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Simen Mountains Study 2004

Intermediate Report on the 2004 Field Expedition to the Simen Mountains in Northern Ethiopia

Eva Ludi

NCCR North-South Dialogue, no. 6

2007

dialogue

The present study was carried out at the following partner institution of the NCCR North–South:

Centre for Development and Environment (CDE)
Institute of Geography, University of Bern

IP7 (Environmental Change and Conflict Transformation), Swisspeace

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Cover photo

Farmers from Gich attending a meeting to discuss conservation and development issues in the Simen Mountains National Park. (Photo by E. Ludi)

Distribution

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Contents

Figures

Tables

Abbreviations

ANRS	Amhara National Regional State
ARARI	Amhara Regional Agricultural Research Institute
BoARD	Bureau of Agriculture and Rural Development
BoYCS	Bureau of Youth, Culture and Sport
CDE	Centre for Development and Environment, University of Bern, Switzerland
DA	Development Agent
EB	Ethiopian Birr (1 Euro = approx 10.66 EB, October 2005)
EC	Ethiopian Calendar
EPLAUA	Environmental Protection, Land Administration and Use Authority
FDRE	Federal Democratic Republic of Ethiopia
FfW	Food-for-Work
GEF	Global Environment Facility
GIS	Geographical Information System
GPS	Global Positioning System
IDP	Integrated Development Project administered by Austrian Development Cooperation
KA	Kebele Association
Kebele	Community
MP	Management Plan
NCCR North-South	National Centre of Competence in Research North-South
NGZ	North Gonder Zone
PaDPA	Parks Development and Protection Authority of Amhara Region
PCU	Project Coordination Unit
RC	Regional Coordinator of the NCCR North-South
RCO	Regional Coordination Office of the NCCR North-South
SDA	Sustainable Development Appraisal
SDC	Swiss Agency for Development and Cooperation
SMBS	Simen Mountains Baseline Study (1994)
SMNP	Simen Mountains National Park
SMS 2004	Simen Mountains Study 2004
SWC	Soil and Water Conservation
TLU	Tropical Livestock Unit
UNESCO	United Nations Educational, Scientific and Cultural Organisation
Walya	*Walya ibex*
Wereda	District
WHC	World Heritage Committee of UNESCO's World Heritage Convention

Summary

The purpose of the Simen Mountains Study 2004 was to re-assess specific bio-physical and socio-economic conditions in selected villages inside and around the Simen Mountains National Park that had been previously studied in the Simen Mountains Baseline Study in 1994 and to assess changes – both positive and negative. Furthermore, strategic studies were launched in areas where involved research and development agencies have identified a need for greater in-depth knowledge. The Simen Mountains Study 2004 was carried out as a research collaboration initiated by the Amhara Regional Agricultural Research Institute (ARARI) and the Amhara Region Parks Development and Protection Authority (PaDPA), in Bahr Dar, Ethiopia, and the NCCR North-South, namely IP7 – Environmental Change and Conflict Transformation at the Swiss Peace Foundation (swisspeace), Bern, Switzerland, and IP2 – Ecology and Natural Resources at the Centre for Development and Environment (CDE), University of Bern, Bern, Switzerland.

Besides presenting preliminary findings on the major themes investigated, namely the status of the *Walya ibex* population and other wildlife, the occurrence of potential wildlife habitats in areas outside the current National Park boundaries, the status of forest resources, soil erosion threats and soil conservation opportunities, the status of the livestock sector, the role of communication in sustainable rural development, recent changes in political organisation and its influence on resource management, develop-ments in the tourism sector, and recent changes in park management, this report also presents a preliminary assessment of major changes and trends with regard to wildlife, natural resources, land use, human population and livestock, institutions, and tourism. At this moment – i.e. before main findings are available – it can be concluded that enormous efforts have been initiated by the regional and local governments, partly sup-ported by bilateral and international donor agencies, to improve the living conditions of the resident population and improve conditions in the National Park, its management, and ultimately the protection of wildlife. Nonetheless, considerable efforts are still needed to reconcile conservation with sustainable development.

Based on these preliminary findings, general recommendations are formulated in the three main fields of park management and development, tourism management and development, and rural development in general. Tasks related to conservation and development in the Simen Mountains, including the National Park and the surrounding Weredas, remain large, but the government's financial resources to address them all are limited in terms of meeting the goals of development and simultaneously conserving the outstanding beauty of the landscape, biodiversity of global significance, and endangered species – of which the *Walya ibex* has become a national symbol. Additional financial support is necessary. We therefore believe a project proposal addressing these conservation and development issues in the Simen Mountains should be submitted to the Global Environment Facility.

1 Background

1.1 Context and purpose of the study

The Simen Mountains in northern Ethiopia are an area of great diversity and scenic beauty. The area is characterised by topographical ruggedness with steep escarpments, rolling hills in the highlands, and flat terraces dissected by rivers in the lowlands. Simen has a rich biodiversity of natural plants, crops and animals. Several endemic species are found in the area, of which the *Walya ibex* has become a national symbol. Simen offers not only beautiful landscapes and a remarkable flora and fauna, but also a cultural landscape of outstanding heritage.

Figure 1: View from Imet Gogo to the north-northeast (E. Ludi, R. Schild 2004).

Unfortunately, Simen is not free of problems. Land degradation is widespread, leading to chronic food deficits among an ever-growing portion of the local land users. Without regular deliveries of food aid, the survival of a considerable proportion of the population cannot be secured. Demographic trends with annual growth rates of 2% and more result in land scarcity, abandonment of fallow periods, deforestation, and overgrazing.

The National Park, which was established in 1969 with the primary goal of ensuring the survival of the highly endangered endemic *Walya ibex*, contributed to the protection of this unique landscape and its fauna and flora. The creation and existence of the National Park, however, has not been free of conflict. The interests of local residents do not coincide with those of certain national and international stakeholders, whose main interests lie in the protection of flora and fauna. Thus the joint efforts of all involved stakeholders – from local residents to government agencies at different levels to international organizations – are of primary importance in the search for opportunities to promote sustainable development. Neither protection of flora and fauna alone nor the promotion of social and economic development for local residents will help to solve the many problems in this unique area. What is required are innovative ideas that help to reconcile conservation with sustainable development, allowing the park and the people to co-exist and to benefit from each other.

Based on this vision of co-existence and mutual benefit, the Simen Mountains Baseline Study (SMBS) was carried out in 1994. Its primary goal was to create shared knowledge about people and natural resources in the Simen Mountains National Park and its surrounding areas. Its aim was to analyse trends, needs, and options in relation to re-source use and conservation, as well as development from an internal and an external perspective, and synthesize knowledge and opportunities for sustainable development as seen by different stakeholders. Data collection and presentation were organized in such a way that they could serve as a basis for monitoring and impact assessment at a later stage.

The results of the SMBS were published in 2000 (Hurni, H. and Ludi, E., 2000. Reconciling Conservation with Sustainable Development. A participatory study inside and around the Simen Mountains National Park, Ethiopia. Bern, CDE) and handed over, along with a database containing all the GIS layers, to the authorities of Amhara Region on the occasion of a high-level fact-finding mission to the area by the government of Amhara.[1]

Since 1994, considerable development efforts have been initiated by various government bodies and international development agencies. A wide range of activities has been launched, including the construction of a rural road connecting the communities in the vicinity of the Simen Mountains National Park (SMNP) with the main highway, the strengthening of the park administration, improvements in capacity, and construction of various tourism facilities and social infrastructure. At the same time, negative development trends, such as resource degradation and impoverishment among the local population, have continued more or less unchanged.

Based on the outcomes of the high-level fact-finding mission by the Amhara government and various discussions held between 2000 and 2004 with staff of government bodies at various levels and international donor agencies active in the Simen Mountains, it was decided to launch a study 10 years after the first Baseline Study of 1994 in order to assess changes – both positive and negative – and to initiate strategic studies where research and development agencies involved have identified a need for greater in-depth knowledge.

1.2 Framework

In the course of preparation for the Simen Mountains Study in 2004, a contractual agreement was signed between the Centre for Development and Environment (CDE), University of Bern, and the Swiss Peace Foundation (swisspeace), Bern, Switzerland, on behalf of the NCCR North-South Programme and the Amhara Region Government, represented by the Amhara Regional Agricultural Research Institute, Bahr Dar, Ethiopia.

[1] Hurni, H. and E. Ludi. 2000. High-Level Fact Finding Mission by the Amhara Regional Government to the Simen Mountains National Park and its surrounding Rural Areas, 17–23 March 2000. Mission Report. Bern, Centre for Development and Environment (CDE).

Figure 2: The Simen Mountains Study team (R. Schild 2004).

The general objectives of the Simen Mountains Study 2004 to be carried out by CDE/swisspeace and ARARI were stipulated as follows:

To provide decision-making support for the park administration, line agencies and development projects through the collection and presentation of data for strategic planning of targeted activities.

This was to be achieved by:

1. Monitoring changes and providing information on natural resources and potential natural resource trends and human activities in selected villages where baseline data for 1994 are available, including an update of GIS information where appropriate.
2. Conducting strategic studies where various stakeholders have identified the need to have in-depth information.
3. Reporting on the potential for sustainable development and the limitations to it, in relation to the capabilities and capacities of the land users, local institutions, line agencies and projects administered by external donors.

The study team consisted of an interdisciplinary team totalling 6 MSc/MA candidates from Ethiopia and Switzerland, supported by a group of specialists. The approach consisted of interdisciplinary core survey teams, each of which was active in several villages inside and around the SMNP from September to December 2004. Each member of a team covered one of the following specific topics:

- Wildlife and park conservation and development
- Soil, forest and grassland resources management
- Sustainable livelihood strategies
- Political organisation and changes and their influence on park and resource management
- The role of communication in sustainable rural development
- Potentials and limitations for tourism development in the SMNP

1.3 Location of the study areas

In 1994, baseline information was collected in 30 villages inside and adjacent to the SMNP. For the SMS 2004, villages were selected to represent the major agro-ecological zones in the Simen Mountains (e.g. highlands above 2,800 m and lowlands below 2,800 m) as well as different socio-cultural settings (e.g. Muslim villages, Christian villages). These villages include: Debir, Walk, Argin, Kerneja, Suksuk and Gich. Additionally, information was collected in villages belonging to Beyeda and Adi Arkay Wereda to the east of the SMNP as well as in the administrative centres of Debark, Gonder and Bahr Dar (see map on next page).

2 Methodology and Approach

2.1 Research themes

From the Simen Mountains Baseline Study of 1994, detailed and comprehensive information for villages inside and surrounding the SMNP is available on the following aspects: (i) Park/wildlife ecology, (ii) natural resources/soils, (iii) land use/farming system, and (iv) socio-economic aspects. In various discussions with staff of government bodies at various levels and international donor agencies active in the area, a decision was made to launch strategic studies in addition to focusing on the monitoring of baseline data in selected villages.

The following topics were covered by MSc/MA candidates from Ethiopia and Switzerland: [2]

- Wildlife and its actual and potential habitats in the vicinity of the SMNP, Ethiopia (Katrin Bircher)
- Forest and forest management in the SMNP and surrounding villages (Regula Schild)
- Determinants for adoption of soil and water conservation (SWC) practices in the environs of the SMNP, Ethiopia (Girmachew Siraw)
- Livestock in the Simen Mountains, Ethiopia – its role in the livelihood strategies and land use systems of smallholders in selected villages of the Simen Moun-tains, Ethiopia (Julia Grünenfelder)
- Empowerment through participation – which communication processes are necessary? The example of the Simen Mountains National Park, Ethiopia (Michael Walther)
- Effects of decentralisation in Ethiopia on the management of natural resources and of the Simen Mountains National Park, Ethiopia (Marcel Budmiger)

Another MA candidate who was focusing on "Behaviour of *Walya ibex* under human disturbance and park management strategies to mitigate negative impacts" (Berhanu Gebre) unfortunately decided to leave the SMS 2004 team and pursue his studies independently.

The following topics were covered by senior researchers and specialists:

- The distribution of the *Walya ibex* population in the SMNP, Ethiopia (Derebe Deksiyos)

[2] The titles below are taken from the research outlines as formulated before the actual field research and will be changed if necessary to better reflect concrete research findings.

- Sustainable livelihood strategies in the SMNP and its environs (Bosena Tegegne, Solomon Abegaz)
- Potentials and limitations for tourism development in the SMNP, Ethiopia (Ne-gash Atnafu)
- Status of and possibilities for decentralised development in remote areas of the Simen Mountains and options for reintroducing *Walya ibex* into their former habitats (Hans Hurni, special project, see Hurni, 2005)

2.2 Methodology and approach

From a methodological point of view, the SMS 2004 for the most part applied a "Sustainable Development Appraisal" (SDA), as developed during the SMBS in 1994. The SDA is based on empirical information and data for pre-defined area units at different scales. It thus has to be carried out as a field study by an interdisciplinary team. On the one hand, the team applies a transdisciplinary approach by combining external (scientific) knowledge with the indigenous knowledge of local residents. On the other hand, "shared" knowledge is enhanced by disciplinary assessment methods (see Hurni and Ludi, 2000).

1. The approach of the SMS 2004 follows the SDA and is composed of the following three major steps. Step 1 had been completed by the time this report was written, while steps 2 and 3 will follow in the course of the coming year.
2. Participatory field work: A three-month field study (September - December 2004) in villages inside and surrounding the SMNP was carried out, including visits to the major institutions at Kebele Association, Wereda, Zonal and Regional level.
3. Supplementary scientific analysis: Methods of analysis will include a study of existing information, air photo interpretation, GIS analyses, etc.
4. Preparation of synthesis, baseline information, and consequences of action: A comprehensive synthesis will be elaborated, based on individual studies, including an assessment of changes in major bio-physical and socio-economic aspects between 1994 and 2004. Specific recommendations will be formulated in the fields covered and inputs provided for the formulation of management plans (e.g. Park Management Plan, Tourism Plan) and conservation and development projects (e.g. Austrian Development Cooperation, UNCDF, GEF, etc.).

2.3 Fieldwork methods

The following methods were applied as part of the fieldwork involving the SDA:

- Village conferences and meetings, organised by the study team to discuss issues relating to the topics covered
- Open and semi-structured interviews, structured questionnaires
- Participatory assessments, consisting of field visits to land units for identification of resource situation, processes of change
- Surveys/mapping of natural resources, land use and infrastructure, using the same methodology as applied in 1994 to allow comparison and identify changes
- Wildlife observations and counts at pre-defined observation points, to allow comparison with previous observations and a total count of *Walya ibex* in a larger area inside and surrounding the SMNP

Figure 3: Fieldwork methods: Wildlife observation from Saha (left) and men from Walk involved in a wealth ranking exercise (right) (K. Bircher 2004).

2.4 Itinerary

October 2003 – February 2004	Graduate Student Seminars, CDE, University of Bern, on: World Heritage Sites in mountain areas and preparation of the SMS 2004, under the direction of Prof. Hans Hurni, Prof. Urs Wiesmann, and Dr. Eva Ludi
May 2004	Mission to Ethiopia led by Dr. Eva Ludi. Preparation of SMS 2004, contacts with stakeholders at national and regional levels
July – September 2004	Individual preparation of research concepts, frameworks, questionnaires, etc.
24 – 26 Sept. 04	Arrival of Swiss research team in Addis Abeba, Meeting with Berhanu Debele, Head, Regional Coordination Office of the NCCR North-South, Addis Abeba
27 – 29 Sept. 04	Arrival of research team in Bahr Dar. Meetings with Dr. Gete Zeleke, Director General, ARARI; Girma Tesfahun, socio-economic expert, ARARI; Fasil Ayehu Zeleke, Commissioner, and Negash Atnafu, Team leader, Tourism Industry Development, Tourism Commission of the Amhara Region; Mulugeta Wubshet, Head, Parks Development and Protection Authority, Amhara Region; Mengesha Zewdu, SMS 2004 manager for the SMS 2004
30 Sept. 04	Arrival of research team in Gonder. Meetings with Yirga Alemu, Manager, Gonder Centre ARARI; Solomon Abegaz, Bosena Tegegne, researchers ARARI; Girmachew Siraw, MSc candidate, Alemaya University; briefing meeting in Gonder; meeting with Abebe Alemu, Head, North Gonder Rural Development Branch Office
1 Oct. 04	Transfer to Debark, meetings with Maru Biadglegn Endalew, Deputy Head, Debark Wereda Rural Development Branch Office; Derebe Deksiyos, wildlife expert / ecologist SMNP; by car to Adi Arkay, meeting with Messie Assefa Teka, Adi Arkay Wereda Rural Development Branch Office
2 Oct. 04	Meeting with Bisrat Kebede, a/Head SMNP. Transfer to Gich camp
3 – 6 Oct. 04	Preparation of first field research phase in Gich camp involving all researchers, experts and translators
7 – 21 Oct. 04	Field Research Phase I (Debir, Walk, Gich). Arrival of Prof. Hans Hurni, Director, NCCR North-South and CDE, University of Bern; Andreas Gerrits, SDC, Bern; Amare Bantider, PhD candidate, NCCR North-South, Addis Abeba; Derese G/Wold, staff member RC Addis Abeba, NCCR North-South; Negash Atnafu, Tourism Commission, Bahr Dar
22 – 25 Oct. 04	Preparation of second field research phase in Gich camp
26 Oct. – 14 Nov. 04	Field Research Phase II (Argin, Debark, Gonder, Bahr Dar; Beyeda Wereda; Gich)
1 – 10 Nov. 04	Trekking: Dr. Eva Ludi, together with Prof. Hans Hurni, to Tellemt (Adi Arkay Wereda), Gich – Amdir – Sabra – Tiber – Gilbena – Mirka – Argin – Gich
12 Nov. 04	Arrival of Prof. Bernhard Nievergelt, University of Zurich; Berhanu Gebre, MSc student, Dublin University College
15 – 17 Nov. 04	Preparation of third field research phase in Gich camp
18 – 20 Nov. 04	Total Walya count involving 24 SMNP scouts, Mulugeta Wubshet, Head, Parks Development and Protection Authority, Amhara Region; Leykun Abune, Coordinator, Simen Mountains Integrated Development Program, Gonder; Bisrat Kebede, a/Head SMNP, SMS 2004 study team
22 Nov. 04	Departure from Gich Camp of Prof. Hans Hurni, Prof. Bernhard Nievergelt
22 Nov. – 8 Dec. 04	Field Research Phase III (Kerneja, Suksuk, villages around Silki, Abba Yared, Walya Kend, Gich)
9 Dec. 04	Return of team leader and research teams to Debark
10 Dec. 04	Meetings with Amsale Amare, Head, Information Center, Debark Wereda and Deputy Wereda Administrator; Gobezie Zelalem, Head, Rural Energy Desk and representing deputy Head of Agriculture and Rural Development Office, Debark Wereda, Bisrat Kebede a/Head SMNP
15 Dec. 04	De-briefing meeting in Gonder Official end of SMS 2004 field research phase

3 Major Findings[3]

3.1 Status and dynamics of the *Walya ibex* population and other wildlife

Observations made during the Simen Mountains Baseline Study in 1994, and during later missions to the SMNP, clearly indicated a critical situation for the *Walya ibex* population, a species endemic to Ethiopia and one of the most endangered mammals in the world (Nievergelt et al., 1998; Hurni, 1995).

Table 1: Recorded Walya in different years and at different observation points, and estimated total Walya population.

Observation Point	1994 Oct.	1996 Jan.	2004 Nov. morning	2004 Nov. evening
1. Kebero	2	0	0	0
2. Michibiny	0	3	0	0
3. Sankaber	2	6	0	0
4. Gidir Got	0	0	5*	–
5. Zemed Yellesh / Muchila Afaf	0	0	5*	–
6. Kedadit	12	2	1*	–
7. Set Derek	16	21	5*	–
8. Saha / Gwaro	2	22	17*	–
9. Imet Gogo / Meflekiyaw	27	13	22	18
10. Shayno Sefer	0	17	15	7
11. Inatye	3	10	23	15
12. Chennek	0	10	28	47
13. Bwahit N	23	6	57	54
14. Bwahit E	27	15	77	23
15. Mesarerya	72	55	62	90
16. Digowa			68	49
Total population – counted	**186**	**180**	**385**	**336**
Total population – estimated	**230**	**200–250**	**450–530**	

* Observation points not considered on 19–20 November 2004. Number of *Walya ibex* derived from several observations by Derebe Deksiyos in October and November 2004

[3] Based on author's own research and observations, oral reports by researchers at the end of field research phases I, II and III in the different villages, and back-to-office reports

Table 1 shows census data for the . The first column shows the observation point number and location, followed by the number of animals counted during the simultaneous counts of 28–29 October 1994, 19–20 January 1996, and 19–20 November 2004.

As in 1994 during the SMBS and again in 1996, during a one-month survey of the flora and fauna of the Simen Mountains under the leadership of Prof. Bernhard Nievergelt, a simultaneous wildlife count was organised on 19 November (evening) and 20 November (morning) 2004. Thirty-seven observers equipped with binoculars and telescopes were distributed along the escarpment at predefined observation points, which were also used in 1994 and 1996, and most of which had already been used in 1968 (Nievergelt et al., 1998).

Figure 4: Preparations for the wildlife count, including 24 scouts, additional experts and the SMS 2004 team on 19 and 20 November 2004 in Gich Camp (K. Bircher 2004).

The most positive finding is clearly the number of Walya observed. The Walya population has doubled since 1994. Of greater concern is spatial distribution. As in 1994 – and by contrast with 1996 – two-thirds of the Walya population was counted in areas to the east and south-east of the gazetted Park boundaries. This observation requires further analysis – including age and sex distribution of Walya ibex in the different areas, as findings from 1996 seem to suggest that the Walya population moved westwards into the core areas of the Park between 1994 and 1996. The current count again shows a much higher portion of Walya outside the core areas, in habitats, which are clearly inferior to those inside the SMNP. What has caused this movement cannot be concluded at this early stage of analysis.

Of special concern is the death of at least 1 Walya in November 2004,[4] partly as a result of infestation with internal parasites. One possible explanation is that in the Chennek-Bwahit area, where the dead animal was found – but also in the rest of the SMNP – grazing pressure from domestic animals is extremely high, especially in areas close to the escarpment. These areas, which are also important feeding grounds for the Walya,

[4] Berhanu Gebre et al. report in their "Field report on the health conditions of Walia ibex in the Simen Mountains National Park" one dead *Walya ibex* found in Chennek, and cite oral reports of four dead Walya around Sebat Minch. The preliminary explanation for the death of the animals was diarrhoea.

are now occupied by domestic animals. It can be hypothesised that Walya are not nourished enough or have to switch to less nutritious plants, i.e. they are generally weaker and thus more easily affected by internal parasites (pers. com. Bernhard Nievergelt, 13.11.04). A further indication that the Walya population is under pressure is the relatively low number of kids observed.

A positive development compared to the situation in 1994 and 1996 was recorded for the Klipspringer population. Based on regular observations by Derebe Deksiyos and observations made during the simultaneous Walya count of 19–20 November 2004, the number of Klipspringer counted increased from an observed population of 57 (1994) to an estimated population of about 100 in 2004.

Figure 5: *Walya ibex* (B. Nievergelt 1968).

The following preliminary conclusions can be made based on developments in the *Walya ibex* and Klipspringer populations: The re-establishment of the Park administration and management, the renovation of scout camps and outposts and permanent stationing of wildlife guards, as well as strict anti-poaching measures and village conferences and meetings in villages inside and around the SMNP – with the goal of raising awareness about the importance of wildlife protection – have contributed to this positive development. Of great concern, however, is the eastward movement of two-thirds of the Walya population into less suitable habitats around Bwahit-Masarerya. Further analysis of the factors that have contributed to this development is still needed. Of utmost concern is the high grazing pressure from domestic animals and the overlap of wildlife habitats with grazing lands. This situation urgently requires solutions.

3.2 Potential wildlife habitats in the greater Simen Mountains area

Wildlife inside the SMNP cannot survive if it constantly has to compete with human use of wildlife habitats (e.g. crop cultivation, livestock grazing, wood cutting, grass harvesting, etc.). Although the National Park helps to ensure that wildlife habitats continue to exist – especially for the *Walya ibex* and the Klipspringer, but also for large carnivores such as the leopard, the Ethiopian Wolf or the Serval – its limited spatial extent does not necessarily ensure the survival of the species. In the great Simen Mountains area, additional areas exist with bio-physical characteristics similar to those of the habitats inside the SMNP, but where no wildlife is currently found (see Hurni, 2005, with map). Findings from research carried out in Walk, in selected areas of Beyeda Wereda (escarpments to the east and north of the high plateau, grasslands at high altitudes around Ras Dejen) and in the vicinities of Silki, Abba Yared and Walya Kend (see map, p.17) suggest the existence of substantial areas that could serve as habitats for endangered species such as the *Walya ibex* or the Ethiopian Wolf. In some of these potential habitats the local population reported the occurrence of Walya in earlier times – usually as far back as the time of Haile Selassie. In other areas, resident land users reported the occurrence of Walya even today, although such observations could not be corroborated.

Based on interviews and discussions held with resident land users, we conclude that an extension of the National Park to these areas, along with its strict regulations and prohibited activities, would not welcomed. But definition of specific management zones under the supervision of the Kebele Administration may be an option that would not be totally rejected. On several occasions, even the (re-)introduction of *Walya ibex* in areas far outside the SMNP was discussed. Although overall scepticism remains, there seems to be a certain willingness to consider (re-)introduction, as it was also considered an asset in promoting tourism in these remote areas or in making the village eligible for compensation from the government for foregone resource use.

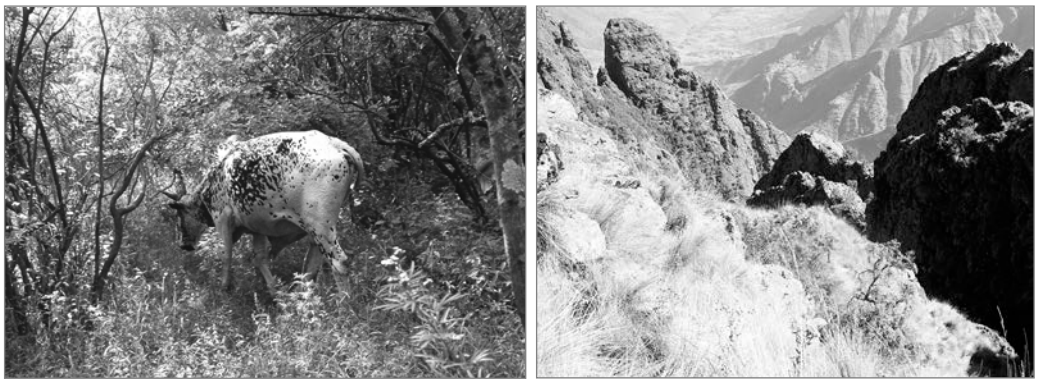

Figure 6: Potential wildlife habitats: Forest between Christan and Islam Debir used for grazing cattle; Tellemt mountain with long grass (left, J. Grünenfelder 2004, right, K. Bircher 2004).

Based on preliminary analysis of aerial photographs, maps, field surveys and discussions with resident land users, it can be concluded that several areas exist outside the SMNP which could be considered habitats for *Walya ibex* or other endangered species. Preconditions for the (re-)introduction of animals to these areas are:

- Clear and binding agreements with Kebele Associations and Weredas regarding the use and management of the areas
- Exclusion of livestock from such habitats
- Prohibition of wood cutting
- Relocation of Arkwasiye village, which blocks a corridor/potential migration route for Walya from the Chennek-Bwahit area towards Silki-Abba Yared-Walya Kend and even further towards potential habitats in the surroundings of the northern escarpment of the Beyeda Plateau and Amba Hay (see Hurni, 2005)
- Clear commitment by KA, Wereda, zonal and regional administrations and gov-ernments to an introduction of specific management zones (based on the idea of biosphere reserves as set forth by UNESCO).[5] If specific measures such as the relocation of villages are necessary, compensation schemes need to be elaborated.

3.3 Forest resources and their management

Based on analyses of data collected in 1994, a considerable difference in forest cover inside and outside the SMNP was observed: whereas forest cover inside the SMNP was 22%, it was only 6% in areas outside the Park boundaries. Although no precise figures were available at the time this report was being written, preliminary findings and visual impressions suggest little change in forest cover since 1994. Spatial distribution and the extent of forests in Walk, Argin and Sera/Kerneja – the villages studied – seem more or less unchanged.

Of greater concern – as already pointed out in the SMBS synthesis report – is the selective cutting of trees leading to a thinning out of the forest. It was stated that "*areas that were classified as forests 30 years ago have to be called bushy areas now*" (Hurni & Ludi, 2000, p. 96). This process has continued, especially in highland Erica/Hypericum forests, where fresh cutting can be easily detected, even in forests far from villages. Usually not the whole tree is cut, but only one main branch. Although the cutting of Erica inside the Park is forbidden, many households still depend on wood from natural forests, as not every household owns its own Eucalyptus trees for firewood or construction.

A clear distinction can be made between villages in the highlands and those in the lowlands regarding strategies of forest utilisation. A distinct feature of lowland agriculture is the fallowing system – fallow periods of several years are still common. Bushes and

[5] For further details on biosphere reserves see http://www.unesco.org/mab/nutshell.htm

even trees will grow, depending on the duration of fallow periods. In lowland villages, pressure on remaining forests is comparably lower than in highland areas, where no woody biomass develops during the very short fallow periods and natural forests are the only sources of firewood and construction wood besides planted Eucalyptus trees. However, in lowland villages forested areas near settlements are also used heavily in part for grazing cattle and harvesting wood.

In some lowland villages it could be observed that a clear differentiation between wealth classes and their forest use strategies exist. While richer households tend to have their own trees planted around the homestead, around fields or along footpaths, poorer households seem to depend much more on natural forests. This is an important finding specifically concerning outside interventions in the forestry sector and project or government activities promoting tree plantations – project activities clearly need to be targeted and different alternatives need to be developed for different wealth strata of the rural population.

Illegal wood cutting seems to be a much bigger problem in the highlands with less alternative wood resources than in lowlands. On the other hand, forest fires resulting from clearing fallow land are a serious problem in lowland areas.

Figure 7: Different fuelwood sources (from top left to bottom right): Eucalyptus trees in Kerneja, dung after collection, tree-heather forest in Argin, and newly established tree nursery in Argin (Photos by R. Schild 2004 and E. Ludi 1997).

In some villages it seems that the forest cover has even increased. Farmers reported that during the time of Haile Selassie most forested areas were included in rotational harvesting or even clearing systems. In the 1982 (EC) land distribution, forested areas were clearly excluded from clearing to gain additional arable land.

Although regulations exist regarding forest use, the main problem is enforcement. There seems to be no clear ownership of and commitment to enforcing existing regulations at the KA level. Forest management could be a case where decentralisation reaches its limits as long as virtually no alternatives exist. It is difficult for KA officials to punish fellow villagers for using natural forests if they don't have viable alternatives.

Especially in Gich camp, and partly also in Chennek camp, selling wood to tourists has become quite important for local residents. A bundle of approximately 10 kg is sold for 10 EB. Up to now, no system has been developed for selling wood. Individual households approach cooks and camp managers on a first come-first serve basis.

An especially difficult situation can be found in Gich: The people of Gich are – like all others as well – not allowed to harvest wood from the Erica/Hypericum highland forests. The Austrian-funded IDP established several tree nurseries in the surrounding villages outside the National Park and distributes Eucalyptus seedlings annually. As the SMNP management considered Eucalyptus trees an alien species not welcome inside the Park, it intervened at the Wereda office in Debark to prohibit distribution of seedlings to people in Gich who, if they had not planted Eucalyptus before, were now left – theoretically – with no access to wood at all. As a consequence, people continue to harvest Erica or plant Eucalyptus clandestinely.

3.4 Soil erosion and soil conservation opportunities

Soil degradation has been identified as a major problem on cultivable land inside and around the SMNP. Based on the findings of the SMBS, it was concluded that soil erosion not only leads to diminishing soil depth and physical alteration of the soil, but also to selective removal of specific nutriments, thereby causing chemical degradation and loss of soil productivity. It was estimated that soil erosion rates in some areas are 20 times higher than annual soil formation rates.

Of the 20 needs identified by the SMBS team following the 1994 field study, addressing soil degradation was considered to require immediate action, as soil and water conservation was regarded as a prerequisite for many other activities.

It must be expected that, in relation to annual soil erosion rates, no big changes have taken place since 1994. In some villages soil and water conservation investments have been initiated in the past few years and are remarkable in quantity and quality. It is astonishing, however, to observe how few soil and water conservation activities were carried out in other villages despite the far-reaching negative consequences of uncontrolled soil erosion.

Figure 8: Soil degradation in Gich (E. Ludi 2004).

Of special concern are highland areas where fallow cycles are a maximum of 1 year – far too short a period for soil regeneration. SWC structures are found only very rarely on cropland in the Jinbar valley, for example. Discussions held with farmers 10 years ago revealed that they were aware of the problem and also had some knowledge about possible solutions. When asked why they do not construct stone or earth bunds, their usual answer was that they are too poor to do it on their own, but they nevertheless intended to construct SWC structures in the future. 10 years later, the answers are the same and the number of SWC structures has increased only to a very limited degree. There is hope for change in the near future, and more SWC investments will be made. The reason is the new policy concerning land certification. Every farmer will receive a certificate on which his/her current landholding is recorded. For each plot, management considerations and requirements will be specified. If a farmer does not meet his/her obligations regarding soil conservation, (s)he may be punished – in the worst case, a farmer's land can be confiscated.

Figure 9: Soil conservation: waterway in Beyeda Jesus (left), and earth and stone bunds in Mirka, close to Bahir Amba (right) (K. Bircher 2004).

When SWC is carried out, structures are usually built using a Food-for-Work (FfW) approach. Accordingly, the quality of most SWC structures is rather low. In Beyeda and Adi Arkay Wereda, it seems that less SWC is done with the FfW approach, and

more by mass mobilisation and compulsory work. In these two Weredas it also appears that there is more information and greater effort at higher administrative levels. Hence greater emphasis is put on convincing farmers to invest in SWC, and the number and quality of conservation structures are very high.

3.5 Livestock and its management

The integration of livestock and crop cultivation is a characteristic of the farming system in the Simen Mountains. In order to meet all the different household needs, a household must have balanced herd composition, including cattle, sheep or goats, and animals for transport. However, a growing number of households have no animals at all – in Gich village, it is estimated that about 15% of the households have no animals. It was also found that the number of households and the total amount of livestock increased, but the number of animals per household decreased between 1994 and 2004.

Figure 10: Oxen are extremely important – owning a pair of oxen enables a household to perform fieldwork independently and is also a sign of wealth (left). Herding small animals is usually the task of children (J. Grünenfelder 2004, R. Schild 2004).

Because land was distributed according to family size during the land distribution, the main criterion of wealth differentiation is the number of livestock. In Wezahila, Gich, households are considered rich if they have 2 oxen, 2–4 cows, 3 horses, mules or donkeys and as many as 30 sheep. Poor households are those with at least a few sheep, while some might even have a horse or a donkey. Very poor or destitute households are those without any animals. Often, such households are female-headed or are short of manpower/labour force. Households with no animals are in a downward spiral of impoverishment. They are forced to sell their livestock one by one in order to meet other household needs. Very often these poor households have to lease out their land to other farmers in return for 50% of the yield.[6]

[6] In answer to the question of why there are poor and rich households, one explanation given in Gich was as follows: *"It is by Allah's wish and rule. If someone buys a cow and the cow gives birth, he will be rich. If the cow dies, he will be poor."*

Particularly in highland villages such as Gich, Ambaras or Argin, horses are also used for ploughing. This partly explains the considerable number of horses compared with other villages. In order to assess the wealth of a village, the distribution of horses must thus also be considered. In Wezahila, one of the four hamlets of Gich village, the distribution of oxen and equines (horses, mules, donkeys) is as follows:

Table 2: Distribution of oxen and equines in Wezahila, Gich.

Oxen		Equines	
10 households have 2 heads	(14.3%)	4 households have ≥4 heads	(5.7%)
21 households have 1 head	(30%)	6 households have 3 heads	(8.6%)
39 households have 0 heads	(55.7%)	10 households have 2 heads	(14.3%)
		18 households have 1 head	(25.7%)
		32 households have 0 heads	(45.7%)

Thus in Wezahila the total number of oxen (41) is only about half the number of equines (73). It seems that at least in Gich horses are preferable to oxen, because they are (i) much cheaper (500 EB instead of 1,000 EB), and (ii) can be used for transport-ing goods and as riding animals and can also be used for ploughing, although they are much less strong than oxen. Shifting from oxen to horses may be the result of land scarcity – as the amount of cropland per household barely justifies a pair of oxen per household – and of seeking opportunities for income, because renting pack and riding animals to tourists is an interesting income source for many households.

Of the 272 households in Gich village, 200 have either a horse or a mule to rent. In order to share the benefits from renting animals equally, 4 groups have been formed to rent out animals in turn, and 1 representative of each group elected to oversee the fair distribution of job opportunities. In theory, a list exists with all horse/mule owners who should get a chance to rent their animals in turn.

Especially in highland villages, where crop production reaches its limits because of altitude and land degradation, relying more on livestock to secure household income is a strategy of growing importance. Although many people recognise that the grazing land on the Gich plateau is heavily overgrazed – 68% of the Gich plateau has been described as heavily grazed to overgrazed (Nievergelt et al., 1998, p. 31) – they nevertheless aspire to increase their herd size. Grazing pressure is enormous on the Gich plateau. During a count on one evening, including all the animals back to Gich from the Saha-Imet Gogo area, a total of 1,200 animals – cattle, equines, sheep – was counted, equalling roughly 600 Tropical Livestock Units (TLU) and representing about 60% of the total livestock reported for Gich. The grasslands – not including forests, which are also used for grazing, or the cropland – stretching from Gidr Got to Imet Gogo constitute about 9 km2. If the total number of livestock is estimated at 1,000 TLU, then the number of TLU per ha is more the 1. For highland areas, the maximum stocking density recommended is 0.5 TLU (EHRS, 1986). Overstocking on the Gich plateau is thus a very serious problem and is also clearly visible in the severe degradation of large parts of this grassland area and in changes in the composition of grass species. This heavy pressure on grazing land also has very negative impacts on wildlife habitats (cf. 3.1).

3.6 The role of communication in sustainable rural development

Access to information is one important aspect in the empowerment of rural inhabitants. Access to information in a rural society such as that in Simen implies different forms of communication. One of the most important ways to spread information and discuss its contents is meetings, involving representatives of all households in a village. Usually, informal meetings are held on Sundays after church ceremonies in Christian areas or on Fridays after the main Friday Prayer in Muslim areas. Formal meetings in the village will usually include all village inhabitants, both men and women above 18 years, and one representative from the elected cabinet, whereas meetings at KA level often consist of elected village representatives who discuss government documents and decisions, elaborate comments at higher administrative levels, and later organise village meetings to communicate contents and decisions back to the village.

Figure 11: Meeting in Sabra (K. Bircher 2004).

A very new development is communication channels based on IT technology. Two systems are currently under development: the School-Net and the Wereda-Net. The School-Net is a system developed in South Africa. It is installed in high schools (in Debark, for example, for grades 9 and 10) throughout the Amhara Region. The system is composed of a flat-screen TV and a receiver to receive different teaching programs. In areas not connected to the electric system, a generator produces the necessary energy. The second IT-based system is the Wereda-Net. This system is composed of two elements – a wide-area network connecting the Weredas to the Regional level, and a local-area network connecting the different offices at the Wereda level. Once established, it should be available for video conferences, involving representatives of Were-das and the regional administration, making some of today's face-to-face meetings redundant. The Wereda-Net should also provide access to data in different bureaux of the administration or in research institutions, giving the Wereda offices and administration better access to information necessary for the execution of their tasks.

One area where several stakeholders have identified a need for more communication and closer collaboration is among different Wereda offices. It was acknowledged that

as most of the tasks in the field of rural development are multi-sectoral, much closer collaboration among different offices would be needed to properly address problems identified and develop appropriate solutions. In the field of research and implementation in the agricultural sector as well, closer collaboration and better communication were mentioned as necessities by several stakeholders. It was stated that a great pool of traditional knowledge existed which needs to be included in the extension system on the one hand and in the agricultural research agenda on the other hand.

Development agents (DA) perform a vital function and are an extremely important link between KAs and higher administrative levels. They are in day-to-day contact with the real-life situation of farmers. They should be able to address farmers' problems and communicate innovations or research results. A major problem, however, is that often DAs are inexperienced, as they have just left college. More support from Wereda offices would definitely be welcomed.

3.7 Political organisation and its influence on resource management

One immediate result of the decentralisation process was that Regional authorities took over the responsibility for the Simen Mountains National Park. In addition to re-establishment of the Park management, a new organisation – the Parks Development and Protection Authority (PaDPA) – was officially established in 2004 as a follow-up structure to the Park steering committee, which was established in 2000 after a high-level fact finding mission by the Amhara Government to the SMNP and its surrounding villages. Besides supervision and control of the local management of the SMNP in Debark, PaDPA is also responsible for the formulation of policy and management guidelines and plans, and for carrying out feasibility studies on establishment of additional parks within Amhara Region. PaDPA is controlled by a board consisting of representatives of various bureaux at regional level (e.g. Bureau of People's Participation and Mobilization Affairs, Bureau of Youth, Culture and Sport (BoYCS), the Tourism Commission, the Bureau of Agriculture and Rural Development (BoARD), the Bureau of Information (BoI), the Environmental Protection, Land Administration and Use Authority (EPLAUA)), and the manager of the PaDPA himself. This set-up allows close coordination of relevant activities by the various bureaux involved in the Simen Mountains.

Figure 12: Park entrance, indicating the importance of the SMNP as a World Heritage Site (P. Sieber 2001).

One major activity carried out in 2003/04 was the re-demarcation of the Park boundary. This was done through negotiations with concerned villages. Though coordinates of the boundary were assessed using GPS, the legal steps necessary in the process of this boundary re-demarcation were only launched recently. Until now the legal document describing the boundaries of the SMNP was the Negarit Gazeta, Order No. 59 of 1969, in which the SMNP is officially established and the locations of the beacons are described. The new boundary still awaits such a legislation process. Nevertheless, the new boundaries are already used in the day-to-day management of the Park.

Following the Ethiopian constitution, which states *that "[...] the ownership of rural and urban land, as well as of all natural resources, is exclusively vested in the state and in the people of Ethiopia [...] and [...] land is common property [...] and shall not subject to sale [...]"*, the federal states were given responsibility over land at regional level, implying that regional governments can enact laws relating to the nature of land rights and their transferability. In Amhara Region, Proclamation 46/2000 concerns rural land administration and use. For the first time farmers will receive a written certificate in which their landholdings are recorded. Although there are certain regulations and restrictions, the certificate also specifies rights, which are of great importance. Land may be transferred to anyone, not only children. Some people, however, are excluded from the right to obtain land – people with salaries such as government employees, or li-censed traders. Land may be rented out to anyone. If the agreement is short-term (1–2 years), it must be registered with a committee responsible for land administration at the Sub-Kebele level (often corresponding to the village territory). If the arrangement covers a duration of three years or more, the contract must be made under the supervision of the Wereda Desk of the Office of Agriculture and Rural Development. The provision that anyone can rent land implies that farmers are now allowed to rent land in different KAs. Depending on the agro-ecological situation, this allows farmers to have land in different agro-ecological zones and thus to spread risk and improve the diversity of their farming system. A system is under development which specifies how complaints regarding land management will be handled: The lowest level is a committee composed of 7 members at the Sub-Kebele level. Of these 7 members, 2 are elected to represent the Sub-Kebele (village) in the KA committee. The third step is the land and land use desk at the Office of Agriculture and Rural Development.

A relatively new organisation at regional level is the Environmental Protection, Land Administration and Use Authority (EPLAUA) under the BoARD. One of its main tasks at the moment is the organisation of land certification, but at least as important is creation of awareness among other stakeholders to build respect for the land certificate as a legal document. This is important if, for example, a farmer wants to obtain credit. It should be possible to use land as collateral in the future.

3.8 Tourism

The development of the tourism sector since 1994 has been impressive. The number of visitors has increased from 58 in 1991/92 to more than 3,700 in 2003/04. Accordingly, revenues to the state and local people have increased considerably, from around 10,000 EB to almost 1,000000 EB per year (SMNP Office, Debark).

Figure 13: The development of tourism in Gich Camp between 1994 and 2004 (E. Ludi 1994, 2004).

According to interviews with tourists in Gich camp, the main reason to visit the SMNP is its spectacular landscape and natural beauty. Few tourists come specifically for the wildlife. For most, however, seeing wild animals was an additional plus, making the visit to the Park even more worthwhile.

Two different types of tourists can be distinguished: Independent travellers, and organised groups. Independent travellers usually organise their trip either in Gonder or in Debark. Only rarely do they bring all their camping equipment along; more often they rent equipment such as tents in Debark or Gonder. In Gonder, a few agencies offer full-package trips to the SMNP, including transport in a 4WD vehicle from Gonder via Debark to Sankaber or Chennek and back, the necessary material, a cook with all the equipment and food, a guide, the scout, and the Park entrance fee. Trips organised in Debark are somewhat simpler, but can also include most of the above-mentioned services. Organised groups are larger groups of 9 to 20 people, who usually buy a travel arrangement in their home country. Foreign tour organisers then entrust the organisation of trips to the SMNP to an Ethiopian travel agency specialised in trekking tours of this type. Packages usually include guides, pack and riding animals, material, a cook, kitchen supplies and all the necessary food.

Most tourists seem to be more or less content with the organisation of trips to the SMNP. Suggestions for improvement include the following:

- A central office in Gonder, where it is possible to purchase trips of varying dura-tion and necessary services, would be welcomed.
- Tour operators offering their services must be licensed by the government – individuals offering their services in hotels or on the street were considered rather a nuisance.
- Quality standards for rented material and for services would be greatly welcomed.

Other issues of concern to tourists include:

- The obligation to pay a scout – it was considered preferable to have someone responsible for security at the camp sites.
- Youngsters, especially in Debark, offering their services at overpriced rates and very often cheating as well.
- The very poor quality of material rented in Debark.
- Insufficient facilities such as toilets, huts and houses for overnight stays and for cooking.
- Unqualified guides with insufficient knowledge of English and of the area.
- Exaggerated prices for guides, cooks, scouts, or rented material compared to overall price levels in the country.

Despite these criticisms, most tourists asked were very happy to have visited the SMNP. They would highly recommend a visit to the Park to their friends. Some, how-ever, were afraid that if the number of tourists increased, the solitude and peaceful environment would be destroyed. The Park would thus lose one of its main attractions and negative environmental and social impacts would be felt.

Negative environmental impacts – including disturbance of wildlife, trampling, sanitation, or rubbish left behind – are a great concern. The rubbish collection system is completely inefficient – rubbish should be carried back to Debark and destroyed adequately rather than dumped in a pit where animals and children rummage through it. In all camps the availability of toilets, and especially their cleanliness, was considered insufficient for sometimes very high numbers of visitors. And lastly, the great number of pack and riding animals on the already highly overgrazed pastures around the camps is a great concern. Special solutions for overnight quartering of pack animals need to be developed, including proper feeding.

3.9 Park management

Many very positive developments have occurred since 1994 regarding the management of the SMNP. Thanks to assistance from Austrian Development Cooperation, the camps in Sankaber, Gich, Chennek, Dirni, Muchila and Adarmaz have been renovated and upgraded, and one additional camp established in Sebat Minch, so that today a considerable number of scouts is again staying in these camps to patrol the area and assure that rules are respected by resident land users and tourists, guides, and cooks alike. The number of scouts has been considerably increased to 37, and they have received special training. The Park headquarters in Debark have been rebuilt and are now housed in an impressive building that also offers information and services to tourists.

As a result of the high-level government mission to the Park area in 2000, it was decided to establish a steering committee for the SMNP, as there was an urgent need for coordination among the many national and international stakeholders with different activities related to conservation and development actively involved in the Park area. The committee was established but was never fully functional owing to reorganisation of the regional administrative structure. In 2003 a proclamation was issued by the Amhara Government setting down principles for the Parks Development and Protection Authority (PaDPA). In May 2004 the authority was established in Bahr Dar. PaDPA has a board in which all bureaux are involved, ensuring that PaDPA receives the necessary assistance to fulfil its tasks. One measure taken in November 2004 was the employment of additional experts for the SMNP office in Debark. The senior staff will be increased from 2 – 1 expert and 1 acting head – to 6 experts, including a new head.

Already suggested in the Management Plan of 1986 and taken up in the Synthesis of the Simen Mountains Baseline Study of 1994, zonation of the National Park and its surrounding areas has been proposed. The idea of zoning the Park area was also taken up in the Management Plan prepared with the support of Austrian Development Cooperation. Although this Management Plan has so far not yet been officially endorsed, the need for zonation, including definition of rules and regulations as well as use allowed for the different zones, is urgent. The proposal for zonation, whereby full protection of Walya habitats must be guaranteed by excluding any human or livestock interference, has gained importance in light of parasite infestation leading to the death of an ibex (see Section 3.1). It must be borne in mind, however, that any zonation, including specific restrictions on human and livestock use of these areas, is only as good as its control and enforcement. As it will be difficult to enforce specific restrictions in a large area, a step-wise approach should be chosen whereby selected areas of great importance are excluded first from any human or livestock use, followed by other, less important areas. Discussions with concerned KAs will be required, whereby the need for these restrictions has to be explained carefully. Secondly, the SMNP management, supported by the PaDPA and other government bodies, and with financial support from international donor agencies, must devise compensation mechanisms or support schemes for local communities affected by such restrictions on use. Furthermore, voluntary resettlement should be promoted for specifically affected villages.

Based on the Baseline Study of 1994, a proposal for zonation of the SMNP and the surrounding area, including a re-assessment of existing boundaries, was made. This proposal was discussed at length during the high-level mission of the Amhara Government to the SMNP in March, 2000. Based on these discussions, it was decided to negotiate the Park boundaries with the villages with the goal of (i) including specific areas, i.e. potential habitats for the *Walya ibex*, the Ethiopian Wolf and other species that need special protection, and (ii) excluding other areas from the National Park, namely agricultural land in the north of the escarpment. Discussions with local communities were held and the new boundary was demarcated in 2003, with the support of the Austrian-funded Integrated Development Project (IDP). Currently, work is underway to produce a map showing the new boundary, based on a number of GPS points, which will then also be instrumental in legalisation of the new Park boundary.

Although the Park management is also responsible for guiding the formulation of a Tourism Master Plan for the SMNP, it should not involve itself in tourism-related tasks such as providing guides or camping material to tourists. Close involvement of the tour-ism commission would be required here in order to relieve the Park administration of such additional tasks.

4 Synthesis – Changes and Trends

Some preliminary statements will be made regarding changes in the following 6 aspects over the past 10 years: (1) wildlife, (2) natural resources, (3) land use, (4) human and livestock populations, (5) institutions, and (6) tourism. More detailed analyses will follow in theses being written by the MA/MSc candidates involved and in the synthesis report based on these detailed analyses.

4.1 Wildlife

The number of *Walya ibex* counted and estimated in 1994, 1996 and 2004 is shown in Section 3.1, Table 1. It is very encouraging to see that the number of Walya has doubled in the past 10 years. In other words, the Walya population grew by about 7% annually. Such a high growth rate can be expected in populations recovering from serious stress under relatively undisturbed conditions. It seems that conditions were favourable in the last 10 years – i.e. habitats were less disturbed than before, poaching was sufficiently controlled, and food availability and habitat size were not limiting factors. Considering the increase in the human and livestock populations, leading to considerable pressure on Walya habitats, such high growth rates for the Walya population cannot be expected in future, unless drastic measures are taken to reduce pressure on habitats or to (re-)introduce Walya in habitats outside the current Park boundaries. Similar conclusions can be drawn regarding the Klipspringer population, which seems to have recovered to a certain degree, but for which special emphasis on habitat protection will be needed for the future. No conclusive statements can be made about the Ethiopian Wolf population, which was not systematically observed.

With an estimated population of about 500 Walya, long-term survival of the species does not seem to be a question at the moment. However, as the entire population exists in one area only, the spread of disease could still have a devastating impact. The outbreak of disease is more likely as (i) Walya habitats are also intensively used by domestic animals, including goats, which could easily transmit diseases affecting Walya, and (ii) the general nutritional status of Walya appeared to be poor, as internal and external parasite infestation suggests. Immediate action is thus required: An initial measure could be the vaccination of domestic animals against easily transmitted diseases. This, however, would only combat symptoms. Longer-term measures such as the separation of Walya habitats and grazing areas for domestic animals are indispensable.

4.2 Natural resources

It appears that the spatial distribution and area of forests has not changed since 1994. What has certainly continued unchanged, however, is overuse, especially of highland Erica/Hypericum forests. Despite the ban imposed by the National Park on felling Erica trees, illegal cutting still occurs – despite severe punishment, including imprisonment. Especially for highland villages outside the SMNP, visual impressions suggest that the

number of Eucalyptus trees has increased significantly and will continue to increase, thanks to recently established nurseries. Forests in the lowlands are also overused, although probably less than those in the highlands, as wood can be collected from fallow land. If, however, fallow periods decrease as a consequence of population increase, it must be expected that these lowland forests will also come under growing pressure.

Of great concern is pressure on grasslands between 3,600 and 3,800 m (timberline, above the climatic limit for barley cultivation) and at about 4,200 m. This grassland, composed of different types of short- and long-grass steppe, is intensely used as grazing area. A survey of the Gich plateau conducted in 1996 (Burnand, in: Nievergelt et al., 1998, p. 24 ff.) concludes that totally eroded and heavily overgrazed areas doubled between 1973 and 1996. Observations made by Prof. Bernhard Nievergelt in November 2004 suggest that the area of heavy grazing or serious overgrazing has again increased since 1996. Instead of a mix of short and long grass, only short grass types still exist over large areas – giving an impression similar to a golf course with a well-tended English lawn. Only in the most distant areas (Set Derek, Imet Gogo, Inatye) can a less disturbed vegetation pattern still be found – although these areas are also used for grazing. If this grassland area is to serve again in future as a habitat for herbivores such as Walya or Klipspringer, or carnivores that depend on grass rats, such as the Ethiopian Wolf, then far-reaching measures – excluding domestic animals from considerable areas – must be considered.

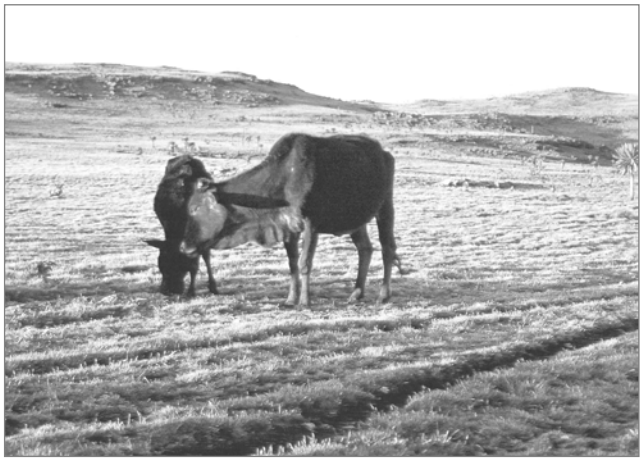

Figure 14: Grazing cattle on the Gich Plateau. This area should be covered by long-grass steppe, but heavy grazing pressure has reduced it to short-grass steppe (J. Grünenfelder 2004).

Soil erosion rates were estimated by the SMBS team to be around 85 t/ha*year in highland villages and 65 t/ha*year in lowland villages. It must be assumed that no major change has taken place during the last ten years. This would mean that in the highlands soil depth was reduced over the past 10 years by almost 8 cm and in the lowlands by 5 cm. Considering low soil formation rates of 3–12 t/ha * year (Hurni, 1983) depending on altitude, the destructive process of soil erosion becomes even more apparent. Although the use of manure and compost is promoted and more artificial fertiliser is available than 10 years ago, soil productivity is still declining, as soil erosion continues almost uncontrolled, nutrient mining takes place unchecked, manure is collected as a substitute for fuelwood, and fallow periods are shortened. It is alarming to see how

little investment in soil conservation and soil productivity improvement has been made in some areas, despite available technologies and general awareness of the seriousness of the problem within parts of the administration. It can only be hoped that the new land proclamation, including the obligation to invest in SWC under penalty of land confiscation, will be enough of an incentive to boost efforts to reduce soil erosion and fertility declines in future. On the other hand, in some villages considerable efforts have been made with regard to initiating SWC. Besides offering various technologies, such as different physical and biological measures to farmers, the approach currently used for SWC implementation is no longer Food-for-Work but awareness creation, mass mobilisation, or activities within the Employment Generation Scheme (EGS). Furthermore, more flexibility is envisaged by considering the small-scale, site-specific needs of the land and the land users before recommending SWC measures to be implemented.

Figure 15: Foreground: SWC terraces close to Mentaber. Background: natural "terraces" on a steep slope in Maje village (E. Ludi 2004).

Whether or not water availability and runoff has changed in the last 10 years is difficult to assess. With further decrease in soil depth, retention capacity is certainly diminished, leading to reduced water infiltration and higher runoff. More frequent harvest failures, as a result of less frequent or temporally unfavourable distribution of rainfall and less soil moisture, could support this hypothesis.

4.3 Land use

It is likely that only very little new land was claimed between 1996 and 2004. The opposite is to be expected – land had to be abandoned because it had become totally de-graded. As already observed in 1994, fallow periods are shortened to compensate for the unfavourable human-land ratio. Intensified crop cultivation with no inputs or technological adaptations leads to decreasing soil fertility, increasing soil erosion, increasing occurrence of pests and diseases, increasing weed infestation, and, in lowland areas, decreasing wood availability. Unfortunately, it must be expected that this negative trend will continue in the near future as well, as long as there are no alternatives to farming available for the local population and as long as no additional improved and adapted land use technologies that could help mitigate the negative impacts are introduced.

4.4 Human population and livestock

The growth rate of the human population for the period 1964–1994 has been estimated at 1.5–2% per year. For the village of Gich, where recent data were available, the annual growth rate between 1994 and 2004 was calculated at 2%, showing no change by comparison with the rate calculated for the previous period, 1975–1994. An annual growth rate of 2% results in a doubling of the population about every 35 years. As there are very few alternatives to farming – even the tourism sector offers few additional sources of income, as it is not large or stable enough to be fully reliable – it must be expected that the majority of the population will depend on the agricultural sector, thus further aggravating land degradation and pressure on remaining wildlife habitats. Socio-economic problems related to such great human pressure on available natural resources are visible in the extremely high dependency of several villages on outside assistance. Taking Argin as an example, in 2002/03 80 kg of maize and wheat per household were distributed in a food-for-work campaign. This is about the amount a family of 6 would need in 1.5 months. In Gich, food aid is needed even for 5–6 months. Although the last few years were characterised by unfavourable climatic conditions according to farmers' observations, such dependency on outside assistance is a very dramatic demonstration of an unsustainable course of development.

As the number of households increases, total livestock numbers are likely to increase as well, although the number of animals per household is likely to decrease. The number of oxen in Gich, for example, has decreased slightly from 140 to 135, although the number of households has increased from 222 to 272, reducing the average number of oxen per household from 0.63 to 0.49. As crop yields are no longer sufficient to sustain a household for one year, more animals have to be sold to meet immediate household needs. Farmers reported that deficits have become so great that they have had to sell more and more heifers and steers recently to raise sufficient cash to meet household demands.

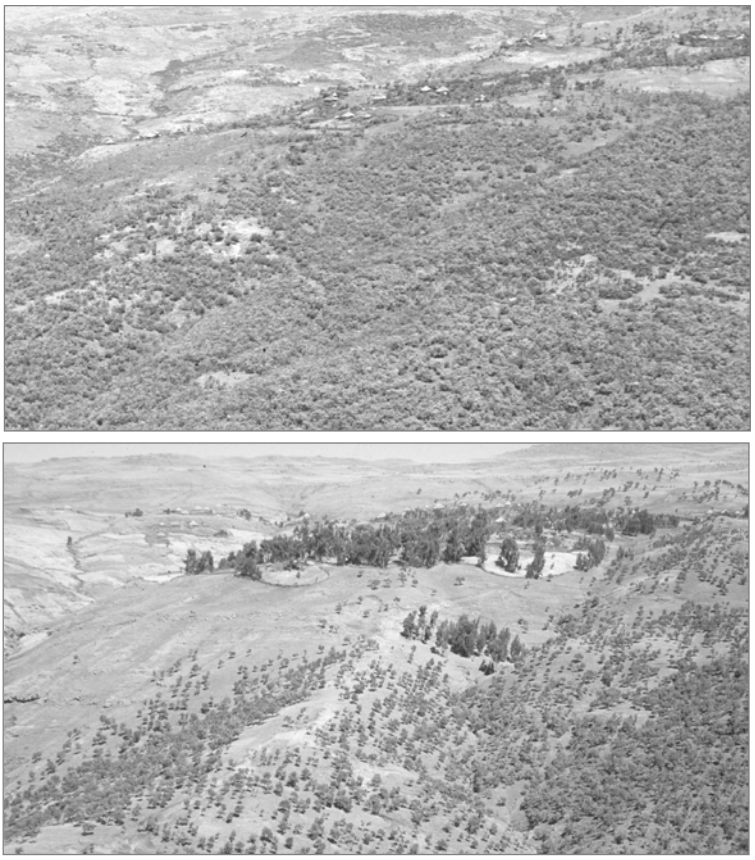

Figure 16: Wezahila hamlet, belonging to Gich, in 1974 (top) and 2004 (bottom). In 1975, Stähli counted 31 houses (Stähli, 1978). By 2004 the number of households had increased to 72. Annual population growth in Wezahila is estimated at 2.9%. One visible result is heavy pressure on remaining natural Erica forest, but also expanding Eucalyptus plantations (H. Hurni 1974, E. Ludi 2004).

4.5 Institutions

The biggest institutional change in the area is clearly the re-establishment of the Park management, including the posting of scouts in the decentralised camps and the reinforced control system. Even more important for some villages is the re-demarcation of the Park boundary. For many villages the situation has become easier, as their cropland now lies outside the Park boundaries and forest areas, where wood cutting or collecting dead branches is not allowed. There are, however, several villages where the situation is still not clear – notably Debir (Muslim part) and Gich. In Debir, the Park boundaries are not well known by many inhabitants and it is unclear whether forested areas with severe use restrictions are inside or outside the Park boundaries. As Gich is located totally inside the Park, no changes have occurred up to now regarding the status of the village. As representatives of the villages concerned were involved in the Park boundary negotiation process as well, it can be expected that the boundaries and the related restrictions concerning the use of certain areas will be better respected in future. Certain regulations concerning the use of resources are easier to enforce than others. Cases have been reported where people were fined or even sentenced to prison for ploughing land inside the Park boundaries or cutting Erica trees. The main challenge in future will

be to restrict livestock grazing – not only on highland meadows and in Erica forests, but also in forests along the escarpment.

A new proclamation, The Rural Land Administration and Use Proclamation (No 46/2000), was issued by the Amhara Government in 1992 EC (1999/2000). Based on this proclamation, farmers will receive certificates on which their landholdings are registered. Special provisions stipulate who is eligible to receive land and who is not. In the first phase, land size is estimated and classified by elected representatives from the villages. Only later are the plots properly measured and mapped. An important aspect of the proclamation is its regulations regarding management practices, which are written down for each plot and recorded in the certificate booklet. Theoretically, land can be confiscated if the owner does not comply with the management regulations specified. If land is used for government purposes (e.g. infrastructure development) or for NGOs (e.g. nursery establishment), it can be taken away from farmers but compensation must be paid – either in the form of land, or, if no land reserves are available within the KA, in the form of money. This provision is especially important for the Park area. At the time this report was written, it was not yet clear if and how the licensing process will continue for land inside the Park. Licensing has been halted until the government at regional level decides what will happen to the people currently living inside the SMNP. According to some informants, the PaDPA will receive a certificate for the SMNP territory and will be evaluated according to specified standards. If management is not carried out according to these standards, the PaDPA can lose its management authority. The provision that land can be confiscated if compensation is paid when it is to be used by government agencies means that farmers residing inside the SMNP could theoretically be evicted now on these grounds and compensated for their loss. Whether this provision will be used in future, however, remains to be seen.

4.6 Tourism

With the exception of 1998/99 and 1999/2000 (Ethio-Eritrean war), the number of tourists increased each year. In 1991/92, there were less than 100 tourists registered, whereas in 2003/04 almost 4,000 people visited the SMNP. The increase in the number of tourists – and consequently revenues generated – is impressive. Over the years services provided to tourists have been improved and the number of people employed in the tourism sector has increased as well. Currently, there are about 17 licensed guides in Debark, 16 cooks, and 14 people registered to rent out camping material. Revenues to local people – guides, cooks, mule-owners, etc. – are estimated at more than 500,000 EB for 2003/04. Infrastructure development, however, can barely keep pace with this growth. Hotel accommodations in Debark are still very limited and of low quality – a high-standard lodge is currently under construction and will be finished in 2 years. Overnight facilities inside the Park only exist in Sankaber – otherwise tourists have to spend the night in tents. Huts were recently constructed in the three main camps of Sankaber, Gich and Chennek. Here, cooks prepare food, tourists seek shelter from the cold evening winds, and accompanying staff use them to spend the night. During October and November 2004, the number of tourists spending the night in Gich Camp was

recorded, and found to vary between 0 and 68. With 68 tourists – not counting scouts, guides, cooks, etc. – the camping ground of Gich Camp becomes extremely crowded and facilities such as shelter or toilets are far from sufficient. Also water consumption is extremely high – whether there will be enough water during the dry season remains to be seen. Rubbish is an unsolved problem. Currently it is dumped in a pit – if the SMS team hadn't burned it regularly, the pit would be oversflowing by now and most of the rubbish would have been scattered all over the place by ravens, jackals, goats and children. Although pack animals, riding horses and their keepers must spend the night in Gich, the additional pressure on the already overgrazed pastures is a serious problem that needs to be addressed by the SMNP management.

Since 2000, tourist numbers have steadily increased, although the annual growth rate has been reduced from around 40% (00/01 to 01/02) to 8% from 2002/03 to 2003/04. With around 4,000 visitors a year, the limit seems to have been reached – even more so as a clear seasonality of tourist flows can be observed: between May and August, only about 10% of all tourists were recorded in 2003/04, whereas 2/3 of all tourists recorded in that year visited the Park between September and the end of January, i.e. during a period of 5 months. Many of the interviewed tourists would not be totally opposed to a limitation on visitors to the Park as long as there are only 3 camping grounds with very limited facilities available. It was also mentioned that from the point of view of revenue it would be positive to have more tourists, but more tourists would definitively reduce the quietness and peacefulness of the area and increase negative social and ecological impacts. A tourism master plan for Amhara Region first, followed by one for the SMNP, needs to be developed. This would help to guide the development of tourism in order to bring maximum benefit at minimum ecological and socio-cultural cost.

5 Recommendations

As already noted based on findings from the Simen Mountains Baseline Study (Hurni & Ludi, 2000), it is not modern development that threatens the area; lack of development is the critical issue. Although enormous efforts have been initiated by the regional and local governments, partly supported by international and bilateral donor agencies, considerable efforts are still needed to reconcile conservation with sustainable development. The human population has increased at an annual rate of 2% for the last 10 years, and pressure on natural resources has not diminished – on the contrary. Therefore, the main development issues already cited 10 years ago are still valid today. In particular, solutions for some of the villages inside the National Park must still be found.

Prof. Hans Hurni in his report on one-month's fieldwork and an expedition in the Simen Mountains in October-November 2004, covers specific issues relating to the current status and future options for development in remote areas of the Simen Moun-tains, and examines possible measures for wider distribution of the *Walya ibex* popula-tion in its former range in Simen (Hurni, 2005). He formulated specific recommenda-tions relating to (a) access (Debark – Sankaber road section, alternative Mekane Birhan road, access road to Beyeda Wereda, road access to Tellemt, and local trail improve-ments), (b) soil and water conservation, (c) water development, (d) natural resource management and wildlife conservation, and (e) education and health development.

In this following chapter, only general recommendations concerning the three main issues of Park management and development, tourism management and development, and rural development in general will be presented. Detailed recommendations covering the strategic issues studied such as livestock, forest management and the role of communications in sustainable development, will follow in a synthesis report.

5.1 Park management and development

Finalisation and endorsement of the SMNP management plan

- The draft management plan, submitted to the Regional Government in 2000, needs a thorough revision prior to endorsement. New realities such as the new park boundaries, the opening of the road to Mekane Birhan, the new proclamation regarding rural lands, and the GIS, maps and findings from the Simen Mountains Baseline Study (cf. Hurni & Ludi, 2000) should be taken into ac-count.
- The management plan (MP) should follow the principle of "Park with People", although before the final version of the MP is elaborated, a consensus has to be reached about what exactly this means – How many people can still reside within the National Park? Where? In which occupations should they be involved? etc.

- Definition of zones: Different zones (e.g. prime protection zone, recovery zone, bio-diversity protection zone, tourism zones, land use zones, etc.), their permissible use, and specific management objectives have to be formulated and agreed upon. Of particular importance is consideration of the development zone around the SMNP, as this area is still considered to offer opportunities for accommodating people who will eventually resettle from specific areas inside the SMNP.
- Different management programmes relating to project planning, resource management, research and education, etc. and relating to the different zones must be formulated.
- Different activities, in relation to available funds, seriousness of the problem to be addressed, and available staff, need to be phased.
- Rre-demarcation of the Park boundaries, including finalisation of agreements with concerned villages, setting of beacons, production of a map showing the new boundary, etc., must be undertaken.
- Information campaigns must be initiated in villages inside and surrounding the Park with respect to new boundaries, zoning, use restrictions, etc., and awareness creation.

Coordination with ongoing activities

- As the fate of the SMNP also depends on what happens in the surrounding areas, coordination with government and NGO activities is necessary. The PaDPA and its steering committee, composed of representatives of the different bureaux, has a coordination mandate and must further ensure coordination of protection and development activities inside and around the SMNP. The coordination unit in Gonder, established primarily to coordinate the activities of Austrian Development Cooperation, could be entrusted with this task at zonal level and strengthened financially and in terms of manpower to ensure day-to-day coordination of development and protection activities.
- Potential wildlife habitats, which often overlap with specific protection zones or reserve land and wildlife corridors, need to be delimited. Management options need to be defined, and control and sanction mechanisms established for such zones at KA level. Subject matter specialists within the Park administration should be involved in the definition of protection zones; however, day-to-day management should for the time being remain with the KA or the sub-Kebele. If a KA sets aside specific potential habitats, long-term compensation schemes and short-term alternatives must be developed.
- Parallel to the land certification process, and depending on the outcomes of discussions and agreements relating to the “Park and People” concept, a clear strategy must be formulated regarding land certification inside the

Park boundaries. The land administration regulation would be a good opportunity to decrease the number of residents inside the SMNP and properly compensate them for their loss, so that they can either settle somewhere else or start a business other than farming. The villages concerned are: Gich, Adarmaz, Muchila, Minmana (Flasha), Debir, Ambaras, and Argin.

- Addressing urgent problems
- As the wildlife habitats and grazing lands of domestic animals overlap in many areas, vaccination of domestic animals against easily transmittable diseases should be considered as an immediate action.
- Separating the wildlife habitats and grazing areas of domestic animals is an in-dispensable measure for retaining a healthy population of *Walya ibex* and Klipspringer and hopefully increasing the Ethiopian Wolf population. Accompanying activities must include: alternative fodder sources produced locally, reduction of total animal numbers, etc.
- As long as people still reside inside the SMNP, they must have access to fuel-wood. Establishing household plantations, even with alien species, should be al-lowed for the time being.

Use of revenues

- Current entrance fees are rather low and could be raised to address several issues such as: (i) Increased salaries for wildlife guards to make them less dependent on per diems from tourists or other additional income sources, (ii) salaries for forest and wildlife guards in KAs outside the SMNP, for their extremely important work, (iii) allowances to scouts who send their children to school in Debark (5th to 8th grade), (iv) establishing a fund to sponsor children of scouts who go on for further education (Grade 9 and above), (v) establishing a special “Village Development Fund”, sponsored by an additional fee on top of the normal entrance fee, to fund investments in the villages inside and around the SMNP according to priorities set by the villages concerned (e.g. spring development, etc.), (vi) upgrading tourist facilities in the camps, etc.

5.2 Tourism development

Separate tourism management from park management

- Establish an office of the tourism commission in Debark and Gonder to provide tourists with necessary information where they can also book trekking arrangements offered by private tour operators. In Debark, such an office should be located in the Park Office headquarters to ease overall coordination.
- Management of tourists

- Provide tourists with better information regarding rules and regulations, and in-form them about permissible and prohibited activities.
- Provide better information regarding possible trekking routes; develop alternative routes both within and outside the National Park.
- Develop more camp sites (e.g. in Gich Camp, camping could easily be distributed among 3 different sites) and more camps, including necessary infrastructure.
- Limit the number of tourists staying overnight at the different campsites to about 30, and make a special effort to coordinate larger groups.

Improvement of facilities in Debark and inside the SMNP

- Improve the lodging situation in Debark
- Offer better options for buying food in Debark
- Improve the material (e.g. tents, sleeping bags, kitchen supplies, etc.) rented in Debark
- Improve the system of animal rental (e.g. quality and health status of animals, knowledge of drovers, etc.)
- Improve facilities at the camp sites: Water, places to cook, places for tourists to stay in the evening/at night, toilets, showers, etc.
- Improve availability of firewood at camp sites, e.g. store wood to be bought by tourists
- Construct kraal for mules and horses near the camp sites, provide water and fodder (to be bought by animal owners); provide shelter for the mule drivers, including sanitation infrastructure
- Develop a waste management system, e.g. a deposit to be paid in the tourism office. Cooks or individual tourists who fail to bring back their rubbish will lose the deposit.
- Employ a local resident as campsite manager who is responsible for cleanliness, respecting rules and regulations, security, etc.

Figure 17: Farmers from Argin benefit from tourists staying overnight in Chennek Camp. This woman helps a cook by cleaning lentil. Other possibilities include baking injera or bread (R. Schild 2004).

Service provision

- Provide better training for guides in English, subject matter, interacting with tourists and local residents, providing services to tourists, etc.
- Allow tourists to select guides according to their needs. Differentiate guides according to their experience and quality (e.g. trainees – year 1 = 30 EB/day; guides – year 2–3 = 50 EB/day; experienced guides – year 4 and above = 75 EB/day)
- Abolish the obligation (but maintain the possibility) that 1 scout must accompany each tourist group. Station 1–2 scouts at camp sites to ensure security.
- Involve local population more in the tourism sector, e.g. whenever possible purchase food from local villages, establish kiosks selling food items (e.g. bread, eggs, chicken, korefe, tej, araki, soft drinks, etc.), local handicrafts (e.g. baskets, shemma, scarfs, etc.) or preparing simple menus.

5.3 Rural development

Basically, the development needs identified by the SMBS in 1994 in a transdisciplinary manner, presenting shared knowledge and perceptions, are still valid today. Although a great number of very positive activities have been initiated by local and regional governments, such as the development of schools, clinics and springs as well as deployment of development agents in major villages and increased investment in resource conservation to address these development needs, most of them are far from completion. Recommendations made in the SMBS Synthesis report are still valid today. Specifically, they include:

Soil conservation

Promote SWC actively on all cultivable land; offer not a single technology but several different technologies from which farmers can choose what addresses their needs best; improve training for farmers and DAs in SWC technologies; use FfW only for investments on communal land. Use mass mobilisation and private initiative on cultivable land; enforce regulations as specified in the rural land proclamation (e.g. in the worst case, confiscate the land).

Soil productivity

Promote the use of chemical fertilisers only on land which is treated with SWC measure; promote improved fallows; search for appropriate technologies in neighbouring areas/countries and adapt them to the situation in the Ethiopian highlands; strengthen research in the field of soil productivity improvements; offer a basket of technologies to farmers from which they can choose those which fit their needs and constraints (e.g. using manure is only an option for households with livestock), etc.

Cultivation land

Land availability cannot be increased on a village basis. Options exist only if households cease farming and if land productivity is improved. Rather, if measures to better protect wildlife habitats are initiated, available cropland and grazing areas will diminish and alternative employment options for land users must be developed.

Food security

With current levels of land degradation and available technologies, and given the increase in the population that depends on the agricultural sector, food security will diminish in the future. Every possible effort is needed to increase land productivity and reduce the number of people dependent on the land. This will most probably not be sufficient. Food assistance will also be necessary in the near future.

Extension

Strengthen the existing extension system to three DAs per KA (specialising in crop production, livestock management, and natural resource conservation and management); improve the knowledge and capacities of DAs; send experts from the Wereda more often to visit the KAs.

Livestock

Improve the quality and health of livestock; regulate grazing on communal land; restrict access of livestock to core wildlife habitats; restrict access of livestock to specific protection zones; improve livestock marketing at the local, zonal and regional levels.

Fuelwood

Improve availability of tree seedlings; diversify seedling production; intensify research in the forestry sector, e.g. by searching for and promoting other fast-growing and multipurpose trees beside Eucalyptus.

Water

Improve springs and wells; establish cost-sharing arrangements; develop and improve small-scale irrigation schemes in suitable areas.

Health & education

Continue and strengthen efforts concerned with the development of the health and education system at Kebele and sub-Kebele level.

Figure 18: The importance of education is realised by a growing number of households in the Simen Mountains. Because the number of pupils is increasing rapidly, some classes have to be held outside. This school in Argin was built as a joint venture by local residents and the government – the former providing labour and a modest financial contribution per household, the latter providing the building material and teachers (R. Schild 2004).

Access

Improve the system of paths between villages, at least to a level where they can be used by mules, and subsequently also by motorcycles; connect each Wereda by at least one all-weather road; improve road access wherever feasible; develop and extend the public transport system (e.g. public bus on a regular basis to Mekane Birhan)

Price policy & employment conditions

Assure competitive and stable prices for local produce; increase salaries of government employees (allowing a decent livelihood, enhanced motivation, compensation for hardship in remote areas, etc.); provide housing in remote areas;

Off-farm employment

Give much greater emphasis in future to the development of the secondary (handicraft, manufacturing) and tertiary (service) sectors. Increase training activities and opportunities in these fields; encourage private enterprise and the development of a private sector by devising the necessary support structures and conducive policy environments.

5.4 Conservation and development

The tasks in the field of conservation and development in the greater Simen Mountains – including the SMNP and Janamora, Beyeda, Debark and Adi Arkay Wereda – remain large. At the same time, the financial resources available to the government to address all these tasks in order to meet the goals of development and simultaneously conserve the outstanding beauty of the landscape, biodiversity of global value, and endangered species, of which the *Walya ibex* has become a national symbol – are limited. Additional financial support is necessary. The Amhara Regional Agricultural Research Institute launched an initiative in November 2003 to formulate a project addressing these issues of conservation and development in the wider Simen area, to be submitted to the Global Environment Facility (GEF) for funding.

CDE, together with the PaDPA and other organisations at the regional and national levels, is prepared to support the regional and national governments in submitting a proposal to GEF, including the following components:

- Road realignment in specific areas (e.g. between Debark and Sankaber, around Mt Bwahit)
- Study of an alignment of the road from Chennek/Bwahit area to Beyeda Wereda, avoiding the crossing of important wildlife habitats or corridors
- Relocation of Arkwasiye, including compensation for relocated residents who will lose their property
- Negotiations with communities (a) outside the SMNP, to delimit specific protection zones, and (b) inside the SMNP, to reduce pressure on – or even refrain from using – specific critical areas/natural resources, including a search for compensation payments and development of alternatives
- Development of social and economic infrastructure (e.g. in the fields of health, education, access, markets, marketing, etc.)
- Intensification of agriculture on suitable areas outside the core area of the National Park
- Investments in Soil and Water Conservation on sloping lands
- Promotion of resource conservation in general (including water, forests, bush-land, grassland, etc) in areas outside the core area of the SMNP
- Support for SMNP management

Figure 19: Meeting in Gonder, where initial results of the SMS 2004 were presented to different stakeholders (K. Bircher 2004).

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The purpose of the Simen Mountains Study 2004 was to re-assess specific bio-physical and socio-economic conditions in selected villages inside and around the Simen Mountains National Park that had previously been studied in the Simen Mountains Baseline Study in 1994.

Besides presenting preliminary findings on the major themes investigated, this report also presents a preliminary assessment of major changes and trends with regard to wildlife, natural resources, land use, human population and livestock, institutions, and tourism. At this moment – i.e. before main findings are available – it can be concluded that enormous efforts have been initiated by the regional and local governments, partly supported by bilateral and international donor agencies, to improve the living conditions of the resident population and improve conditions in the National Park, its management, and ultimately the protection of wildlife. Nonetheless, considerable efforts are still needed to reconcile conservation with sustainable development.

Based on these preliminary findings, general recommendations are formulated in the three main fields of park management and development, tourism management and development, and rural development in general.

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