulting from the implementation of each programme's management specific objectives will be shown in **Black** and, where appropriate, the potential negative impacts (and related indicators) will be shown in **Grey**. SMNP management will have the responsibility for establishing a practical workplan for routine measurement of these indicators, following the initial collection of baseline data. This database will provide the foundation for subsequent adaptive management through the adjustment of the rolling three-year Action Plans according to lessons learnt.

A number of underlying assumptions and risks for the successful implementation of GMP implementation are:

Availability of sufficient and appropriate financial, human and technical resources,
The stability of Ethiopia and the local area
Continuing political support at all levels nationally
SMNP partners continue to be willing to collaborate and support SMNP
Government Ministries and agencies have the capacity and willingness to support SMNP management and SMNP partners
Park-associated communities are willing and able to engage with SMNP management

The GMP Impact monitoring and evaluation framework is clearly currently too detailed to be implemented. Thus prioritisation of indicator selection must take place at the beginning of GMP implementation, concentrating on prioritisation of indicators that relate to results that are dependant on critical assumptions, to give a spread of indicators across the output/outcome results chain or for strategies where the desired result may not be achieved.

Specific and SMART targets for objective impact indicators will be developed as part of Annual Operation Plans, in line with capacity and financial resource availability. Specific outputs and their indicators will be also be developed during Annual Operational Planning.

Table 1.4: Ecological Management Programme Impact Monitoring Plan

Objective/Sub-objective	Potential Impact (Positive and Negative)	Indicator	Source of Information
Objective 1: Threats to PECs reduced or resolved through interventions based on adaptive management	Rare and globally unique species conserved and key ecosystem processes maintained	The status of key ecosystem and socio-economic indicators maintained or improved above baseline levels (as per EMP) Threats to PECs reduced from baseline levels or eliminated (as per threat indicators in EMP)	Park and community patrolling and monitoring data/ reports
1.1: Immediate human impacts from settlement, cultivation, grazing and unsustainable natural resource use reduced or eliminated	See above (Negative – community livelihoods are compromised or poverty is increased)	As above Incidence of illegal activities reduced from baseline levels	Park and community patrolling and monitoring data/ reports RBM records

Objective/Sub-objective	Potential Impact (Positive and Negative)	Indicator	Source of Information
1.2: Degraded habitats rehabilitated	Status of the relevant PEC enhanced	Habitat extent or quality increased above baseline levels as per land cover classification and other key indicators in EMP	EMP data/ reports
1.3: Threats to endemic and threatened wildlife mitigated	Wildlife populations stable, increasing, or decline slowed Reduced incidence of disease e.g. rabies in wildlife, livestock and humans Connectivity between habitats maintained Reduced HWC	Positive trends towards attaining the desired status of population size, structure and distribution indicators for key species (as per EMP) Threats to PECs reduced from baseline levels or eliminated (as per threat indicators in EMP)	RBM records Park and community patrolling and monitoring data/ reports (e.g. RBM records)
	Increased HWC	incidence of HWC	EMP reports
1.4: Strategy to mitigate effects of global warming on PECs developed	Systems in place such that species, habitats and ecosystem processes maintained or adaptations facilitated so that all components of functioning ecosystem still present in the face of predicted climate chance impacts	Climate change model developed Monitoring plan designed with 'early warning' indicators Mitigation strategies developed with interventions based on 'early warning' indicators as per monitoring plan	Reports Monitoring plan, protocols, databases
Objective 2: Research and monitoring of PECs and KEAs carried out	Knowledge of the status of the PECs and threats to guide management interventions improved	# reports, presentations or publications in peer-reviewed journals on biodiversity, ecosystem function,and/or ecosystem services in SMNP	Scientific literature databases (e.g. Web of Science) SMNP monitoring centre library
2.3: Ecological monitoring plan developed and implemented including climate change	Ecosystem priorities and threats agreed by stakeholders and framework available for coherent and consistent long-term monitoring Information available to guide intervention decisions	Key ecosystem targets (ecological and socio-economic) have been selected, threats identified, and monitoring plan developed Park and community-based para-ecologists identified and trained Monitoring database set up and maintained Park and community-based monitoring protocols developed and implemented METT score (or part pertaining to monitoring)	Monitoring plan, protocols, activity reports, and databases Annual METT assessment
2.2: Modern data acquisition, management and distribution systems developed for research and monitoring	Justification for key management actions documented and verifiable Basis for adaptive management established	Systems in place for adaptive management of ecosystem (including databases and feedback between monitoring and interventions) METT score (or part	Databases, monitoring and management reports Annual METT assessment

Objective/Sub-objective	Potential Impact (Positive and Negative)	Indicator	Source of Information
		pertaining to monitoring and adaptive management)	
2.3; Partnerships for research and monitoring promoted and developed	Increased research and monitoring knowledge, activity and capacity Time and resources appropriately allocated as a result of experience sharing and knowledge exchange	# and type of academic partners active in Simien Amount of external funding contributed to research and monitoring	Research proposals Academic seminar reports
Objective 3: Financial, human and material capacity for ecological management built	Tools, knowledge, and infrastructure available for job fulfilment resulting in increased ecological management and monitoring activity, improved EM staff morale, better job performance, and greater commitment to conservation	# ecological management or other relevant staff that have received formal on-the-job training in applicable fields of work # and type of equipment and facilities increased/ improved Number of staff days in the field increased above baseline Staff morale and motivation for work increased above baseline levels METT score (or part pertaining to monitoring and ecological management)	Annual operations reports and field activity reports Training reports Infrastructure assessment reports Fixed asset lists Staff surveys Annual METT assessment

Table 1.5: Settlement Management Programme Impact Monitoring Plan

Sub-Objective	Potential Impact (Positive and Negative)	Indicator	Source of Information
Objective 1: Voluntary resettlement plan implemented	Number of settlements and people using SMNP resources reduced Negatives: Lack of livelihood options for resettled individuals Adverse effects on cultural and social cohesion within communities Potentially unsustainable (misused resources)	Settlement and population size decreased from baseline Negatives: Status of socio-economic indicators decreased from baseline Change in cultural and social values from baseline situation # of resettled people returning to the park over long-term	Park and community monitoring data/ reports as per EMP Negatives: Socio-cultural, and economic/livehood opportunity surveys Resettlement programme M&E reports
Objective 2: Cultivation reduced and controlled and negative environmental impacts mitigated	Extent of cultivation reduced and sustainable cultivation practices implemented so as to reduce negative impacts of cultivation on PECs	Extent of cultivation decreased from baseline Sustainable cultivation practices implemented Degraded land rehabilitated	Park and community monitoring data/ reports as per EMP

Table I.6: Park Operations Programme Impact Monitoring Plan

Objective/Sub-Objective	Potential Impact (Positive and Negative)	Indicator	Source of Information
Objective 1: Resource management and protection strengthened	Management effectiveness improved PECs enhanced or maintained Negative: Increased negative attitude towards SMNP management in park-associated communities Decrease in socio-economic status/livelihoods of some people (particularly poor, women and other marginalised groups)	METT score increased from baseline levels The status of key ecosystem and socio-economic indicators maintained or improved above baseline levels (as per EMP) Negative: Community perception of park decreased from baseline Status of socio-economic indicators (as per EMP) decreased from baseline	Annual METT assessment Park and community monitoring data/ reports as per EMP Attitude and perception surveys Park and community monitoring data/reports as per EMP
1.1: Park staff and institutional capacity improved	Tools, knowledge, and systems developed for park to deliver effective protected area management while improving staff morale, job performance and commitment to conservation Justification for management decisions documented, transparent and verifiable	# park staff that have received formal or on-the-job training # and type of equipment and facilities increased/ improved Staff morale and motivation for work increased above baseline levels % delivery of department AOPs increased above baseline levels	Training reports Annual operations plans/ reports Infrastructure assessment reports Fixed asset lists Staff surveys and evaluations
1.2: Systems and framework for resource protection strengthened	Increased patrolling activities and control over resource use	Patrolling frequency and extent increase above baseline # illegal incidents, extent of agricultural, settlement, timber extraction and use	Ranger based monitoring, Ecological Monitoring Plan, park records
	Law enforcement efforts of other stakeholders enhanced and supporting park activities	# and activity of community scouts increase above baseline # successful prosecutions increase above baseline	Scout employment and activity records Police, judiciary and park enforcement records
	Stronger legal framework for biodiversity conservation, protected area management which are recognized and understood by all stakeholders Decrease in incidence of illegal activities coupled with better enforcement by relevant authorities	Policies, rules and regulations for resource use and enforcement developed Knowledge and understanding of laws among stakeholders increased from baseline # illegal incidents Number of prosecutions for illegal activities increased from baseline	Policy and regulation documents Stakeholder meeting minutes and surveys RBM and park records Park, police and judiciary records

Objective/Sub-Objective	Potential Impact (Positive and Negative)	Indicator	Source of Information
	Increased negative attitude towards SMNP management in park-associated communities Increase in illegal activities	Negative attitudes towards park increased from baseline levels Incidence of complaints to park increased from baseline # illegal incidents increased from baseline	Community attitude surveys RBM and park records
1.3: Park boundary secured	Communities recognize, acknowledge, and adhere to boundary on ground	Boundary agreed and demarcated together with communities Community awareness and support for park and boundary increased above baseline	Meeting minutes/ boundary agreements with communities Park boundary documents and boundary beacons Community surveys Google Earth / EMP
	Improved legal basis for SMNP	Park gazetted with new boundary	Gazettement document
	Deterioration in relations with park-associated communities	Community attitudes towards and support for park and boundary decreased from baseline Incidence of complaints to park	Community attitude surveys Park records
	Important habitats or corridors for wildlife are excluded from park	Species distribution and movement data collected and provided by park ecologists	Species distribution data and maps
1.4: Synergistic, collaborative and adaptive planning and review system operational	Monitoring and evaluation of management effectiveness and GMP implementation takes place and thus management is adaptive	3-year Action plan and annual operations plans produced in timely fashion and taking into account progress in GMP implementation	3-Year Action Plans GMP implementation reports
Objective 2: SMNP infrastructure developed and maintained	Improved facilities for park operations	Number and types of facilities increased above baseline	Infrastructure assessment reports Fixed asset lists
	Improved staff morale Increase job performance and fulfilment of activity plans	Attitudes of staff improved above baseline Staff evaluations and % of activities fulfilled increased above baseline	Staff surveys Staff evaluations Activity reports
Objective 3: Sustainable financing mechanisms explored and established	Potential external income sources are identified to cover park running costs SMNP budget for park management and community development increases	Value of ecosystem services assessed Sustainable financing plans designed including projected expenditure and potential funding sources Trust fund capital committed and/or donor funding raised	Ecoystem valuation reports; scientific publications SMNP business plan SMNP financial reports and accounts

Table 1.7: Tourism Development and Management Programme Impact Monitoring Plan

Sub-Objective	Potential Impact (Positive and Negative)	Indicator	Source of Information
Objective 1:Visitor facilities, opportunities, information and access diversified and improved in environmentally appropriate and sensitive ways	Revenue from tourism for protected area management and community development increased Economic benefits from biodiversity benefitting local and national economies will elevate conservation on the political agenda Tourism facilities and presence are having a minimal impact on environment and local culture/society Negatives: Park becomes managed for tourism and revenue production not conservation PECs are degraded from increased tourism development and number of tourists	Park and community revenue increased from baseline levels Political support for SMNP and conservation more generally increased from baseline levels No change in cultural and social values from baseline situation The status of key ecosystem and socio-economic indicators increased/decreased from baseline levels (as per EMP)	Financial records Government awareness and attitude surveys Socio-cultural, and economic/livehood opportunity surveys Park and community patrolling and monitoring data/ reports
1.1 Tourism infrastructure extent and quality developed and maintained	Tourism infrastructure and services improved in SMNP so as to accommodate a greater number of tourists and provide an enhanced visitor experience	No. and type of beds and concessions available increased over baseline Visitor satisfaction increased over baseline # return visits or recommendations increased over baseline	Infrastructure assessment, concession agreements and usage records Visitor activity and satisfaction surveys Feedback comments
		# of visitors and length of stay increased over baseline	Tourism department accounts and records
1.2: Quality visitor information centres developed and materials produced	Visitor experience enhanced	Visitor satisfaction increased over baseline # return visits or recommendations increased over baseline	Visitor activity and satisfaction surveys Feedback comments
	Visitor understanding of SMNP ERVs, ecology and conservation issues improved	# of maps and guidebooks sold, and leaflets distributed Visitors evaluation and feedback on information materials	Tourism department records Visitor use and satisfaction surveys
1.3: Visitor attractions and activities improved and diversified to support a greater range and volume of tourists	Increased volume and diversity of tourists	# visitors # activities available and # activities undertaken by tourists	Visitor surveys Tourism Dept records
		# tourists participating in cultural activities	CTA records Visitor surveys
		Visitor and community feedback	Visitor use and satisfaction surveys Community surveys

Sub-Objective	Potential Impact (Positive and Negative)	Indicator	Source of Information
	Decline in visitor safety as a result of diversification and increased access to remote areas	Incidence of accidents increased from baseline	RP department records
		Park budget and allocation to tourism	Annual budgets and workplans EIA and cultural impact surveys
1.4: Integrated marketing and promotion of SMNP tourism implemented and linkages with tourism provision partners in place	More visitors to SMNP	# visitors and duration of stay	Tourism records
	Greater awareness and support for SMNP nationally and internationally	Visitors to website increased from baseline Donations and partner projects increased from baseline Government budget for SMNP increased from baseline # visitors from officials increased from baseline	Hits on website PaDPA/park records, budget on partners
Objective 2: Capacity and systems for the development and management of sustainable SMNP tourism strengthened and maintained	As per Objective 1		
2.1: Capacity of SMNP staff and other key stakeholders to deliver and manage tourism in the SMNP enhanced	Park staff have increased knowledge and tools to manage tourism	Knowledge of tourism provision facets among park staff increased from baseline	Staff knowledge, attitudes and practices surveys
2.2: Tourism impact and experience monitored, mitigated and adaptively managed through improved management systems	Enhanced responsiveness of SMNP to tourism needs and trends Justification for key management actions documented and verifiable	Systems in place for adaptive management of ecosystem (including databases and feedback systems)	Database records, meeting minutes, management reports
	Increased cost of managing and mitigating effects of tourism renders cost/benefit analysis negative	Costs-benefit ratio of managing and mitigating effects of tourism	Cost/benefit analysis reports
Objective 3: Increased opportunities, participation and benefit sharing for local communities from SMNP tourism facilitated	Improved and increased diversity of benefit flows to communities Improved interactions between community members and visitors Negative: as per Objective 1 and 2	# and type of CTAs Income to CTAs increased from baseline # community members gaining income from tourism increased from baseline Attitudes and experiences between tourists and community members improved from baseline levels	Tourism/ park records Accounts of CTAs Community household surveys Tourist and community attitude surveys

Table I.8: Outreach Programme Impact Monitoring Plan

Sub-Objective	Potential Impact (Positive and Negative)	Indicator	Source of Information
Objective 1: Stakeholder involvement and commitment to SNP strengthened			
1.1:Coordination for park development and management among stakeholders improved	Community issues are dealt with by SMNP, within remit Improvement in community-park relationship Improved communication between stakeholders and "joined up actions" Better land use planning in surrounding communities	# community / kPAC issues that reach and are replied to by wPAC Community attitudes to park Strategic and action plans of stakeholders and partners take into account SMNP priorities and management Presence of land use plans and bye laws in kebeles	Minutes of wPAC and kPAC Community attitude surveys Meetings minutes Zonal, local government, tourism etc. plans Partner project activities Kebele records
1.2: Awareness of the importance of SMNP increased	Improved awareness of SMNP and its importance, locally, nationally internationally More visitors Improved political and public support at all levels	Knowledge of national and international visitors # radio and TV features # tourists # officials visiting SMNP Increased budgets	Visitor surveys Surveys in local and national populations Park records Tourism records Park records Park budgets
1.3: Environmental education extended in all park-associated communities	Improved awareness of conservation and environmental issues in school children, youths and the wider public Increased activity of community members in tree and soil conservation activities Increased awareness of SMNP rules/regulations and management methods	School and youth knowledge and awareness # tree nurseries and seedling survival # active soil conservation programmes Community awareness levels	Awareness surveys Park/partner/kebele records RBM / Park records Community Awareness surveys (KAP)
1.4: Park outreach team strengthened	Improved delivery of outreach services Improved relationship with communities and other stakeholders Improved park management	Breadth, depth and quality of outreach activities Attitude of stakeholders to SMNP and its management Frequency of communications METT score	Park activity reports, GMP implementation Attitude surveys kPAC and wPAC minutes Annual METT assessment
Objective 2: Sustainable development and livelihoods around SMNP improved	Threats to SMNP reduced		
2.1: Shortage of fuel and construction wood mitigated	Decreased use of SMNP natural resources for energy use by all park users and park associated businesses and communities	Frequency of Illegal fuelwood collection Source of construction wood Woodlots outside park Fuel efficient stove use frequency	Scout-based monitoring records Kabele and outreach records Energy audit

Sub-Objective	Potential Impact (Positive and Negative)	Indicator	Source of Information
2.2: Sustainable and environmentally-friendly agricultural technologies promoted	Diversification of agricultural activities contributing to livelihoods	Household activities and livelihood strategies	Community livelihood surveys
	Increased immigration into areas surrounding SMNP	Trends in population growth and immigration in Park-adjacent areas	Direct observation, land use mapping, census records
3.1: Population growth in park-associated communities reduced	Slower rate of threat increase and pressure on park resources	Threat levels Slower population growth rate and land expansion in park associated communities compared with other communities	EMP and threat monitoring Census records, remote sensing

iv. Monitoring GMP Action Completion

Monitoring of the implementation of the 3-Year Action Plans will be done twice yearly, by comparing progress on implementing Annual Operations Plans with the 3-Year Action Plans. Tables will be drawn up listing each activity and status of implementation, as per the example table below. SMNP management will be responsible for drawing up and completing these tables as part of their regular planning.

TABLE A1.5. Example of Action / Activity Implementation Monitoring from Ecological Management Programme

Action/Activity (Ecological Management Action Plan)	Completion status on 1.7.09	Tasks undertaken	Comments
Action 1.1 Provide knowledge to minimise ecological impacts of settlement, cultivation and grazing as well as unsustainable NR use			
a. Investigate extent of ecological damage due to settlement, cultivation, grazing, and produce map			
Ib. Identify ecological resources that are illegally exploited in SMNP and the amounts and create map			
c. Identify and map fragile habitats susceptible to settlement, cultivation and grazing			

Appendix 2: SMNP GMP Planning Team

Core Planning Team:

- General Manager, PaDPA (Chair) : Mulugeta Woubshet/ Berhanu Gebre/Mohammed
- Warden, SMNP Asfaw Menesha / Maru Beyadegelegne
- Austrian Development Cooperation, SMNP-IDP; Teshome Mulu
- Project Leader, FZS Afro-alpine Ecosystems Conservation Project Dr Zelealem Tefera
- General Manager Ethiopian Wildlife Conservation Authority: Dr Kifle Argaw (final stages only)

Technical Working Groups Composition

Ecological Management - Bekele Zerihun (PaDPA), Abraham Marye (PaDPA), Getachew Assefa (FZS-AECP), Bisrat Kebede (SMNP), Derbie Deksiyos (SMNP), Dr Deborah Randall, (FZS Facilitator), Aschalew Worku (Zone C&T

Park Operations)– Asfaw Menesha (SMNP), Menelik Belay (SMNP-IDP), Sisay Mequanent (SMNP), Woldegebriel G/Kidan (EPULA), Zelealem Tefera (FZS-AECP), Workeneh Hailu (PaDPA)

Outreach – Aklewog Seyoum (PaDPA), Teshome Mulu (SMNP-IDP), Alamrew Dessie (SMNP-IDP), Sisay Yeshanew (SMNP), Azanaw Kefylaew (Debark Woreda BoCT), Chalachew Mekonnen (Debark Woreda BoARD), Dr Karen Laurenson (FZS, Facilitator)

Consultants

ERCAND Consult; In 2006 updated 2000 SMNP GMP developed by Austrian Nature Oriented Tourism Development Project
Tourism: Getinet Fetene, Alehign Dagnew: Multisectoral Consultants PLC. Bahir Dar
Grazing Strategy: Amibeti Agricultural Development Consultancy

Stakeholder Consultations

ERCAND consult held discussions with different woreda offices

Workshop December 2006: 2 day workshop at which representatives of the community, the concerned stake holders at woreda, zonal, regional level and national level.

Appendix 3: SMNP Research Priorities

Prioritisation	Research Topic
1	Conflict between wildlife and local communities and mitigation strategies
2	Impact of grazing on wildlife (especially rodents) and vegetation in different habitats
3	Past and present land cover change and predicted future change (modelling)
4	Population dynamics and local migration patterns of Walia ibex
5	Carrying capacity of Walia ibex, Ethiopian wolf and gelada in SMNP
6	Outbreak, transmission, and management of wildlife diseases (esp. Walia ibex and Ethiopian wolf)
7	Impact of vegetation cover on wildlife populations in different ecosystems
8	Use of fixed point photographic monitoring for vegetation
9	Sustainable solution for the blocked wildlife corridor
10	Types of soils in SMNP and impact of different land uses on soil quality
11	Behavioural ecology, ranging patterns and feeding behaviour of Walia ibex
12	Factors affecting regeneration of indigenous trees and possible rehabilitation strategies
13	Habitat preferences of large mammals in SMNP
14	Carbon storage potential of SMNP forests and watershed for carbon offsets (carbon trading)
15	Impact of grazing on distribution of Walia ibex
16	Economic value of SMNP natural resources locally, nationally and internationally
17	Extent of fuelwood extraction and grass collection in SMNP and estimates of sustainable use levels
18	Clarify the genetic status of Walia ibex (species or sub-species)
19	Trophic interactions between predators and prey in the Afroalpine (vegetation, wolves, jackals, rodent, geladas and raptors)
20	Biodiversity inventory for SMNP (plants, butterflies, amphibians, reptiles)
21	Watershed dynamics and human impacts on watershed quality and dynamics
22	Use of remote sensing for monitoring wild animal populations (particularly Walia ibex)
23	Methods for enhancing Erica regeneration in sub-Afroalpine belt
24	Impact of climate change on habitat of Walia ibex
25	Fire incidence, causes and changes over time and management solutions
26	Causes underlying increases in Walia population size
27	Walia distribution inside and outside the national park
28	Impacts of rodents on soil and vegetation
29	Species list of wild flowers
30	Competition between golden jackals and Ethiopian wolf
31	List of medicinal plants in SMNP and their traditional uses
32	Distribution of he endemic *Rosularias simensis*

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