UPPER SVANETI PROTECTED AREAS MANAGEMENT PLAN

Georgia's Protected Areas Program

2008 December Tbilisi Georgia

GEORGIA

PROTECTED AREAS DEVELOPMENT PROJECT

(GEF TF 023968)

COMPONENT 1:

Development of a Detailed Plan for Biodiversity and Forest Conservation in the Central Caucasus Region and Corridor Conservation Planning in Eastern Georgia

UPPER SVANETI PROTECTED AREAS MANAGEMENT PLAN

GPAP Tbilisi, December 2008

Contents

Annexes:

EXPLANATION OF ABBREVIATIONS USED IN THE TEXT.

APA Agency of Protected Areas of the Ministry of Environment Protection and Natural Resources
BC Before Christ
CC Central Caucasus
DoF Department of Forestry of the Ministry of Environment Protection and Natural Resources
DoMP Department of Monument Protection of Ministry of Culture and Sports.
DoT, Department of Tourism of the Ministry of Economic Development
GEF Global Environmental Fund
ICCROM International Centre for the Study of the Preservation and Restoration of Cultural Property.
ICOMOS International Council on Monuments and Sites
IUCN International Union for Conservation of Nature.
MAB Man and Biosphere Program of UNESCO
MoA Ministry of Agriculture.
MoEPNR Ministry of Environment Protection and Natural Resources.
MoCMPS Ministry of Culture, Monument Protection and Sports
MoED Ministry of Economic Development.
MSL Mean Sea Level.
NGO Non Governmental Organization
RLLSPA Racha-Lechkhumi-Lower Svaneti Protected Areas
RLLSNP Racha-Lechkhumi-Lower Svaneti National Park.
RLLSPL Racha-Lechkhumi-Lower Svaneti Protected Landscape.
UNESCO United Nations Educational, Scientific and Cultural Organization.
USPA Upper Svaneti Protected Areas.
USNP Upper Svaneti National Park.
USPL Upper Svaneti Protectd Landscape.
WB World bank.
WHC World Heritage Committee.
WHM World Heritage Monument.

MANAGEMENT PLAN UPPER SVANETI PROTECTED AREAS.

1 Executive Summary.

This chapter gives a condensed summary of the contents of the management plan for the Upper Svaneti Protected Areas (USPA).

Chapter 2 summarizes the conclusions of the guidelines that recommended including the following categories of protected areas in the Central Caucasus Protected Areas:

National Park;
Protected Landscape;
Multiple Use Area.

It was decided to exclude the Multiple Use Area from this project as a management plan will be prepared as part of an other project. The chapter gives the objectives for the management plan and the approach used for the management plan preparation. A detailed description of this approach is shown in Annex 1.

Chapter 3 gives a synopsis of the description and evaluation of the ecological-, cultural- and social-economic characteristics of the protected areas in Svaneti that was presented in the guidelines. More detailed information on these topics is given in Annex 2 (flora), 3 (mammals), 4 birds, 5 (culture) and 6 (socio-economic).

The management principles are described in Chapter 4. This chapter shows the process framework for environmental management that is the basis of the management plan. Environmental management uses an integrated concept for the management. Integration is achieved by formulating a common set of strategic objectives, by applying a centralized management structure and by using a uniform approach for all protected areas that integrates all relevant disciplines. This approach is further elaborated in the subsequent chapters and in Annex 7.

Chapter 5 sketches a model for an effective, transparent and participatory management and describes the required legal framework and institutional arrangements for the management of the USPA. The Law on the Establishment and Management of the Central Caucasus Protected Areas will be the legal basis for the management. A new public legal entity will be created under the APA of the MoEPNR to manage the Upper Svaneti National Park (USNP) that is under the jurisdiction of the MoEPNR:
The Upper Svaneti Protected Landscape (USPL) and the Upper Svanti Multiple Use Area remain under the jurisdiction of the local authorities who will be responsible for their management. It is recommended to set up a management unit for the management of the USPL to coordinate the environmental management actions of the various local governments and the local offices of the MoEPNR and the Ministry of Culture, Monument Protection and Sports.
To ensure active participation of all stakeholders an advisory council will be appointed consisting of representatives of the central- and local government, local stakeholders and NGO's.

The strategic management objectives and evaluation criteria are elaborated in Chapter 6. The over arching objective is to conserve the natural- and cultural characteristics of the area through an appropriate territorial functional plan with related measures and strategies for

- conservation, protection and rehabilitation of nature;
- awareness building and PR;
- conservation, protection and restoration of cultural monuments and
- socio-economic development.

Moreover this chapter analyses the factors that influence the achievement of these objectives and presents the indicators and criteria to evaluate the management results. Seismic threats and flooding are natural factors, together with more local phenomena such as mud flows and landslides that will have a negative effect on both the natural- and manmade landscape and its cultural monuments. The climate and soil conditions on the other hand will have a positive effect on nature as it creates favourable conditions for a quick recovery of damaged ecosystems.

Also human factors play an important role. Large scale wood cutting, hunting, uncontrolled resource use and inadequate land use have had a negative effect on the ecosystems and poor maintenance threatens the integrity of the cultural monuments. Most of these negative effects can be attributed, however, to the difficult economic situation in the region. Traditionally, local farmers used their land in a sustainable way that respected its carrying capacity and most inhabitants still have a positive attitude towards the plans to establish protected areas.
The lack of a properly functioning regional infrastructure for management of natural and cultural monuments is considered to be a negative factor for the protection and conservation of these monuments.

Chapter 7 lists the site-specific operational objectives for the individual protected areas. Nature conservation and environmental education are the main objective for the USNP, in combination with controlled resource use and ecotourism that will also help to improve living conditions for the local population.
Both nature- and culture conservation are the prime objectives for the USPL in combination with the development of its potential for eco- and cultural tourism.
Finally, sustainable resource use is the key objective for the Multiple Use Area that also will act as a buffer for the USNP. It will provide opportunities for grazing and wood cutting, activities that are largely restricted in the other protected areas. This aspect is, however, not elaborated in this management plan.

Chapter 8 describes the territorial functional plans for each of the protected areas. These plans define their functional zoning and the management regimes that will be enforced in each zone.

Chapter 9 outlines the strategies and measures and specifies the physical infrastructure to enforce this regime.
A detailed action plan with programs for the execution of the activities is given in Chapter 10.
A summary of the cost of these programs and a disbursement schedule is given in Chapter 11. The total cost of all programs is estimated to be US $ 2,845,000. The annual operating cost- the salary cost of staff and the running cost of facilities and equipment - is not included in this figure as the organization and staff still has to be defined by the Administration. As the set up of the Upper Svaneti Protected Landscape is as yet not clear, the proposed plans could not be discussed with the responsible agencies. These figures are therefore provisional.
Finally Chapter 12, bibliography, summarizes the literature that has been consulted for the preparation of the management plan.

2 Preface.

2.1 Planning context.

The Law on Protected Areas System is the legal basis for the plan preparation. In the Guidelines for management of the Central Caucasus Protected Areas, made earlier as part of the conservation planning for the Central Caucasus, the protected areas were selected on basis of the description and environmental assessment. At the start of the plan preparation it was decided to divide the Central Caucasus Protected Areas into two parts: Racha-Lechkhumi (Tsageri, Ambrolauri and Oni administrative districts) and Svaneti (Lentekhi and Mestia administrative districts), due to administrative and historical-cultural differences between the regions. At a request of the APAof the Ministry of Environment Protection and Natural Resource this division was changed and in the final stage it was decided to make a management plans for the Racha-Lechkhumi-Lower Svaneti Protected Areas and the Upper Svaneti Protected Areas.
As resource use is restricted or prohibited in certain parts of the protected areas, the impact of these restrictions should be further evaluated in compliance with the safeguard policy of the World Bank.[1]
The present management plan includes the protected areas in Upper Svaneti. The following protected areas were selected on basis of the description and environmental assessment described in the guidelines that were made earlier as part of the conservation planning for the Central Caucasus:

Category II, National park.
Upper Svaneti, National Park (USNP).

Category III, Natural monument.
No natural monuments.

Category IV, Managed Nature Reserve.
No Managed Reserves

Category V, Protected Landscape.
Upper Svaneti Protected Landscape (USPL).

Category VI, Multiple Use Area.
Upper Svaneti Multiple Use Area.

2.2 Objective of the management plan.

The present management plan describes how the Racha-Lechkhumi Protected Areas should be developed within the next five years. The over arching objective of the management plan is to conserve the natural- and cultural characteristics of the protected areas through an appropriate territorial functional plan with related measures and strategies for

- conservation, protection and rehabilitation of nature;
- awareness building and PR;
- conservation, protection and restoration of cultural monuments and
- Socio-economic development.

2.3 Approach.

The management plan was prepared in compliance with the project document: “Terms of Reference for the Development of a Protected Areas Plan for Central Caucasus Planning Region, contract GEF TF 023968 N 12/C” and the Retroactive Amendment to this contract dated February, 2, 2007. The Terms of Reference prescribed a phased approach that included:

- Phase A: Data collection and synthesis. During this phase all available information was collected and evaluated and field surveys were carried out to obtain additional data. A list of the literature that was used is shown in Chapter 12.

1World bank: Involuntary Resettlement Sourcebook: Planning and Implemention in Development Projects. Washington August 2004.

- Phase B: Guidelines for management plan preparation. In this phase the collected information was analyzed for the area as a whole, the protected areas where selected that should be included in the management plan preparation and guidelines for the plan preparation were given.
- Draft Law for the Establishment of a System of Protected Areas in the Central Caucasus.
- Phase C: Management plans for Racha Lechkhumi and Svaneti. The final phase included the preparation of two management plans for the protected areas in Racha-Lechkhumi and Svaneti respectively.

The activities in each phase are described in detail in Annex 1. Each of these phases is reported in separate documents that describe the methods that were applied and the results that were obtained. During all phases of the management plan preparation the stakeholders were informed about the progress of the work. Field survey teams consulted the local population when collecting the necessary data and the socio- economists interviewed local population to assess the anticipated effect of the protected areas on the socio-economic conditions in the area.

3. Description and Assessment.

3.1 Introduction.

A detailed description and evaluation of the area is given in the guidelines. This chapter contains a summary of the description as far as relevant for the management of the various categories of protected areas that are part of the Upper Svaneti Protected Area (USPA). After a general description an assessment is made of the ecological-, cultural- and social-economic aspects of the various protected areas. This assessment is used as input for the formulation of the strategic management objectives that are described in Chapter 6 and 7.

Figure 3.1 : Upper Svaneti Protected Areas in the Georgia's Protected Areas System.

The USPA comprises an area of 173,607.93 ha and is located within the Mestia and Lentekhi administrative districts (see Figure 3.1).
The Protected Areas consist of the following categories of protected areas (see Figure 3.2):

- One National Park (USNP);
- One Protected Landscape (USPL);
- One Multiple Use Area.

The Protected Areas comprises nival-, sub-nival-, alpine-, sub-alpine- and middle and upper forest belt habitats; it encompasses the water catchments of the rivers Enguri and it includes the highest peaks of the main watershed ridge of the Caucasus, Shkhara (5201), Gistola (4860), Jangha (5059), Tetnuldi (4853), Ushba (4710), Shkhelda (4368), Tikhtigeni (4617), Tsurungali (4250), Ailama (4547), Laila (4008), Tekhurishdudi (3001).

The high mountain ecosystems of Upper Svaneti have a high biodiversity and contain many rare, endemic and relict flora species such as high mountain oak(*Quercus macranthera), Markowich silene (Silene markowiczii),* Svanety bell flower and *(Campanula svanetica)* The following rare and protected animal species inhabit the area: Tur (*Capra cylindricornis* and *Capra caucasica)* and Brown bear (*Ursus arctos*). Moreover, the high scenic value of the landscape has a high potential for ecotourism. Although some parts are degraded due to human activity, climate- and soil conditions are favorable for recuperation of degraded habitats. The rehabilitation and subsequent preservation of the biodiversity will be easy, therefore, if appropriate measures are undertaken.

Svaneti has been one of the important provinces of Georgia throughout centuries. This is reflected in its cultural heritage that includes a.o. the Chazhashi, World Heritage Monument.[2]

The area is scarcely populated; main settlements are located in the valleys of the main rivers. The economic situation is difficult, agriculture is the main economic sector but the unemployment rate is high and many of the younger inhabitants migrate to other parts of Georgia. This aggravates the economic situation even further. The establishment of protected areas will create new jobs and business opportunities that will support the economic development of the region. The various categories of protected areas in combination with appropriate zoning guarantee a proper balance between the interests of people and nature.

The USPA is a hazard prone area, due to the high level of seismicity that may trigger other hazards as well. Moreover human activity may aggravate this situation and may introduce additional threats.

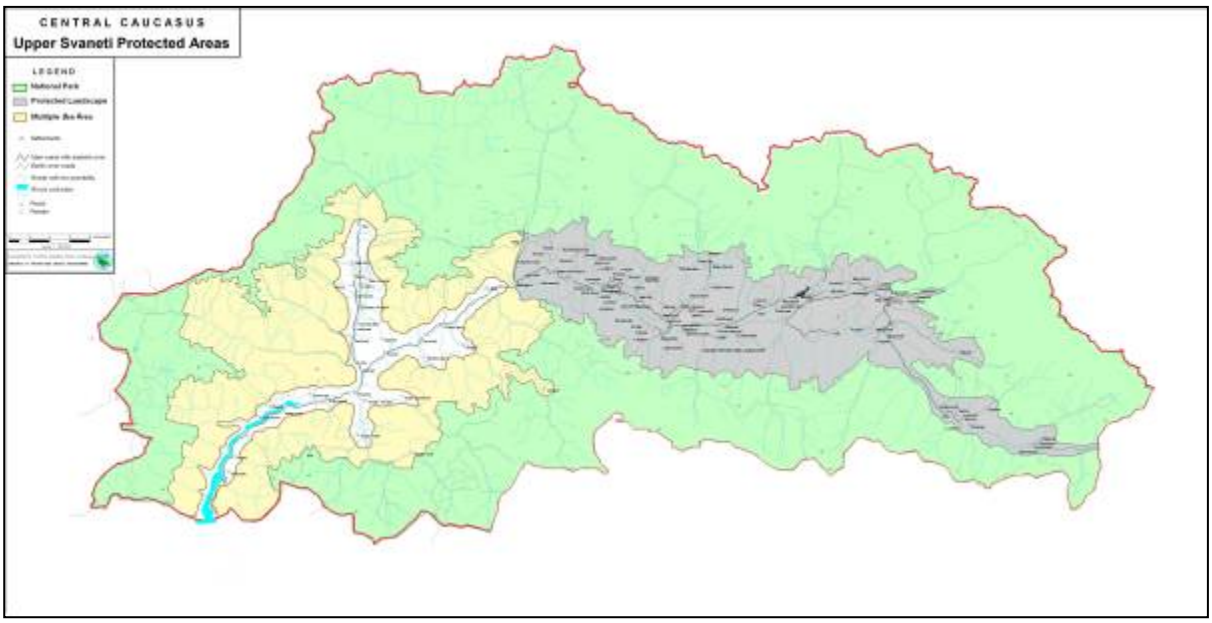


Figure 3.2 : Upper Svaneti Protected Areas.

The following natural threats are of importance:

- Earthquakes;
- Landslides, rock fall, mud- and debris flows;
- Avalanches;
- Flash-floods.

These hazards are threatening live of people and cause great material- and ecological damage. Obviously these hazards will affect the possibilities to achieve the management objectives.

The following threats caused by human activities should be considered:

- Wood cutting and related landslides;
- Inappropriate and/or uncontrolled land use (agriculture and tourism)
- Habitat destruction (e.g. through large-scale hydropower infrastructure);
- Uncontrolled resource use (hunting, fishing, mining);
- Uncontrolled use of natural functions (pollution surface and ground water);
- Climate change.

Despite human pressure on these areas their fauna is still fairly rich. The preservation of the diversity of the fauna species and its rehabilitation will be easy if appropriate measures are undertaken.

The various protected areas are described in the following sections. The management plan for the Multiple Use Area is not included in the present management plan as it is part of the forest development project. As the

[2] The Monument is better known as Ushguli, the name of the cluster of villages Zhvibiani, Chvibiani,Chazhashi and Murkmeli.

Multiple Use Area also functions as a buffer zone for the National Park, there is a close linkage, however, with the management of the National Park. For that reason the present management plan gives also recommendations for the operational objectives and territorial functional plan of this protected area.

3.2 The Upper Svaneti National Park (USNP).

3.2.1 General.

National parks are areas with high ecological value and a potential for ecotourism, where nature conservation, environmental education and wise resource use go hand in hand. The areas are mainly managed for ecosystem protection and ecotourism. The following sections describe the specific ecological, social-economic and cultural values of this territory that are of importance for its management.

Tetnuldi Mountain. ***© Vakhtang Naveriani.***

3.2.2 Physical-geographical aspects.

Location.

The USNP is located on the southern slope of the main watershed of the Caucasus, in the historical province of Georgia – Upper Svaneti. The north-western border follows the Zemo Apkhazia, northern and east-northern border follows the state border between Georgia and Russia, to the east the border coincides with the border of the Racha-Lechkhumi Lower Svaneti National Park and to the south-west it follows the Upper Svaneti Multiple Use Areas and then runs on both sides of the Upper Svaneti Protected Landscape along the bottom of the gorge of the r. Enguri from the valley of the r. Nakra up to Ushguli. The USNP is part of the Mestia administrative district.

Area. 74,056.33 ha

Description.

The USNP comprises:

Habitats of nival, sub-nival, alpine and sub-alpine belts, also partially habitats of middle and upper forest belts; upper parts of r. Enguri and its tributaries (Nenskra, Nakra, Kasleti, Dolra, Adishischala, Mulkhra, Khaldechala, etc); peaks of the main watershed of Caucasus – the crest between Dalari and Sharivtseki and the southern slope – Kodori, Shtavleri, Ushba, Atkveri, Ughviri, Tsalgmili, Gvaldi, Machkharani, Koruldashi, Zeskho, the branch ridges, the northern and southern latitudinal slopes of the Svaneti ridge and the northern slope of the Egrisi ridge.

The USNP encompasses a large part of the catchments of the river ***Enguri.*** The catchment of ***r. Enguri*** includes***:*** the catchments of r. Nenskra and Nakra at altitudes higher than 1200-1400 m above Mean Sea Level (MSL); the water catchment basins of r. Dolora and Mestiachala at average altitudes higher than 1600-1700 m above MSL; the upper reaches of r. Murkhra at altitudes higher than 2000-2100 m above MSL; the upper reaches of r. Enguri (northern part of Ushguli Temi) at altitudes higher than 2400-2500 m above MSL; on the northern slope of the Svaneti ridge the catchments of the left tributaries of r. Enguri at altitudes higher than 1400-1600 m above MSL;

Obviously, the USNP is of prime importance for the hydrology of these rivers. It controls the discharge and sediment yield of the rivers, it reduces extreme water levels in downstream areas as large volumes of water can be stored during river floods and it regulates the water quality due to filtering of surface- and groundwater.

The USNP has a pronounced and complex relief. Rocky slopes with permanent snow and ice cover the crest of the main watershed of the Caucasus and its southern slopes that form the northern border of USNP, it includes from west to east the following peaks: Shkhara (5201), Gistola (4860), Jangha (5059), Tetnuldi (4853), Ushba (4710), Shkhelda (4368), Dalra (3979 m), Donghuzorun (4454 m), Tikhtigeni (4617), Tsurungali (4250,)Laila (4008), Tekhurishdudi (3001), etc.

The National Park also includes the highest part of the main ridge of Caucasus, the so called Bezingi wall, with a steep southern slope that is permanently covered with snow and glaciers at the altitudes higher than 3400-3500 m above MSL. The following glaciers are connected with the crest of the main watershed: the glaciers of Kvishi, Dolra, Ushba (r. Dolra water catchment), Lekhziri, Chalaati (r. Mestiachala water catchment), Adishi (upper reaches of r. Adishischala), Khalde (upper reaches of r. Khaldechala), Tviberi and Tsaneri (upper reaches of r. Mulkhura), Shkhara and Enguri (upper reaches of r. Enguri), etc. Most of these glaciers end at altitudes higher than 2400 m above MSL, although some glacier tongues descend to lower altitudes. For instance the Chalaati glacier tongue in the catchment of r. Mestiachala) ends in the forest belt at an altitude of 1850-1900 m above MSL.

These glaciers are typical for the highest central part of the Svaneti ridge – the northern slopes of p. Lakhili (4008 m), Leshnili (3900 m) and Ghvadarashi (3765 m). Glaciers on the Svaneti ridge are significantly shorter, than those on the main watershed of the Caucasus. The maximum length of these glaciers exceeds 12 km (the Lekhziri glacier), whereas the length of the longest glaciers of the Svaneti ridge does not exceed 4 km.

At altitudes higher than 1500-2000 m above MSL, mainly paleo-glacial relief with trough gorges and moraines is developed within the National Park. Erosion formations are also significant; they are found in the area that was left when the glaciers retreated. Narrow and deep canyons and gorges are typical for these formations. Numerous debris cones, formed by periodic mudflows, are found at the bottom of the eroded gorges. Riverine terraces located on various altitudes are also present in some locations.

Below the borders of the permanent snow and glaciers (at altitudes lower than 2000-2800 m above MSL) belts of alpine and sub-alpine landscapes are developed. The lowest border of these belts is located at an altitude of 1900-2000 m above MSL. At lower altitudes this landscape develops into the forest belt of the National Park.

Table 3.1. : Characteristics of climate.

Station	Height above MSL (m)	Average temperature °C			Relative humidity %	Precipitation (mm)		
		January	August	Annual	Average annual	Annual	Summer	Winter
Mestia	1441	-6.0	16.4	5.7	75	992	243	226
Khaishi	730	-0.1	21.0	10.6	76	1421	307	429

The climate at altitudes lower than 2800-3000 m above MSL is characterized by a high humidity, cold long winters and relatively short cool summers. At altitudes higher than 3000-3500 m above MSL a humid climate with permanent snow and glaciers is common. Climate data for representative meteo- stations are shown in Table 3.1.

3.2.3 Landscapes.

3.2.3.1 General.

Differences in elevation, relief and climate in the various parts of the Central Caucasus protected area have created a large variety of landscapes. The negative impact of economic activities of man on the structure of the natural landscape and biodiversity is fairly prominent along gorges of r. Enguri, Tskhenistskhali and their tributaries – in the belt comprising approximately 400-800 m above the sea level. At higher altitudes natural landscapes are less modified due to complexity and inaccessibility of the terrain.

All landscapes can be classified as mountainous landscapes comprising middle mountainous, upland and high mountainous.

The vertical zoning ranges from subtropical to nival. Most of the above landscapes are found in the USNP and are shown on Figure 3.3. A brief description of these landscapes is given in the following sections.

3.2.3.2 Landscape types.

Erosive-denudational and beech-dark coniferous and dark coniferous forest landscape with the presence of evergreen under storey developed in moderately cold climate at the altitude of 1000-1800 m above mean sea level (Landscape 125). This type occupies a fairly large area of the Upper Svaneti National Park and is found in the middle and lower reaches of the catchment of r. Nenskra, Nakra, Becho, Mestiachala, Khaishura, Kasleti, Khumfreri, Arshira, flowing on the southern slope of the main watershed of Caucasus and northern slopes of the Svaneti ridge. The natural shape of this landscape has considerable changed due to unsystematic logging.

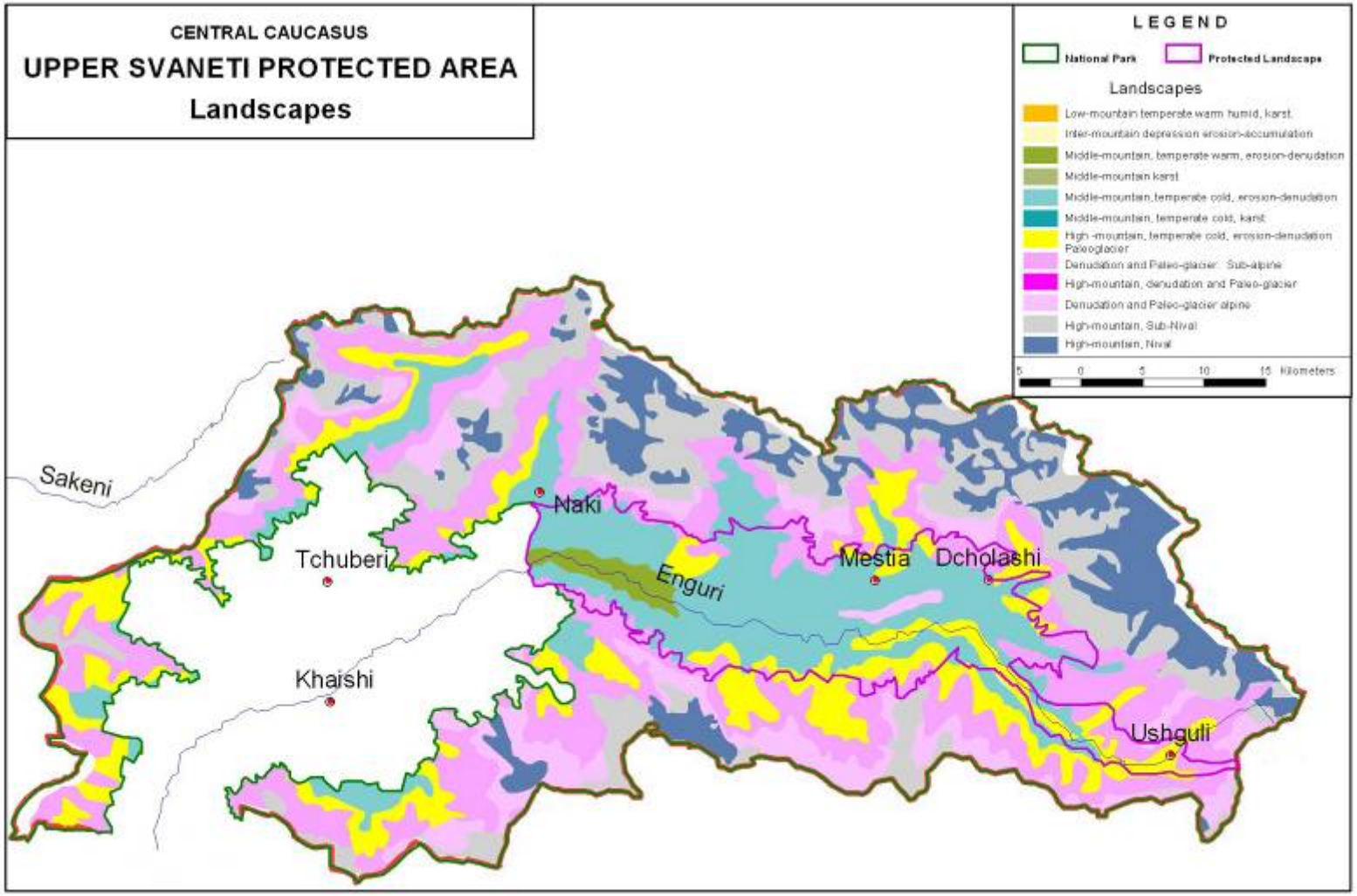
A high-mountain landscape with sub-alpine meadows and deciduous forests (birch and at some areas, oak, beech) and coniferous forests with pine and fir (Landscape 129) is more widely distributed in the Upper Svaneti National Park. This type of landscape is developed on the slopes of the main watershed of Caucasus, Northern slopes of Svaneti ridges within moderately cold climate and erosive-denudational, at some areas paleo-glacial relief at 1800-2200 m above MSL. As this area is used as summer pastures the appearance of this landscape is changed.

The landscape of high mountain tall grass and dense grassy meadows with the presence of shrubberies and crook stem forests (beech, birch, etc) (Landscape 135) is developed in the form of separate areas in the same vertical belt at an altitude of 1900-2000 m above MSL on the southern slope of Caucasus ridge and northern slopes of Svaneti ridge This landscape is significantly modified due to grazing and mowing.

Landscape of alpine meadows (Landscape 144) is also widely distributed at approximately 2000-2500 m above MSL within Upper Svaneti National Park. The landscape of alpine meadows at some areas with rhododendron is represented as an almost continuous stripe on the southern slope of Caucasus and northern slopes of Svaneti ridge on denudational-paleo-glacial terrain of high mountains and in moderately cold and humid climate. The area is used as pastures and numerous areas of the landscape are altered to various degrees.

Above the alpine landscape sub-nival landscape (Landscape 150) dominates at altitudes of 2500-3000 m above MSL. This type is common on the southern slope of Caucasus ridge and northern slope and crown zone of the central part of Svaneti ridge it is mainly developed on denudational, steep, rocky terrain in cold and humid climate. Vegetation is very thin. Mosses and lichens are abundant. The landscape is less altered by man. Nival landscapes (Landscape 152) cover the crown of the main watershed of Caucasus and directly adjacent southern slopes as well as crown and its northern slope of the central part of Svaneti ridge at altitudes of 2800-3000 m above MSL. This landscape is developed on the steep rocky typically alpine relief covered with permanent snow and glaciers in harsh climate conditions. This landscape is entirely deprived of vegetation, only minor patches of mosses and lichens are found at some areas of exposed rocky slopes.

Figure 3.3. Landscapes.



3.2.3.3 Specific geo-morphological features.

The Upper Svaneti National Park includes two areas with spectacular geo-morphological features: the Adishi Glacier and the Perkhuliskva Block. A special conservation regime will be established for these areas.

Adishi Glacier.

3.2.4 Ecosystems and vegetation.

3.2.4.1 General.

The landscapes in the forest-, sub-alpine-, alpine- and sub-nival belts contain the following ecosystems and vegetation:

The *forest belt*:

Mixed deciduous (poli-dominant) forests;
Mixed deciduous – Dark Coniferous Forest;
Dark Coniferous Forest.

The *sub-alpine belt*:

Thin Forests;
Sub-Alpine Crook stems forests;
Sub alpine forb grass complexes;
Broad leaved forb grass meadows.

The *alpine belt* :

Alpine meadows;
Patches of alpine flora;
Alpine geranium meadows.

The *sub-nival* vegetation.

Some species are found in all belts and do not follow the above zoning. This type is classified as *azonal vegetation*

The various ecosystems and their vegetation are shown on Figure 3.4 and on the Map 10.1 in Annex 10. They are described below.

The description shows that the USNP complies with the IUCN criteria for the selection of protected areas. All ecosystems cover large areas that are sufficient for self regulation through natural succession. The vegetation of USNP is classified as Colchic. However, due to the large distance from the Black Sea and the relatively dry climate, non-Colchic xerophytes occupy larger territories in comparison with more western areas. This is a rare and typical feature of this area.
Habitats of the forest belt of Upper Svaneti National Park have a high ecological value. They are prominent for the abundance of endemic and relict and the presence of Colchic evergreen and deciduous species in the vegetation. The majority of these species are Tertiary period relicts, which actively participate in all habitats of the vertical level of the forest belt. Especially the stable presence of the Colchic undergrowth in the vegetation formations gives the Upper Svaneti National Park a high conservation value.

The USNP has in total 1100 vascular plant species. This underlines the high bio diversity of the area. The lower forest belts have suffered from wood cutting, but due to the fertile soil and favorable climate conditions degraded forests have a great potential for (self) rehabilitation. The larger part of the forests is still in a natural state and acts as a refuge for many rare flora and fauna species some of which are on the verge of extinction and have been included in the Georgian Red List. This demonstrates the naturalness and uniqueness of the area.

3.2.4.2 Forest belt.

Mixed deciduous (Poli-dominant) Forests.
Mixed deciduous forests within Upper Svaneti National Park are mainly found up to approximately 1200 m. above MSL. The forests are found mainly in the middle reaches of the catchments of r. Nenskra, Nakra, Mestiachala, Mulkhura r. Kasleti and Khaishura and on the northern slopes of Svaneti ridge.
Beech (*Fagus orientalis*), hornbeam (*Carpinus caucasica*), chestnut (*Castanea sativa*), alder (*Alnus barbata*), lime (*Tilia begoniifolia*), mountain sycamore (*Acer pseudoplatanus*) form the above forests. Hornbeam, Georgian oak and beech are relatively more abundant. Associate species are the following: Norway maple (*Acer platanoides*), Caucasian maple (*Acer laetum*), elm (*Ulmus glabra*), wild cherry (*Cerasus avium*) and spruce (*Picea orientalis).* Depending on micro relief and expositions the undergrowth is formed by the following species: hazel nut (*Corylus avellana*), Pontic twin-flowered daphne (*Daphne pontica*), Caucasian whortleberry (*Vaccinium arctostaphylos*), and Pontic azalea (*Rhododendron luteum*). These species often form variously mixed communities.

Mixed deciduous -dark coniferous forests.
The above forests are common at altitudes between 1200-1700 m above MSL. The forests are mainly found in the catchment basins of r. Nenskra, Nakra, Khaushura and the northern slopes of Svaneti ridge. The following dark coniferous species participate in the forest formations: spruce (*Picea orientalis*) and fir (*Abies nordmanniana*); Typical deciduous species are beech, hornbeam, European aspen (*Populus tremula*), high mountain sycamore (*Acer trautvetteri*), European white birch (*Betula pendula*), white birch (*Betula litwinowii*), goat willow (*Salix caprea*) and ash (*Sorbus aucuparia*). The undergrowth and grass cover is identical to the mixed deciduous forests.

Mixed deciduous-dark coniferous forests are mainly represented by the following communities: fir-beech-spruce forests with forb shrubbery undergrowth (*Abieteto-Fageto-Piceetum mixtoherbosum*); spruce-beech forests with fern cover (*Piceeto-Fagetum mixtofilicosum*), from ferns black fern (*Matteuccia struthiopteris*) and mail fern (*Dryopteris filix-mas*) are mainly present; fir-spruce-beech forests with blackberry and forb grass cover (*Abieto-Piceeto-Fagetum ruboso-mixtoherbosum*); beech-spruce-fir forests with Caucasian whortleberry undergrowth (*Fageto-Piceeto-Abietetum arctostaphylosum*); etc. These syntaxa form various combinations, although such communities are highly similar and their flora composition is mainly identical.
Mixed deciduous-dark coniferous forests of the middle and upper sub-belts of the forest belt have landscape significance and form high conservation value habitat in terms of ecosystem These formations represent Tertiary period forest type and consist of many relict, endemic and rare vegetation species. These forests have preserved close to natural state throughout the major part of Svaneti area.

Mixed deciduous-dark coniferous forests meet the IUCN criteria of territorial sufficiency, biodiversity, naturalness, typicalness and rehabilitation potential.

Dark Coniferous forests.
Dark coniferous forests with the dominancy of fir (*Abies nordmanniana*) and spruce (*Picea orientalis*) are fairly abundant mainly on Svaneti ridge within the USNP. These forests are mainly found at altitudes up to 1850 m above MSL. They are typologically rather diverse, which is partially caused by the complexity of the terrain. At some areas the upper border of dark coniferous forests ends into crook stem sub-alpine forests and shrubbery.
The following deciduous species are less common in dark coniferous formations: white birch, European aspen, beech, ash, goat willow and high mountain sycamore. The following shrubbery is present: Caucasian whortleberry, bird cherry (*Padus avium*), cherry laurel, arrow-wood, twin-flowered daphne, etc. The presence of spruce in the above fir forests is reduced along with the increase in the altitude. The grass cover is formed by tall grass elements (*Gadellia lactiflora, Campanula latifolia, Senecio propinquus, Adenostylus macrophylla, Inula grandiflora, Aconitum nasutum*) and broad leaved forb grass (*Salvia glutinosa, Stachys macrantha, Geranium ibericum*) and grain species (*Calamagrostis arundinacea, Poa nemoralis, Festuca drymeja*).

The following ecosystem components , shown on Figure 3.4 , are typical for the forest belt:

III-2 upper forest and sub-alpine belt ecosystems of the upper reaches of r. Nenskra;
III-3 forest ecosystems of r. Nakra;
III-4 forest ecosystems of r. Kasleti and Khaishura;
III-5 coniferous forest ecosystems of the northern slope of the Svaneti ridge.

3.2.4.3 Sub-alpine and alpine belts.

The following ecosystems are found on almost all slopes of the mountains at altitudes between approximately 1800-2000 m above MSL.

Thin forests.
These forests are mainly formed by red-bud maple (*Acer trautvetteri*), beech (*Fagus orientalis*), spruce (*Picea orientalis*), fir (*Abies nordmanniana*), in some areas – pine (*Pinus kochiana*) and Caucasian oak (*Quercus macranthera*).

Sub-alpine crook stem forests.
This type is mainly formed by white birch (*Betula litwinowii*), beech (*Fagus orientalis*), ash (*Sorbus aucuparia*) and goat willow (*Salix caprea*). The lower layer of these forests consists of Colchic undergrowth – rhododendron (*Rhododendron ponticum*), cherry laurel (*Laurocerasus officinalis*), Colchic holly (*Ruscus colchicus*), holly (*Ilex colchica*), azalea (*Rhododendron luteum*), Caucasian whortleberry (*Vaccinium arctostaphylos*), and Caucasian rhododendron (*Rhododendron caucasicum*). Evergreen shrub – rhododendron originating from Caucasus-Central Asia is abundant on the northern humid mountain slopes. It sometimes forms undergrowth in sub-alpine forests.

Sub-alpine forb grass complexes.
Tall grass complex distributed in the upper sub-belt of forests and sub-alpine belt of the southern slopes of the main watershed and connected branch-ridges (Kodori, Shtavleri, Tsalgmili, Ushba, Gvaldi, Adkveri, Svaneti, is especially noteworthy. Sub-alpine tall grass is one of the most significant components of high mountain biodiversity of USNP. It consists of many endemic species and genera of Caucasus; many of them are relict endemics of Caucasus.
Sub-alpine forb grass *(Altherbetum subalpinum)* belongs to a special bio-ecological community of grasses, which is not characterized by tussocks but has a distinct morphological-physiological structure and floristic composition. The specific climate (high humidity in combination with high solar radiation) and the favorable soil condition (high humus content, high humidity), in the sub-alpine belt is the main reason for the development of the sub-alpine tall grass in this Caucasus eco-region. Also the thick snow cover is important as it protects the grass against freezing in winter and creates favorable conditions for the development of sub-alpine tall grass in spring. For that reason most of these plants have a tall and thick stem.

These features distinguish sub-alpine grass from other grass types. Presumably, these specific conditions explain the significant presence of relict and endemic species in the sub-alpine tall grass flora.
The habitat meets the IUCN criteria of territorial sufficiency, biodiversity, naturalness, rarity, vulnerability, typicalness and has a high rehabilitation potential that justifies its conservation.

Broad leaved forb grass meadows.
Broad leaved – forb grass meadows are one of the significant components of sub-alpine vegetation. They are found in a narrow strip along the border between upper forests and lower alpine meadows. The best examples in RLNP can be found in the sub-alpine belt of the Lechkhumi ridges, and on the southern slopes and branch-ridges of the main watershed of Caucasus. These meadows are usually growing on fairly humid mountain-meadow secondary soils.
Despite its floristic diversity broad leaved forb grass meadows are noncomplex synusia. Grain, legume and sedge synusia are represented in the meadow, although their share in the majority of habitats is insignificant. From the synusia that form the vegetation the following are relatively highly constant: *Poa iberica, Festuca djimilensis, Phleum alpinum, Carex caucasica*, etc.
Sub-alpine broad leaved forb grass meadows are the best pastures that can easily be damaged and eroded. In order to prevent further degradation a conservation regime should be enforced. As the strip of broad leaved forb grass meadows is closely connected with other habitats of the sub-alpine belt, such a conservation regime should also include these sub-alpine habitats. The vegetation is floristically rich.
The habitat complies with the IUCN conservation criteria of territorial sufficiency, biodiversity, vulnerability, typicalness and has a high rehabilitation potential.

3.2.4.4 The alpine belt.

The following alpine ecosystems of high ecological value are found in the high mountain belt (2400-2500 m above MSL).

Alpine meadows.
Broad leaved forb grass meadows distributed in the catchment basins of the rivers and on mountain slopes of USNP are rare and original plant communities. Mat nardus grass meadows (*Nardus stricta*), the edificator of the formation, is a low plant with dense tussocks and its strong and tightly located tussocks cover the surface as a blanket. Mat nardus grass meadows are psychrophilic plants that grow in the alpine (rarely in the sub-alpine) belt on mild slopes. It is a pasture of low value (due to its coarse stems) and is resistant to permanent grazing as the dense and inaccessible structure protects it against erosion. This is of special significance for the stability of high mountain ecosystems.
Fescue (*Festuca varia*) is one of the plants of the high mountains of the Caucasus. Fescue meadows are high mountain semi-xerophilic meadow and are typologically diverse. The edificator of the formation - fescue is one of the pioneer turfer of sediments and has certain significance at the initial step of the development of soil. In this function many representatives of rich high mountain flora could not compete with fescue.
Festuca airoides is a common species of high mountain vegetation in the Caucasus (especially in its eastern part); it is often associated with alpine patches of sedge (*Carex*), fescue (*Festuca varia*) and mat nardus grass (*Nardus stricta*) meadows. It is intensively regenerating and forms an agglomerative community with other plants. It often forms mono-dominant communities and is always floristically poor as mat nardus grass (*Nardus stricta*) as it also prevents the growth of other plants in this meadow due to strong and absolute turfing. It is mainly developed on slightly inclined slopes of southern and eastern expositions and flatter areas.
Alpine fescue meadows are classified as pasture with good nutrition value; it is resistant to normal load due to its full tussocks and prevents erosion.

Patches of alpine vegetation.
These patches are developed at altitudes higher than 2700 m above MSL and are mainly formed by perennial low and crawling forb grass. Usually the major part of the patches grows in one layer and moss synusia is almost always developed. The total mass of the grass is low and the production of phytomass above the surface is small. In spite of this it is considered a good pasture for the upper Alps. Communities of the vegetation patches often have a mosaic structure, which is caused by the micro-relief.
A dense structure of the roots is typical for alpine vegetation patches and thus water filtration is better than in meadows with dense tussocks. Due to these features, the patches of alpine vegetation are more resistant to erosion than other types of meadows.

Alpine geranium meadows.
The edificator of the geranium meadows is *Geranium dymnocaulon* a perennial, large rooted low plant. The formation is a specific component of the Caucasus Mountains and its habitats are mainly developed on the glacial relief, on the slopes of glacier circuses, trough gorges and glacier doors. This vegetation is common on the southern slopes and branch-ridges of the main watershed of the Caucasus. Alpine geranium meadows are floristically poor and on average only 15 species participate in most of the habitats. Alpine meadows play a key role in the stable functioning of high mountain ecosystems; they have high bio diversity and are of great importance for man. Most of these alpine habitats should get a conservation status as they fully comply with IUCN criteria for territorial sufficiency, biodiversity, vulnerability, typicalness and have a good rehabilitation potential.
The following eco system components , shown on Figure 3.4 , are typical for the sub alpine and alpine belt:

II – habitats of the southern slope and its branch ridges of the main watershed of the Caucasus, also the Svaneti, Egrisi, Lechkhumi and Racha ridge sub-alpine and alpine belts (among these, limestone substrata).

3.2.4.5 The sub nival belt.

At higher altitudes the ecosystems of the alpine belt are replaced by ecosystems of the sub-nival belt;
The ecosystems of the crest zone of the main watershed of the Caucasus and the nival and especially sub-nival belts of its southern slope and branch ridges, also northern slope of the Svaneti ridge, are characterized by a fairly high level of endemism and original plant communities and rare and endangered species. This belt is located in the zone with permanent snow and glaciers, where the vegetation is represented by open micro-habitats. Mainly alpine vegetation is found here on patches of solid sediments, coarse gravel and fine sediment as well as specific saxicolous species; the populations of which often form diverse mosaic and mono-dominant micro-habitats.
The great variety in endemism should be noted, which demonstrates the originality of the Caucasus eco-region and especially that of the Georgian high-mountain vegetation and flora. It should be mentioned, that this floristic complex of the sub-nival belt is of special importance for the biodiversity of Georgia as a whole as it is a representative habitat of sub-nival flora. These habitats are mainly represented by open canopy micro-habitats. Almost all taxa within the habitats of the sub-nival belt are Caucasian endemics, one of these, the *Silene marcowiczii,* is included in the Georgian Red List.

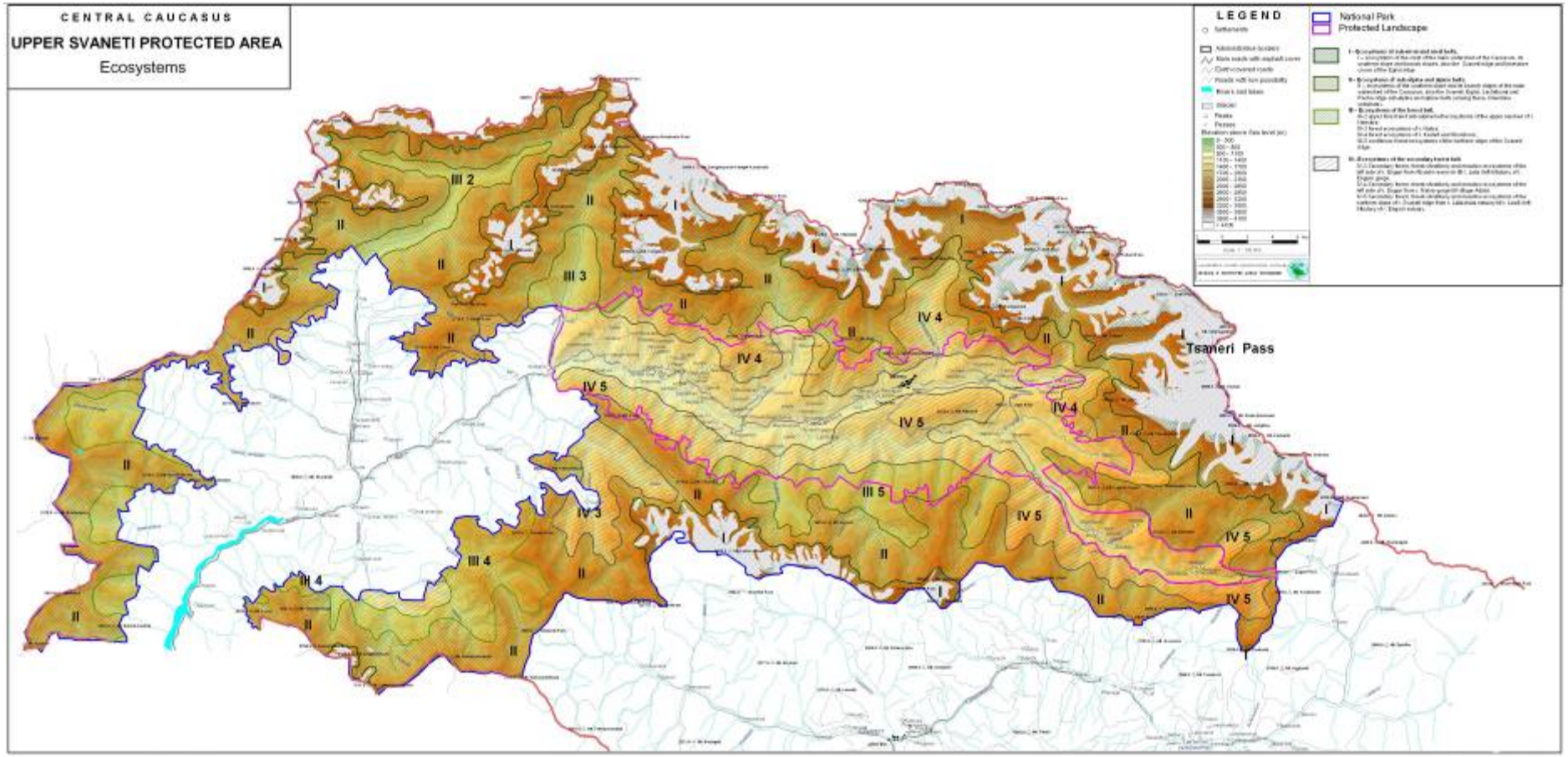
The following eco system components , shown on Figure 3.4 , are typical for the sub nival belt:

I – habitats of the crest of the main watershed of the Caucasus, its southern slope and branch slopes, also the Svaneti ridge and limestone crown of the Egrisi ridge

3.2.4.6 Azonal vegetation.

Ecosystems with original ***azonal vegetation***, marshes and petrophytes, are widely spread within these vegetation belts. Marshes and connected ecosystems are developed on the eastern slope of Kodori ridge in the upper reaches of r. Devra (a right tributary of r. Nenskra) at an altitude of 1900-2000 m above MSL (Shavlura marsh) and the catchment of r. Nakra (a right tributary of r. Enguri) at an altitude of 2000 m above MSL (Lashkhrashi marsh), The Marsh complexes of the Zagaro Bottomless Lake on m. Labrakhi massif in the upper reaches of the r. Tskhenistskhali (Koruldashi gorge and have great significance for the study of the genesis of the vegetation of the National Park.

Figure 3 .4. Habitats.



3.2.5 Flora.

3.2.5.1 General.

Due to the complex landscape and variation in local climate the flora and vegetation of the area is fairly original and diverse. The many endemic, relict and rare plants form a unique feature of the Svaneti flora. Svaneti is the part of Kolkheti botanical-geographical province, which is characterized by the presence of relict dendroflora of the warm and humid refuge of the Tertiary Period (rhododendron – *Rhododendron ponticum*; cherry laurel – *Zaurocerasus officinalis*; holly – *Ilex colchica*; Colchic ivy – *Hedera colchica*; Colchic boxwood – *Buxus colchica*; Pontic azalea – *Rhododendron liteum*; Caucasian whortleberry – *Vaccinium arctostaphylos*; etc).
According to 1985 data, the vascular vegetation of Svaneti includes up to 1100 species. From the Svaneti flora species 9 species are Svaneti endemic, 212 species are Caucasian endemic and 52 species are Georgian endemic. This underlines the great biodiversity and the rarity of the vegetation.
The flora includes the following taxonomic units:
Fern – 10 families, 20 kinds and 30 species;
Gymnosperms – 3 families, 5 kinds and 8 species;
Angiosperms – 89 families, 416 kinds and 1060 species.

The largest families are: *Asteraceae* (152 species), *Poaceae* (79 species), *Scrophulariaceae* and *Rosaceae* (61-61 species), *Cyperaceae* (60 species), *Fabaceae* (58 species), *Caryophyllaceae* (55 species), *Brassicaceae* (50 species*), Ranunculaceae* (46 species), *Apiaceae* (45 species), *Lamiaceae* (32 species), *Boraginaceae* (22 species), and *Campanulaceae* (17 species).

3.2.5.2 Forest belt.

Mixed leaved (polidominant) forests.

These forests are formed by Beech (*Fagus orientalis*), hornbeam (*Carpinus caucasica*), chestnut (*Castanea sativa*), alder (*Alnus barbata*), lime (*Tilia begoniifolia*), and mountain sycamore (*Acer pseudoplatanus*). Many rare, endemic and relict species are components of floristic spectrum of this type (*Vaccinium arctostaphylos, Rhododendron ponticum, Rhododendron luteum, Daphne pontica, Laurocerasus officinalis, Hedera colchica, Ulmus glabra*, *etc*) and they often play a determinant role at the association level.

Mixed leaved – dark coniferous forests.

From Georgian Red Book species the following are distributed: English yew (*Taxus baccata*), elm (*Ulmus glabra*), chestnut (*Castanea sativa*), Albov's paradise plant (*Daphne alboviana*) and European hop hornbeam (*Ostrya carpinifolia*); from rare, endemic and relict species: *Vaccinium arctostaphylos, Ruscus colchicus, Rhododendron ponticum, Rhododendron luteum, Laurocerasus officinalis, Senecio rombifolium, Valeriana alliariifolium, Gadellia lactiflora, Cicerbita macrophylla, Valeriana tiliifolia, Hedera colchica, Ilex colchica, Goodiera repena, Listera cordata- Viburnum orientale, Aconitum orientale, Luzula sylvatika*, etc.

Dark coniferous forests.

The following Georgian Red List species are represented in the dark coniferous forests: European hop hornbeam (*Ostrya carpinifolia*), Albov's paradise plant (*Daphne alboviana*), elm (*Ulmus glabra*) and Caucasian oak (*Quercus macranthera*). These forests are rich with endemic, relict and rare flora species: *Rubus platyphyllos, Delphinium irinorum, Cirsium oblongitolium, Hieracium latbariense, Polygonatum obtusifolium, Pulsatilla aurea, Rhododendron ponticum, Hedera colchica, Laurocerasus officinalis, Ilex colchica, Rhododendron luteum, Vaccinium arctostaphylos, Ruscus colchicus, Viburnum orientale, Aconitum nasutum, Senecio rombifolius, Polygonatum verticillatum, Luzula sylvatica, Gadellia lactiflora, Cicerbita macrophylla, Senecio pojarkovae*, etc.

3.2.5.3 The sub alpine belt.

In the grass vegetation of the meadows of this type the following are mainly dominant: *Anemonastrum fasciculatum, Anemonastrum fasciculatum, Trollius ranunculinu, Pulsatilla aurea, Geranium sylvaticum, Geranium psilostemon, Geraniub ibericum, while in poly-dominant types the following are co-dominant with the above listed: Ranunculus acutilobus, Cepalaria gigantea, Kemulariella caucasica, Stachy macrantha, Inula orientalis, Geranium gimnocaulon, Vicia balansae, Campanula latifolia, Veratrum labelianum, Scabiosa caucasica, Geranium renardii, etc.*

3.2.5.4 The alpine belt.

Mat nardusgrass (Nardus stricta) meadows: *Anthroxanthum odoratum, Brisa elatior, Poa alpina, Luzula spicata, L. multiflora, Sibbaldia parviflora, Alchemilla caucasica, Cerastium arventse, Taraxacum stevenii, Carum caucasicum, Campanula tridentata, Festuca ovina, Ranunculus oreophilus, and Trifolium ambiguum*.

Fescue (Festuca varia): *Poa iberica, Bromus variegatus, Agrostis planifolia, Anthoxanthum odoratum, Festuca ovina, Deschampsia Flexuosa, Stachys macrantha, geranium ibericum, Scabriosa caucasica, Ranunculus caucasicus, Thymus collinus, Alchemilla sericata, Sibbaldia semiglabra, S. parviflora, Carum caucasicum, Campanula biebersteiniana, Potentilla crantzii, Carex medwedewii, C. meinshauseniana, C. Ruetiana, Alopecurus dasiannthus, Poa alpina, Colpodium versicdor, Senecio taraxacifolium* .

Festuca airoides*: Sibbaldia semiglabra, Alchemilla caucasica, Carum caucasicum, Ranunculus oreophilus, Primula algida, Veronica gentianoides, Poa alpina, Briza marcoviczii, Colpodium variegatum, Luzula spicata, Carex meinshauseniana, C. medwedewii, Kobresia schoenoides, Pedicularis nordmanniana, Gentiana dschimilensis, G. angulosa, Gnaphalum supinam, Antennaria caucasica, Anthoxantum odoratum, Koeleria caucasica, Hieracium pilosella, Myosotis alpestris.*

Alpine fescue meadows are classified as pasture with good nutrition value; it is resistant to normal load due to its full tussocks and prevents erosion.

Patches of alpine vegetation.

The following species are dominant in the patches of alpine vegetation: *Veronica gentianoies, Gnaphalium supinum, Pedicularis nordmanniana, Ranunculus oreophilus, Campanula tridentata, Anthoxanthum odoratum, Campanula biebersteiniana, Carum caucasicum, Minuartia caucasica, Tripleurospermum caucasicum, taraxacum stevenii, Carex leporina, Poa alpina, Luzula spicata, Carex micropodioid* .

Alpine geranium meadows.

The following species are characteristic for these meadows : *Alchemilla retinervis, Sibbaldia semiglabra Potentilla gelidda, Carum caucasicum, Poa alpina, Ranunculus oreophilus, Raraxacum stevanii, Luzula spicata*, etc.

The the following are of particular importance : endemic genus of Caucasus (*Grossheimia*); species included in the Georgian Red List (2003) - *Silene pygmae*; Georgian endemics - *Cerastium svanicum, Pulsatilla aurea, Cirsium pugnax, Helichrisum polyphyllum, Hieracium Latbariense* ; Caucasian endemics - *Cerastium undulatifolium, C. polymorphum, Dianthus ruprechtii, Geranium renardii, Thymus caucasicus, Th. nummularius, Medicago polychroa, Vicia caucasica, Ranunculus svaneticus, R. osseticus, Melampyrum caucasicus and Pedicularis crassirostris.*

3.2.5.5 Sub-Nival belt.

Almost all taxa (*Pseudovesicaria digitata, Ranunculus lojkae, Scrophularia minima, Symphyoloma graveolens, Primula bayernii, Draba bryoides, Cerastium polymorphum, Lamium tomentosum, Nepeta supina, Delphinium caucasicum, Cerastium undulatifolium, Viola minuta, Eunomia rostundifolia, Cerastium svanicum, Senecio sosnovsky, Silene marcowiczii, Ranunculus svaneticus*) within the habitats of the sub-nival belt are Caucasian endemics, one of these, the *Silene marcowiczii,* is included in the Georgian Red List.

3.2.6 Fauna.

3.2.6.1 General.

The wildlife within the various habitats of the USNP is fairly diverse. Due to increasing intensity of human activities many of the species are endangered, however. Firstly, species are directly threatened by hunting. Some decades ago herds consisting of hundreds of Tur were observed in Svaneti. Extensive uncontrolled hunting resulted in a catastrophic reduction of their number.

Due to the significant decrease of the mammals that were hunted within the National Park birds became the new hunting target. This had a negative impact on the population of rare species like Caucasian black grouse (*Tetrao mlokosiewiczi*) and Caucasian snow cock *(Tetraogallus caucasicus*),.

Finally, the feeding base is significantly altered. The feeding base of the bearded vulture and the black vulture and other necrophagous birds, for instance, has significantly decreased due to human activities and hunting and is now a limiting factor.

3.2.6.2 Mammals.

The following mammals are found in the middle and upper sub-belts of the forest belt on the main watershed of Caucasus and its branch-ridges. Reference is made to Annex 3 for a complete list.

Caucasian mole (*Talpa caucasica*), Radde's shrew (*Sorex raddei*), Caucasian squirrel (*Sciurus anomalus*), common squirrel (*Sciurus vulgaris*), common dormouse (*Sylvaemus mystacinus*), Caucasian mouse (*Sylvaemus ponticus*), noctule bat (*Nyctalus noctula*), brown long-eared bat (*Plecotus auritus*), lesser horseshoe bat (*Rhinopophus hipposideros*), lynx (*Felis lynx)*, brown bear (*Ursus arctos*), otter (*Lutra lutra)*, wolf (*Canis lupus*), fox (Vulpes vulpes), wild cat (Felis silvestris), forest marten (*Martes foina*), roe deer (*Capreolus capreolus*), chamois (*Rupicapra rupicapra*). The following are present in sub-alpine and alpine belts: Caucasian shrew (*Sorex caucasicus*), Klukhor birch mouse (*Sicista kluchorica*), Prometheomys satunin (*Prometheomys schaposchnikowi*), Gudauri vole (*Chionomys gud*), chamois (*Rupicapra rupicapra*), East Caucasian tur (C*apra cylindricornis*) and West Caucasian tur (*Capra caucasica*).
The following of these species are included in the Georgian Red List: chamois - *Rupicapra rupicapra* (EN), East Caucasian tur - C*apra cylindricornis* (VU), West Caucasian tur - *Capra caucasica* (EN), brown bear - *Ursus arctos* (EN), and lesser horseshoe bat - *Rhinopophus hipposideros* (VU), Prometheomys satunin - *Prometheomys schaposchnikowi* (VU). Both of the above mentioned tur species are Caucasian endemics. Due to the uncontrolled hunting, the amount of the turs is reduced catastrophically. According to literature data[3] and the 1996 Georgia's Biodiversity data, 2500 individuals lived in Georgia in the 90th of last century. Especially the Tetnuldi and Tsaneri mountains housed large populations. A recent expert assessment showed that less than 1000 individuals and one group with an average of 15 individuals are left.

3.2.6.3 Birds.

The following bird species of the USNP are included in Georgian Red List:
Bearded vulture - *Gypaetus barbatus* (VU), black vulture - *Aegypius monachus* (VU), Eurasian griffon vulture - *Gyps fulvus* (VU), golden eagle - *Aquila crysaetus* (VU), boreal owl - *Aegolius funereus* (VU), Caucasian grouse- *Tetrao mlokosiewiczi* (VU), white winged redstart - *Phoenicurus erythrogaster* (VU), great rose finch - *Carpodacus rubicilla* (VU). Reference is made to Annex 4 for a complete list.
As the natural landscape within the National Park has degraded the number of birds has decreased. The decrease of the feeding base strongly limits the number of Bearded vultures and other necrophagous birds. Hunting has a negative impact on the Black grouse and Stopcock populations, especially – during intensive snowing, when they descend to lower altitudes. Cutting of the sea-buckthorn in winter could become the limiting factor for the white winged redstart and the great rose finch, which feed on the berries of the shrubbery.

3.2.6.4 Reptiles, Amphibians, Fishes.

According to the available data the following reptile species are distributed within Svaneti: *Coronella austriaca, Vipera lotievi, Vipera dinniki, Darevskia derjugini, Darevskia rudis, Darevskia caucasica*; the following amphibians are common: green toad (*Bufo viridis*), tree frog (*Hyla arborea*), Caucasian parsley frog (*Pelodytes caucasicus*); from the fishes trout (*Salmo trutta*) should be mentioned.

3.2.7. Historical-cultural aspects.

3.2.7.1 General.

There are no settlements within the USNP, still many important archeological and architectural monuments are found on the territory and its surroundings. Many villages in the near vicinity are prominent for their churches many of which have murals of the Middle Ages. Residential-defensive architecture has been less preserved in Lower Svaneti, however. Reference is made to Annex 5 for a complete list of monuments and to Annex 10 for their location. Most of these monuments are in critical conditions due to lack of maintenance and need urgent repair.

[3] Source: `Conditions of the East Caucasian tur (C*apra cylindricornis)* and West Caucasian tur (C*apra caucasica)in Georgia*, NACRES, 2006

3.2.7.2 Archaeology.

The archeological monuments are the major part of the cultural heritage of Svaneti. More than 150 archeological monuments of differing periods have been found, the earliest monument dating from the late Stone Age, the latest from XVII-XVIII century. Surveys of some monuments have been ceased due to lack of funding.

The objects of the Bronze and Iron Ages prove that Svaneti was one of the centers of the Kolkhuri culture of the Bronze Age. The articles preserved in the churches and obtained through archaeological excavations include fighting and agricultural tools, worship objects, artistic works, etc. The bronze articles are notable for having local nuances, along with common Kolkhuri marks.

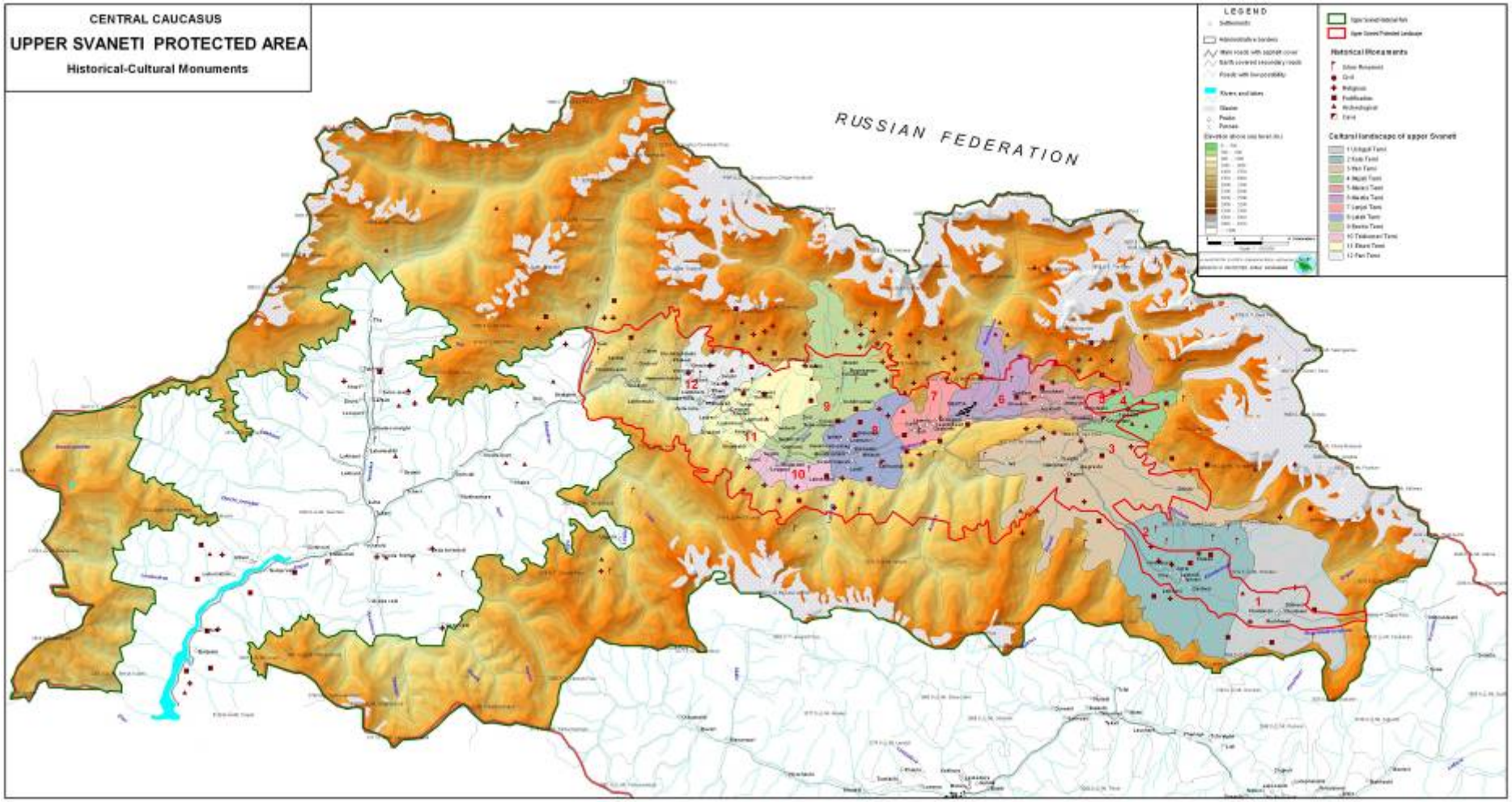
3.2.7.3 Achitecture.

There are about 190 churches in upper Svaneti. As the National Park is located high up in the mountains, the area has always been scarcely populated. For that reason only a few historical-cultural monuments are found in this area, most of them are located in the Protected Landscape.

The most import monuments of USNP are:

- the ruins of the Medieval church Mukhuri in the valley of the r. Lailachala
- the ruins of the Guli church located east of the village Mazeri on the west slope of the Guli mountain (2925 m) at an altitude of 1500 m and

Fig. 3.5. Historical-cultural monuments.



3.2.8 Socio-economic aspects.

3.2.8.1 General.

No settlements are found within the USNP, but the park is important for the neighboring villages. For that reason a socio economic study was carried out, that included 21 villages of various types. The criteria for selection was the distance to the USNP and the extent to which the hay meadows-pastures and forests within the National Park were used. The characteristics of these villages were obtained from the recent national census (2002) and agricultural census (2004). Moreover inhabitants of the villages were interviewed to complete this information. To that end an appropriate questionnaire was used and about 60 questionnaires were processed.

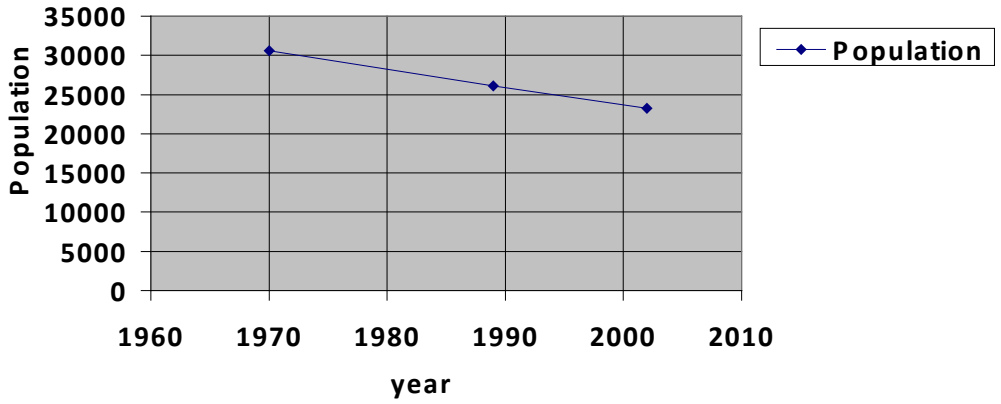
These selected villages include 695 households (mainly family households) and 3150 inhabitants. The majority of the selected villages are situated within the Upper Svaneti Protected Landscape and in the vicinity of the USNP; few of the villages are near the USNP, but are not included in the Protected Areas.

Some villages were selected that would experience a significant impact of the USNP. In these settlements the local inhabitants were interviewed using a questionnaires (about 60 questionnaires were filled in and processed).

The Humboldt University of Berlin completed a socio-economic study of Zemo Svaneti in 2006.[4] The results of this study were used to supplement the data collected by the consultant.

3.2.8.2 Settlements and demography.

The demographic data of the settlements around the USNP are shown in Table 1 of Annex 6. The population decreases in the area as a whole but the rate differs from one location to another due to internal migration. Some villages are completely abandoned whereas neighbouring villages may grow or remain stable as they accommodated these migrants.



The study showed that the average age of the population of the high mountainous villages near the USNP is higher than in villages situated at lower altitudes. This is typical for the majority of the high mountainous villages of Svaneti and is caused by the poor social-economic conditions: absence of schools in villages, unsatisfactory health care and high unemployment rates. Due to the latter, the young people migrate to lower areas or even foreign countries. People who leave the region maintain strong family relations. They often receive part of the harvest and animal products, and in turn help family members to purchase certain products from outside Zemo Svaneti. These transfers apparently constitute an important feature in the Svan economy.

[4] Strategic Options towards Sustainable Development in Mountainous regions A Case Study on Zemo Svaneti Georgia. Humboldt University Berlin, December 2006.

3.2.8.3 Economic aspects.

General.

Economic activities in the villages near the USNP are mainly undertaken by family households, mainly farmers. Only few are employed in other sectors: transport, road repair, trade, education, health care, tourism and other services.

Agriculture.

The main economic sector is cattle breeding. It plays a major role for the subsistence of households and for extra income. The low milk and meat performance is due to a variety of problems:
The low quality and scarce fodder base, the absence of refreshment of the existing breed and the need for a process of systematic reproduction.
A major problem is the current overuse of meadows and pastures as a natural base for the feeding of cattle, resulting in a threat to man and the environment. The main challenge in this sector is to reduce the excessive pressure on natural resources.
The potentials for cultivation of crop, vegetable and fruit are limited by the unfavourable natural conditions. Presently the main crops are potatoes, maize and beans. Most of the agricultural production is used for own consumption.
The broad knowledge regarding cultivation and the interest in optimising cultivation represent the main potentials in this sector. The potential for improvement is limited by the unfavourable production conditions and the poor market access.
This aspect is further discussed in Chapter 9.

Forestry.

Forest offers multiple functions which contribute in varying degrees to the prosperity of Zemo Svaneti. Independently from its specific function, sustainable forest management (including animal husbandry activities) is the key to the positive future use of this natural resource.
Forest privatisation, as foreseen in the most recent reform plans, may endanger the future sustainable development of this sector if no proper techniques are used to minimize environmental impacts and no reforestation plans are envisaged in the contracts with users. For forestry, the optimum objective would be a combination of economic growth and sustainable forest use. This should be attained through improving wood and energy efficiency and by combining tourism with nature conservation. Public private partnership and community forests may be another option to achieve sustainable forest use. These aspects are further discussed in Chapter 9.

Tourism.

The region does have the potential to diversify its tourism products beyond trekking and alpinism. The principal local attractions should be preserved for future generation and could be better advertised and further exploited. The focus of such a strategy should be “sustainable tourism” and, in developing the approach, consideration should be given to the negative side effects of tourism development and ways of avoiding them. This aspect is further discussed in Chapter 9.

Income.

Data on income are available for the Svaneti region as a whole. These data are aggregated data based upon the national census of 2002 and the agricultural census of 2004. They give a global picture of the structure of the economy and the most important sectors but cannot be used to obtain income data for individuals within the project area. In order to obtain this information the data from the interviews were used. This included some 60 household’s equivalent to about 1% of the number of households in the study area. Obviously, this date should be interpreted with caution. It gives only a qualitative picture as the sample size is small and people are reluctant to disclose all income.
The results are shown in the Table 2 of Annex 6. The study gives the per capita monthly income from agriculture. The figures include the value of products sold and the value of the products consumed by the farmers. The study shows that the gross income of the farmers is low and that most of the production is consumed by the farmers. Only some 5 to 15 % (from 40 to 60 GEL per month for a family with 4 persons) is available to cover other expenses by the income that is earned in cash by selling agricultural products. The picture is slightly more positive for families with pensioners, although the average monthly pension for the

research period (2006) was only 38 GEL and pensioners in general spend a large part on health care and heating.
There is an obvious need to diversify the economy and to look for other sources of income. The establishment of the protected regions may possibly act as a catalyst for this.

3.2.8.4 Land ownership.

General.
The USNP includes mainly state owned meadows and pastures and state owned forests. The area around the USNP is also state owned and mainly used for agriculture. (See Figure 3.5. and the Map 10.3 in Annex 10.)

Forests.
In 2007, a cooperation agreement was signed between the Patriarchy of Georgia and the Ministry of the Protection of Environment and Natural Resources during the development of the draft of the law on "Protection of Environment and Natural Resources".

According to Article 11 of the Constitutional Agreement between Georgia and the Georgian Church, the state has the commitment to partially compensate the damage which was inflicted to the church during the XIX-XX c.c., especially – in the period of 1921-1990, when Georgia lost its independence.

3.2.8.5 Land- and resource use.

Land use.
Agricultural activities in the villages adjacent to USNP are mainly undertaken by family households. Particulars of the agricultural land use are shown in Table 3 of Annex 6.
On average such households use 1.41 ha of land. It should be noted, however, that these areas are dispersed and consist of several (often 3-4) parts. The land is used as arable land (0.20 ha), perennial crops (0.002 ha) and hay meadows-pastures (1.21 ha) in direct use. They have approximately 6.87 head of livestock, among these: 3.86 cows and buffalos and 3.45 sheep and goat.

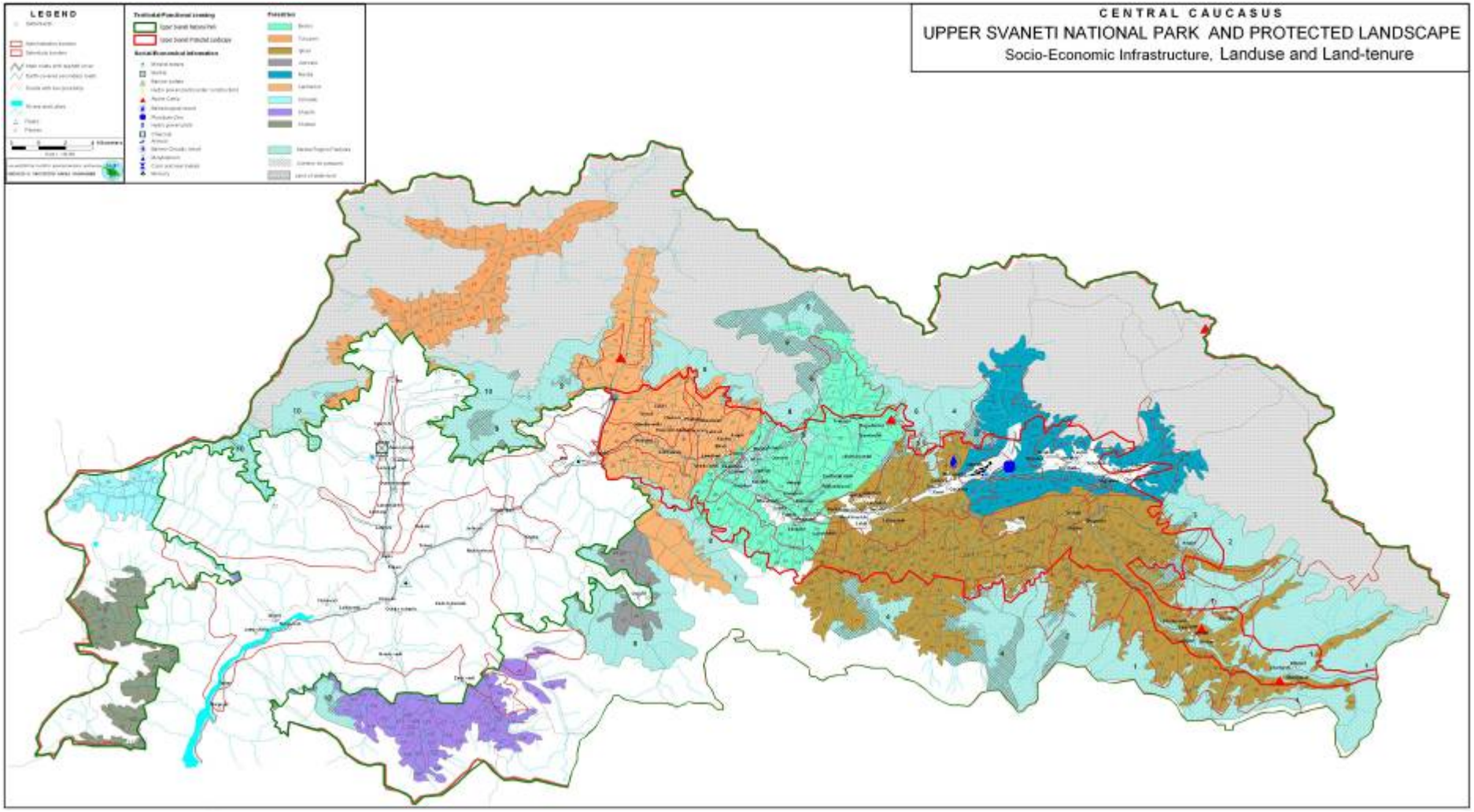
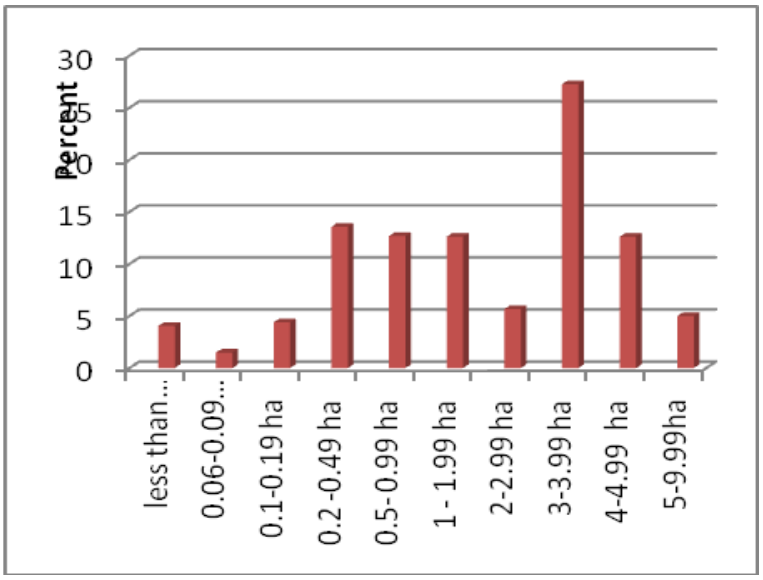


Fig 3.6. Socio-economic information.

The area of the plots in the selected households (695 units) is shown in Table 4 of Annex 6 and Figure 3.5. It appears that about one quarter of the farms have an area of 3 to 4 ha. Most farms have plots between 0.2 and 2 ha (40 %).

Figure 3.5. Distribution of plot sizes.



The smaller farms have inadequate technical equipment and use hand tools and horses / oxen for sowing, cultivation, transportation of hay and fire wood. Small household farms do not have the opportunity to take loans; for that reason it is impossible to buy seeds, pesticides, fertilizers and other necessary material. Moreover the agricultural practices should be updated: there is a need for consultation services that could help farmers to increase crop yield and productivity of livestock breeding by introducing new agro technologies and new products. Presently peasants have inadequate or information on new seeds, breeds of livestock and agro-technologies and have little knowledge of legal and financial issues and other relevant aspects.

Resource use.

Non renewable resources.

The area is rich in ores and minerals and has vast resources of natural stones, marble, clay and gypsum. The latter is used to manufacture various types of building materials and structural elements.

The MoEPNR has made an inventory of these resources and has estimated their economic potential. According to this inventory no resources are located within the National Park. Although not required by law, it is recommended to make an environmental impact assessment when leases are given to exploit existing and new reserves in the vicinity of Protected Areas.

Renewable resources.

Hydro power.

The rivers in the area have a high potential for hydropower. In view of the severe environmental impact of power plants with high dams and reservoirs, the government has decided that only small hydro power plans (maximum capacity between 1 and 10 MW) are allowed, mainly in highly populated areas. Micro units (capacity <100KW) and mini plants (capacity between 0.1 and 1 MW) that do not use reservoirs are allowed in other areas. Their potential for the Svaneti Protected Areas should be further explored.

Mineral water.

The area has mineral springs and there is a potential for production of mineral water. All potential sites are located outside the borders of the National Park, sufficiently far from the borders that no impact of ground water extraction on the National Park has to be expected, but environmental impact assessments should still be made when leases for exploitation of existing and new reserves will be given.

Grazing and hay making.
The pastures in the National Park are used in summer for grazing and haymaking, that provides food for the cattle in winter. The maximum number of cattle that can be fed depends on the area, the slope of the terrain, the type of cattle and the level of agro technology. Details are shown in BOX 3.1.

3.1. Carrying Capacity pastures for grazing and hay making.

The allowable number of the cattle should be based upon the carrying capacity of pastures and hay meadows. It is commonly accepted that 1 ha of pastures can feed 1 head of cattle in summer, without damaging the pastures. However, this figure also depends on the slope of the pasture. It should also be noted, that the area required for sheep and goat is 1/4th of the area needed for one head of cattle. The selected villages have only a small number of sheep and goats which graze on the pastures adjacent to the villages. For that reason, they were not included in pressure calculations for summer hay meadows and pastures.
In winter a cow needs as a minimum 1.5 t of hay if no other food is available. According to the local population approximately 1 ha of hay meadow is necessary to produce this amount of hay. Grown individuals (oxen, horses) need nearly as much food as growing individuals (depending on their weight) some 0.5-1.0 t. on the average, an individual (calf, cow or ox and other grown cattle) needs 1-1.5 t hay. As shown in the report of the Humboldt University the available amount of fodder and hay is insufficient to feed the cattle in winter.
If the number of cattle and sheep on mountain slopes exceeds the carrying capacity it will cause strong degradation of the pastures, which often results in severe erosion. Consequently, prevention of overgrazing on high mountainous slopes and wise use of the pasture is necessary.
Hay making is less problematic from an environmental point of view. Due to the narrow weather window hay making only occurs once in late summer. The hay is left on the meadows until winter when it can be transported by sleds. This procedure allows seeds to grow and disseminate freely. This “traditional use” has proved to be favorable for the regeneration of the meadow vegetation.

In the Soviet period large state agricultural households and collective farms intensively used the alpine hay meadows-pastures in summer; after they disintegrated many small family households were formed. This caused a decrease of the grazing pressure on the pastures.

The agricultural census of Georgia made in 2004 by the Department of Statistics, comprised the land leased and in property of the households, among these – hay meadows-pastures. However, the census does not show the areas of pastures adjacent to the villages. These areas were determined by subtracting the areas of meadows and pastures within the National Park from the total area. The areas within the park were obtained from the recent GIS maps prepared for the project. It can be concluded that the grazing pressure in Mestia district is well below the carrying capacity. It districts 0.13 head of livestock/ha (see Table 5 of Annex 6.).
It appears that no problems will occur if a restricted grazing regime will be enforced in the National park. In some areas, however, specific conditions should be taken into consideration: the distance of the alpine hay meadow-pasture from the village, condition of the access roads, percentage of the large livestock breeding households in the economy, ability to buy hay and other factors.
It should also be noted, that some villages and the majority of small and medium family households could not use alpine and sub-alpine summer hay meadows-pastures due to their distant location from the villages; the access roads are often damaged, also the movement of the livestock to the summer pastures is connected with additional costs, which is economically unjustified for the owners of small number (1-3 units, among these 1-2 cows) of livestock units. Thus these owners have to use hay meadows-pastures adjacent to the villages; some of the households are forced to buy hay produced in other districts (mainly – lowland).

Wood cutting.
The forests are intensively used by local population mainly as pastures for livestock and hay meadows. Wood cutting is also important as other energy sources are scarce or expensive; wood is used for cooking and heating. Heating is required in 7-8 months due to the long winter typical for high mountainous areas. On the average a family consisting of 5 and more members, with 1-2 children consumes approximately 20-25 m^3 fire wood per year; families consisting of 3-4 members about 15-20 m^3 and families with 1-2 members 7-10 m^3. At lower altitudes the required amount of fire wood decreases with about 20-30 %. Average consume of firewood per household taking into account the structure of the population and the amount of electricity supplied by Enguri Hydro Power Station it is estimated that on average 10 -14 m^3, of wood is required . The 695 households use some 15-25 thousand m^3 per year, therefore. Obviously the figure depends on the length and severity of the winter.

Only sanitary tree felling was allowed during the Soviet period. However, in addition to fire wood extraction, illegal timber logging for industrial purposes has occurred since the 90s of the past century, although a significant decrease has been observed recently. As a result, the significant part of Svaneti forests has become thinner.
Once the Law on Establishment and Management of the Central-Caucasus Protected Areas will be enforced, limited wood cutting in the National Park will only be allowed in the traditional use zone and the managed zone. As this area is less than the area that is presently used, there may be a need to look for alternatives. Reduced impact logging in the Multiple Use Area , more efficient wood stoves and other energy sources should be explored, therefore.

Other forest resources.
Local inhabitants collect mushrooms, berries, wild fruits, medicinal plants, etc. for private consumption, no large scale commercial collection takes place as yet.

Hunting and fishing.
Hunting is a tradition in Svaneti, especially hunting goats was popular. However, strict rules were observed regarding the period of hunting and the number of animals that could be hunted. So the impact of hunting on the ecosystems was not severe. The main game is tur, bear and chamois, which are included in the Georgia's red book. Hunters kill on average 2 tur; they do not need the meat for subsistence but sell the horns.
In spite of the fact that it is prohibited by law, people continue to hunt on turs, mainly in the following locations: Natseri, Tviberi, Lekhziri, in the region of Shkhara, also Adishi, near the mountain Tetnuldi. Obviously the laws should be more strictly enforced and there should be more control in these areas.
According to the local population, a significant part of Caucasian Tur residing in the reserves north of the central ridge of Caucasus migrates to the southern slopes and pastures to graze. As these areas are now less intensively used for grazing livestock, the number of Tur which moves to southern slopes of Caucasus to graze has increased. [5]

3.3 The Upper Svaneti Protected Landscape (USPL).

3.3.1 General.

Protected landscapes are territories where the interaction of people and nature over time has produced an area of distinct character often with significant aesthetic, ecological and/or cultural value and often with high biological diversity. The main management objective is to preserve these ecological and historical-cultural values of the territory without jeopardizing the social and economic interests of the local inhabitants. The aspects that are of importance for the management of the territory are discussed in the following sections.

3.3.2 Physical-geographical characteristics.

Location.
The USPL is located on both banks of the valley of the r. Enguri from the mouth of r. Nakra up to the village Ushguli in the historical province of Upper Svaneti. It is bordered by the USNP in the north, east and south and the Svaneti Multiple Use area to the west. The USPL is part of the Mestia administrative district.

Area. 44,587 ha.

Description.
The USPL comprises the lower parts of r. Enguri and its tributaries on the right bank (Nakra, Dolra, Mestiachala, Khaldechala and Adishischala) and the left bank (Arshila, Lailachala and Khumfreri). See Box 3.1.

Box 3.1: The River Enguri.

The r. Enguri starts from the main watershed of the Caucasus at the Shkhara and Namkvani glaciers at an altitude of 2800-2900 m above MSL. The upper reaches of the r. Enguri, from its source to the mouth of the r. Khaldechala (a left tributary of r. Enguri) are located along the southern slope of the main watershed of Caucasus (between p. Namkvani – 4233 m and Jangha – 5059 m) and the north-easternmost part of the Svaneti ridge, the northern slope of the Lamaliasgori ridge.

[5] Reference: Assesement of the East Caucasian tur (*Capra cylindricornis*) and West Caucasian tur (*Capra caucasica*) *in Georgia*, NACRES, 2006

The Kali, that is part of the r. Enguri gorge, starts from the mouth of r. Khaldechala and ends at the mouth of the Latali Temi, a right tributary of the r. Enguri, at 1200 m above MSL)

From the upper reaches of r. Enguri till the mouth of r. Mulkhra it is joined by r. Khaldechala (1760 m above MSL) and Adishischala (1620 m above MSL) to the right and by some small tributaries from the northern slope of the Svaneti ridge (among these Lasili (1570 m above MSL), Arshira (1480 m above MSL) and Lailachala (1140 m above MSL)) to the left.

Another tributary, the r. Mulkhra that starts from the main watershed of the Caucasus at the Tsaneri and Tviberi glaciers joins the r. Mestiachala (at an altitude of 1380 m above MSL) near the large village Mestia.

From the mouth of the r. Mulkhra to the mouth of the r. Nakra (a right tributary of r. Enguri) (960 m above MSL) the gorge of the r. Enguri broadens. The gorge of the Dolra, another right tributary of r. Enguri, is also prominent for its fairly wide bottom. The R. Dolra flows into r. Enguri at an altitude of 1100 m above MSL. At this part of the catchment of the r. Enguri flat-bottomed steps of old riverine terraces have been preserved on both sides of the gorge and at various relative altitudes from the riverbed.

From Lakhamula Temi (r. Nakra estuary) the gorge of the r. Enguri narrows and its bottom is characterized by Kldekari and canyon formations. The western border of the USPL is located in the estuary area of r. Nakra. Here the river leaves the Protected Landscape and flows through the Kolkheti lowlands where it discharges into the Black sea near Anaklia.

The USPL situated between the southern slope of the main watershed of the Caucasus and the northern slope of the Svaneti ridge. The higher part of the Protected Landscape is prominent for its complex and dissected relief. Old glacier (paleo-glacial) terrain forms are dominant – trough gorges, moraines, etc; also erosive gorges with steep slopes and canyon-shaped narrow ridges etc are present.

The lower area mainly comprises slopes of relatively small altitude, approximately 100-300 m above the bottom of the gorges of the r. Enguri and its main tributaries the Mulkhura, Dolra and Nakra.

Trough (old glacier) gorges without forest cover are typical for the gorge of the r. Enguri at altitudes higher than 2000-2100 m above MSL. Below Ushguli Temi the river slopes are mainly covered with forest, while the gorge is more of an erosive type.

The USPL is surrounded by high mountains that protect it from the cold air masses. The area is characterized, therefore, by a relatively mild, moderately humid mountain and almost windless climate, with snowy winters and cool summers. The average annual temperature in the western (lower) part of the Protected Landscape is 10° C and in eastern (higher part – 5-6° C. The total annual amount of precipitation is 900-1300 mm.

3.3.3 Landscapes.

General.

The natural landscape is substantially modified on the larger part of the USPL due to the influence of intensive economic use. In spite of this various close to natural landscapes have been preserved in some areas of the Protected Landscape such as the territories along the border between the Protected Landscape and the USNP. Among these landscapes mixed beech-dark coniferous and dark coniferous forest landscapes developed on erosive -denudational mountain relief at the altitude of 1000-2000 m above MSL is dominating (Landscape 125). This landscape is mainly represented within the USPL along the bottom of r. Enguri gorge.

Beech forest landscape with the rare presence of chestnut, spruce and fir is found in the western part of the Protected Landscape on erosive-denudational relief at altitudes between1500-1700 m above MSL (Landscape 70).

High mountain landscapes are found at altitudes higher than 1800 m above MSL (Landscape 129 and 135.).

Specific geo-morphologic features.

The huge Lahilachala moraine in the Valley of r. Lahilachala) is a noteworthy geo-morphological formation in the Protected Landscape. This giant block is brought to the area by the glaciers from the highest place of the Svaneti range. The length and height of the block is 9 and 11 m. respectively.

3.3.4 Ecosystems and vegetation.

The ecosystems and vegetation types in the Protected Landscape are shown on Figure 3.4 in section 3.2. and on the Map 10.1 in Annex 10. The forests, sub-alpine, alpine and sub-nival belts contain the following characteristic habitats and vegetation:

The *forest belt*:

Mixed deciduous (poli-dominant) forests;
Mixed deciduous – Dark Coniferous Forest;
Dark Coniferous Forest.

The *sub-alpine belt*:

Thin Forests;
Sub-Alpine Crook-stem forests;
Sub alpine forb grass complexes;
Broad leaved forb grass meadows.

The *alpine belt* :

Alpine meadows;
Patches of alpine flora;
Alpine geranium meadows.

Forest belt.

The natural habitats of the forest belt in the USPL are modified due to long-lasting human activity as the area is densely populated. The lower forest belt mainly consists of dark coniferous (spruce-fir) and mixed (beech-fir, beech-spruce) forest derivatives, secondary thin forests, forest-shrubbery and meadows. In the higher forest belt mixed beech-dark coniferous and dark coniferous forest landscape with the presence of evergreen under storey have been preserved. Rarely natural and more often close to natural forests are found in some places mainly in areas that were hard to access (the left side of the gorge of r. Enguri– the foot of the northern slope of the Svaneti ridge, the slopes of the Ughviri ridge, etc). The vegetation is similar to that described for the Upper Svaneti National Park.

The following Landscapes and ecosystems of the secondary forest belt, shown on Figure 3.4. are of importance:.

IV-3 Secondary forest, forest-shrubbery and meadow habitats of the left side of r. Enguri from Khaishi reservoir till r. Laila (left tributary of r. Enguri) gorge,

IV-4 Secondary forest, forest-shrubbery and meadow habitats of the left side of r. Enguri from r. Nakra gorge till village Adishi,

IV-5 Secondary forest, forest-shrubbery and meadow habitats of the northern slope of r. Svaneti ridge from r. Lailachala estuary till r. Lasili (left tributary of r. Enguri) estuary.

Sub alpine- and alpine belt.

In the sub-alpine and alpine belt tall grass and dense grassy meadows with the presence of beech and birch crook stem forests occur, often in the form of fragments at altitudes higher than 1800 m above MSL The vegetation is similar to that described for the Upper Svaneti National Park.

The following eco system components , shown on Figure 3.4 , are typical for the sub alpine and alpine belt:

II – habitats of the southern slope and its branch ridges of the main watershed of the Caucasus, also the Svaneti, Egrisi, Lechkhumi and Racha ridge sub-alpine and alpine belts (among these, limestone substrata).

3.3.5 Flora.

The following species that are found in the USPL are included in the Georgian Red list: Elm (*Ulmus glabra),* English yew (*Taxus baccata),* highm oak *(Quercus macrathera),* paradise plant *(Daphne alboviana)* as well as endemic species of Svaneti – Svaneti *Bellflower (Campanula svanetica),* Svaneti buttercup (*Ranunculus svaneticus),* Svaneti cerastium *(Cerastium svanicum),* Svaneti potentila (*Potentilla svanetica), Euphrasia svanetica*.

Chestnut (*Castanea sativa*) included in the Georgian Red List is seldom observed within the beech forests of the western part of the Protected Landscape in on both sides of the gorge in the upper reaches of r. Nakra and at the foot of the northern slope of the Svaneti ridge. Reference is made to Annex 2 for a complete list.

3.3.6 Fauna.

General.

Due to human activities within the USPL wildlife has been disturbed significantly. The field work performed in 2006-2007, confirmed the presence of the following species:

Mammals.

Hedgehog (*Erinoceus europaeus*), white-toothed shrew (*Corcidura russula*), hare (*Lepus europaeus*), grey rat (*Rattus norvegicus*), Caucasian forest mouse (*Apodemus silvaticus*), Caucasian water shrew (*Sorex caucasicus*), whiskered bat (*Myotis mystacinus*), common bat (*Vespertilio murinus*), Caucasian mole (*Talpa Caucasica*), common squirrel (*Siurus anomalus*), forest marten (*Martes martes*), fox (*Vilpes vilpes*), badger (*Meles meles*) and Georgian Red List species brown bear (*Ursus arctos*).

Birds.

Golden eagle (*Aquila chrysaetos*), bearded vulture (*Gypaetus barbatus*), long legged buzzard (*Buteos rufinus*), white winged redstart (*Phoenicurus erythrogaster*), great rosefinch (*Carpodacus rubicilla*) as well as common cuckoo (*Cuculus canorus*), woodpigeon (*Columba palumbus*), mistle thrush (*Turdus viscivorus*), jay (*Garrulus glandarius*), little owl (*Athene noctula*), common tawny owl (*Strix aluco*), green woodpecker (*Strix aluco*), great spotted woodpecker (*Dendrocopos major*), lesser spotted woodpecker (*Dendrocopos minor*), tree pipit (*Anthus trivialis*), redstart (*Phoenicurus phoenicurus*), goldcrest (*Regulus regulus*), golden oriole (*Oriolus oriolus*), chaffinch (*Fringilla coelebs*), red breasted flycatcher (*Ficedula parva*), red crossbill (*Loxia curvirostra*), etc.

3.3.7 Historic-Cultural aspects.

Cultural landscapes.

The USPL includes natural components that have been degraded due to human activities but still have a great conservation value. Moreover the area is renowned for its rich historical cultural heritage that needs urgent restoration and protection. In many areas these monuments fit harmoniously in the natural and cultural parts of the landscapes and form an essential part of the urban landscape. In these areas the conservation of these landscape values should also be pursued.

Historical-cultural monuments.

The unique combination of the natural-cultural landscape and the harmony between its architectural monuments and the landscape distinguishes this province from many other region of Georgia. Original rituals of pagan religion and ancient traditions have been preserved here. The Svaneti ethnographic heritage is rich with pre-Christian rites mixed with Christian beliefs; the later indicates the connection between cultures of various ages and originality of Svan tribes.

The cultural value of USPL is of global significance. The many small chamber-type churches of the area comprise masterpieces of Georgian art. The richest archeological material, reflecting the socio-economic and cultural life of the population, has been preserved in Svaneti.

The World Heritage Monument Chajhashi, (256 ha) is located in Upper Svaneti, in Ushguli Temi, where a strict protection regime is enforced on 1 ha in and around the monument. Ushguli is the last village (Temi) of a chain of villages in the beautiful high mountainous province Svaneti. It starts at the valley of the r. Enguri, the bottom of Shkhara and follows the Enguri gorge. This chain of villages is surrounded by mountains on three sides and by the monumental Shkhara gorge with permanent snow on the other side. This chain of villages that are aligned as beads on a string stops at the Caucasus.

Ushguli. ***© Vakhtang Naveriani.***

Four villages Murkmeli, Chajhashi, Jhibiani and Chvibiani that form the Lamaria complex are located in an isolated place. Chajhashi is prominent for the high level of protection, of its artistic value and fortification.

Ushguli is the highest settlement in Europe (2200 m above MSL) and one of the oldest dating back to the early middle ages settlement of Svaneti. All architectural types of Svaneti traditional folk art can be found here; but also totally different forms that are typical for Ushguli architecture and can only are found here. Ushguli fully represents the rich variety of civil architecture and original extraordinary compositions of Svaneti.

Archaeology.

Archeological monuments of various periods can be found within the Protected Landscape – they form a significant part of the cultural heritage of Svaneti. Dozens of archeological monuments of various periods were discovered and partially studied within the USPL. The oldest monument dates back to the Old Neolith. The following monuments in the Protected Landscape and neighboring areas should be mentioned:

> Ushguli, Etseri, Skareshi hill-remnants of settlement; Kali, Etseri, Ifari and Chuberi metallurgical production squares, burial mounds, etc.), the Bokvi burial grounds of the late Bronze Age and the Ghari burial grounds of the late Bronze Age.
>
> The archeological finds dating from the Antique Age are marked with wide diversity compared with the previous periods. Besides the articles donated to the churches and articles dispersed in the local population, significant archeological monuments have been excavated: the ruins of Ushguli, Etseri, Skareshi and squares of metal production (Kala, Etseri, Ipari), as well as the crematorium of Larilari (Chuberi).

Architecture.

The USPL is prominent for its residential, defensive and unique religious architecture. In the villages in and around the USPL almost two hundred relatively small vaulted churches have been preserved – their majority was built in X-XIV c.c. almost all of the churches contain masterpieces of Georgian art.

Civil architecture also forms an important part of the cultural heritage of the Protected Landscape. A significant part of the settlements of Upper Svaneti was a so called “free” or “reign-less” county where local inhabitants had to defend and protect themselves. To that end they constructed fortified residential buildings that were based upon the concept of the tower residences of Georgia.

The Svans chose residential areas that could easily be defended. Throughout centuries they built the unique Svan villages with the fortified houses and the characteristic Svan towers on the mountain slopes and along the river gorges. The Silhouettes of these Svan villages and especially their towers against the background of alpine

meadows and rocky mountains covered with permanent snow and glaciers leave a deep impression on the visitor.

The following architectural monuments should be mentioned. All monuments are severely deteriorated and urgent repairs and conservation is needed.

Lekhtegi Lamari Church.

In the historical Mestia tribal village Lekhtagi, in the Lamaria (St. Mary) church, rather interesting folk flow painting of the 15th century are preserved; it has been preserved in fragmented form and included a wide range of portraits of Japaridzes' Ktitor. Though being damaged, the images and accompanying explanatory inscriptions located in lower registers of the south, west, and north walls of the church could be still distinguished in the 1970s.

Ienashi Iani (Prophet Iona) Church.

In the historical tribal village **Ienashi,** the Iani church painting of the 13-14thcc is the earliest work of painting of the prehistoric epoch in Svaneti. This most important painting was preserved in the fragmented form up to now; though being damaged it was still possible to observe its artificial values and iconographical program.

Besides these paintings, this church is important for its architectural design and a number of paintings and embossed icons preserved in it.

Chokhuldi Jesus Church.

The Jesus church of the historical tribal village Chokhuldi, is probably built in 10-11c. Its architectural concept is authentic among the Upper Svaneti churches that are mostly modest, not decorated chapels. Besides its architectural values, this church is important for its particular high wall painting of the 13th c that is preserved in the church. This painting, as well as the others, is preserved in a rather damaged form.

Chokhuldi Jesus Church.

Laghami Jesus Church.

The importance of Laghami church and its painting in the historical village Mestia is rather high not only for Svaneti , but for Georgian medieval art history in general . In this case we have a two-storey church (which is quite rare in Georgia). In the lower and upper storey of the church three wall paintings of different periods have been preserved, dating back to the 11-12th cc (in the lower church) and of the 14th c (in the upper interior and facades). This church tells us something about the development levels and particularities of the Svan wall painting school.

Matskhvari Jesus Church.
Matskhvari Jesus Church is one of the most important churches in Latali tribe; it is valuable for its architectural solution and the painting made by Michael Maghlakeli in 1140. It has a particular place in the history of medieval Georgian wall painting and also for the repousse or painted icons of the 11-13th cc, among them the Byzantine Leading Cross of the 12th century decorated by enamel.

Village Ughvali Svaneti dwellings.
This small village from historical Etseri tribe is important as it is a most interesting and well preserved sample of a traditional Svanian dwelling complex - Old Machubi with its authentic interior and ethnographical household goods next to a 20th century folk dwelling houses.

Village Ughvali.

Jgragi (St. George) church.
This monument is important for the interesting painting and church antiquities of the 15th c preserved within it.

Village Chazhashi.
Village Chazhashi in the historical Ushguli tribe is enlisted as a World's Heritage monument which proves its authentic value.

Chazhashi Jesus church.

Murals.
Rare murals have been preserved in Svaneti. According to inscriptions and portraits, the paintings were ordered by local feudals and population (Adishi, Tsvimri, Matskhvarishi), sometimes by a group of feudals (Kala).

The early paintings comprise frescos in Jhvibiani, Nesguni, Faris Svifi (I layer) X c. Court painter Tevdore is also connected with Svan painting. Tevdore's decorative work in Ifari (1096), Lagurka Kvirike's and Ivlite's churches (1112) and Nakifari (1130) are the most distinctive Svanetian artwork. The influence of the painter is observed on some painted monument of Upper Svaneti dating back to XII-XIII c.c – Tsvimri, Khe, Fkotreri (Etseri), Chochulda (Becho), Tangil (Latali). The decoration of Matskhvarishi church is fairly significant for Svanetian murals. The church was decorated by painter Michael Maghlakeli in 1142. Matskhvarishi frescos are great pieces of Georgian monument painted art.
For Svanetian churches the decoration of the exterior is typical; in Sfifi and Adishi the outer walls of the church are painted with horsemen and in Ifkhi – with holy horsemen. On Lagami and Ifrari outer walls hunting scenes of St. Estate have been preserved, in Nakifari – the benediction of the Holy Spirit, etc.
In Upper Svaneti pieces of temporal art have also being preserved. On the outer walls of Chajhashi and Landshtkhveri churches the fight of Amirani and his brothers against "Devis" is depicted.
Reference is made to Annex 5 for a complete list of monuments and to Map 10.2 in Annex 10 for their location.

3.3.8 Socio- economic aspects.

3.3.8.1 General.

Most of the settlements within the USPL are located near the USNP. Reference is made to the description of the socio economic aspects that is given in section 3.2.8. Particulars for the USPL are described below.

3.3.8.2 Settlements and demography.

The USPL includes 91 settlements of the Mestia district (see Table 6 in Annex 6). Most settlements are located in the valley and on the terraces along the river Enguri.

In **Ushguli** Temi the villages Chajhashi, Murkmeli, Jhibiani, and Chvibiani are located in the valley of the Enguri at an altitude of 1900-2400 m above MSL. The settlements Davberi, Vichnashi, Khalde, etc are situated along the Kali, part of r. Enguri Kali and the settlements Bogreshi, Tsvirmi, Nakifari, Zegani, Ieli, etc are located along the Ifan

In **Mulakhi** Temi the villages Jhabeshi, Cholashi, Chvabiani, Jhamushi, Murskeli, Lakhiri, Artskheli, Zardlashi, Ghvebra, etc are found along the gorge of the r. Mulkhura and the large village Mestia with adjacent territories lays in the area of r. Mulkhura near the mouth of the Mestiachala estuary.

The following Temi and villages are located on the terraces:

Becho with the villages Dolasvifi, Bagvdanari, Doli, Mazeri, Ushkhvanari, Kartvani, Chkidanari, Chokhuldi, Tvebishi and Nashtkoli;

Etseri with the villages Barshi, Talashi, Gvalderi, Ladrereri, Lanteli, Lashkhreri, Usgviri, Ughvali, Frutreri, Kurashi, Tsalanari, Cheliri and Kebudi;

Fari with the villages Fari, Svifi, Zedalukha, Kvedalukha, Katskhi, Lamkheri, Lakvri, Faledi, Leshderi, Kvana and Khosrari;

Lakhamula with the villages Dizi, Nodashi, Kvedaifari, Kazakhi, Shdiliri, Khelra and Khamashtoteleshi.

According to the census data, the resident population of the large village Mestia and other villages within the USPL is 11,438 people; this is 80.3 % of the entire population of the district (14,248 people). The population includes 2475 family households 79 % of these households (3138 households) live in the Mestia district.

3.3.8.3 Economic aspects.

Socio-economic features of the villages of Mestia district within the USPL are fairly similar to those of the villages adjacent to the USNP and have identical agrarian and socio-economic problems (see Chapter 3.2.8. and Table 7 in Annex 6). These aspects are further discussed in Chapter 9.

3.3.8.4 Land ownership.

Agriculture.

The inhabitants of the Protected Landscape use 4,862 ha of agricultural land (92 % of the agricultural land of the district) and have 12,872 head of livestock (95 % of the entire number of livestock). These villages have an important economic impact on the adjacent territories.

Agricultural plots.

Forests.

The forests in the SPL are state owned. The Department of Forestry of the MoEPNR manages part of the forests. The larger part is managed by local communities whilst smaller parts are used for recreational purposes.

3.3.8.5 Land- and resource use.

Grazing and haymaking.

The grazing pressure in the Protected Landscape (see Table 5 in Annex 6), is fairly low in comparison with the allowable capacity (approximately 7.76 ha per zoo-technical unit[6]). The large part of the households uses the hay meadows-pastures near the villages. Mestia district as a whole has enough resources for the development of livestock breeding.

A study of the specific conditions of the hay meadows-pastures of USPL should be undertaken, however to identify critical areas where grazing pressure is high, to evaluate erosion threats on trails and plots threat, to evaluate the grass structure of the hay meadows-pastures and to explore possibilities for sustainable. Measures should be taken to prohibit or restrict the grazing pressure on those hay meadows-pastures where critical conditions exist.

Wood cutting.

There are 2,475 households in Mestia district within the USPL. They use on average 25-35 thousand m^3 fire wood per year.

Fire wood is obtained from the USPL from the forests of the Multiple Use Area and from the National Park. Intensive timber logging for construction wood occurred till the last decade but according to the local population the scale of the timber logging has decreased.

[6] A zoological unit is 1 head of cattle or 4 goat or sheep.

Once the Law on Establishment and Management of the Central-Caucasus Protected Areas will be enforced, wood cutting in the USPL will only be allowed in the traditional use area. As this area is less than the area that is presently used, there may be a need to look for alternatives. Reduced impact logging in the Multiple Use Area , more efficient wood stoves and other energy sources should be explored, therefore.

Other forest resources.

Local inhabitants collect berries, wild fruits, medicinal plants, mushrooms, etc for private consumption; no large scale commercial collection takes place as yet. The local population collects herbs that are mixed with salt to prepare the so called "Svanuri marili" (Svanetian salt). The salt is used for private consumption and is sold.

Hunting and fishing.

Hunting is a tradition in Svaneti, especially hunting goats was popular. However, strict rules were observed regarding the period of hunting and the number of animals that could be hunted. So the impact of hunting on the ecosystems was not serious.

However, in recent years uncontrolled hunting and poaching took place. The main hunting species are bear and chamois, which are included in the Georgia's red book. In the upper part of the river Enguri, in both, left and right tributary gorges, fishing is taking place. Trout is main fish species but commercial fishing is not interesting as it is difficult and expensive to transport the fish to the markets.

3.4 The Multiple Use Area .

According to the IUCN criteria, Multiple Use Area s are areas that are predominantly unmodified natural systems that are managed to ensure long term protection and maintenance of its biodiversity, while providing at the same time a sustainable flow of natural products and services to meet community needs.

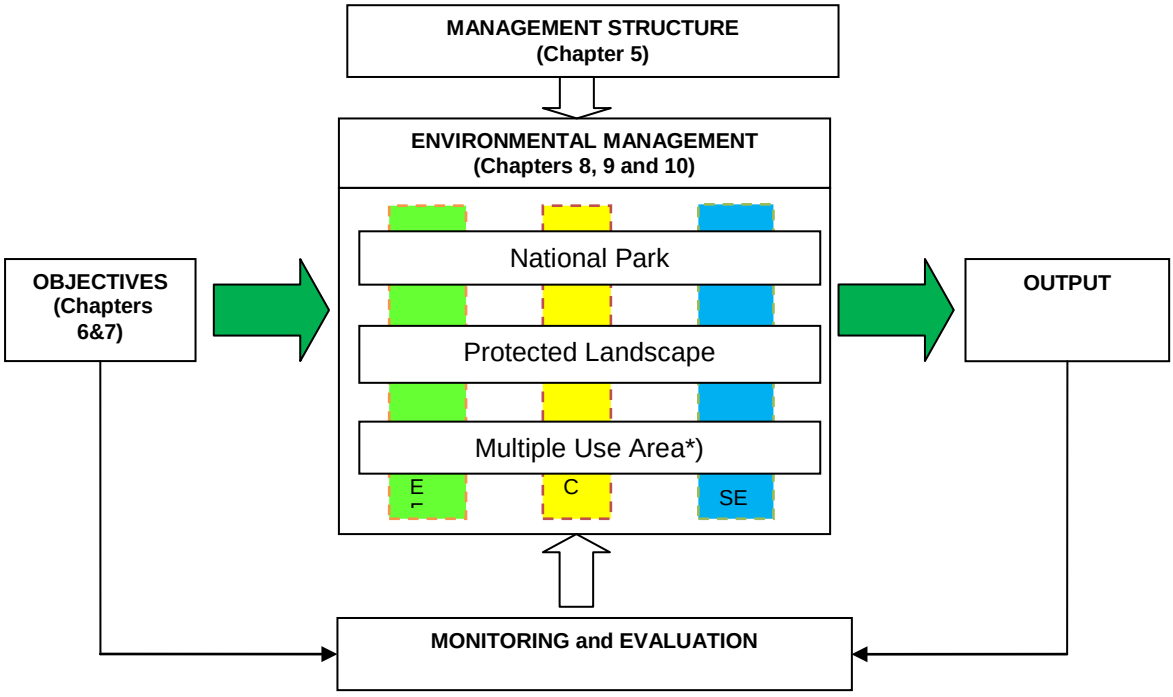
The Georgian Law, also gives the status of Multiple Use Area to territories that are used extensively by people and have been degraded as a result of these activities qualify , provided there is a potential to recover large parts of these degraded areas. As stated above the management plan for this area will be prepared as part of another project. The Multiple Use Area is not described in this section, therefore. In the next sections only the site specific objectives, the zoning and the measures as far as relevant for the management of the other Protected Areas will be discussed.

4 Management Principles.

4.1 Introduction.

Environmental management can be schematized by the process framework shown in Figure 4.1 This framework is the basis for the preparation of the management plan.

Figure 4.1. Process framework for environmental management.



*) Not included in this Management Plan.

Management aims at realizing the management objectives though an action oriented environmental management approach that is monitored and controlled by an effective and efficient management structure. Monitoring and evaluation are used to verify whether the results of the management process have been achieved.

A systems approach was used to structure the components of the environment. This approach is described in the guidelines and synthesis report. The spatial components of the system are the protected areas shown in Figure 4.1. The attributes of these components, are the ecological aspects (E), the cultural aspects (C) and the socio-economic aspects (SE). They were described in the previous chapters and were visualized by means of a GIS. These general principles are briefly discussed in this chapter. Details for the Upper Svaneti Protected Areas are presented in the subsequent chapters.

4.2 Management structure.

A management infrastructure is required to guide and control the management process. This structure is outlined in Chapter 5. It includes the legal and institutional instruments and the arrangements to involve the stakeholders in the management process.

4.3 Management objectives.

The objective of the present management plan is to establish a basis for the protected areas of Svaneti. As a first step the strategic objectives for the protected area as a whole are defined. These strategic objectives are based upon the description and evaluation given in the guidelines and are grouped according the relevant management aspects:

- Objectives related to ecological aspects (green);
- Objectives related to cultural aspects (yellow);
- Objectives related to social-economic aspects (blue);
- Objectives related to the management process (white).

These objectives are described in Chapter 6. This chapter also reviews the factors that may influence the possibilities to achieve these objectives. The strategic objectives are the basis for the site specific objectives for the protected areas that are defined in Chapter 7.

4.4 Environmental management.

Environmental management proper focuses on multiple-resource and multiple-use management and is based upon the following principles:

- It respects the integrity of ecosystems and accepts limits on the use of its resources;
- It recognizes the strategic importance of renewable resources for present and future generations;
- It is based upon a proper understanding of the governing ecological processes and uses these processes to improve conditions for survival and to mitigate negative effects of threats;
- It respects the cultural value of the man made landscape and its historic cultural heritage;
- It is based upon a proper understanding of the dynamic interactions between man and nature that created the present landscape and that will give it its future shape;
- It allows for multiple uses of resources and promotes complementary activities and regulates/separate conflicting uses;
- It ensures multi sectoral and multi level integration in decision-making, linking broad scale management to local level interventions;
- It allows for participation of all stakeholders, particularly the local population, in the planning process to assure effective management.

Environmental management is based upon a systematic approach that integrates ecological-, social-economic- and cultural aspects for each protected area. It uses concepts and methodologies from resource management, spatial planning and green architecture supported by modern data management techniques.
Depending on the management focus various methodologies are in use. Management with a focus on nature conservation uses the IUCN approach, management of cultural areas follow the guidelines of the World Heritage Convention whilst the Man and Biosphere program strongly emphasizes socio economic aspects. Reference is made to Annex 6 for a description of the various approaches. In the present management plan an integrated approach is followed that combines the above methods. This approach is further detailed in Chapter 8 where the spatial planning is discussed, in Chapter 9 where the strategies and measures are described and in Chapter 10 where an action plan is presented for the implementation of these measures.

4.5 Monitoring and evaluation.

The implementation of the plan should be monitored and evaluated
To that end the World Committee on Protected Areas (WCPA) tracking tool may be used. This tool is based upon a more elaborated version of the process framework shown in Figure 4.1 and takes into account:

- the **context** of the project;
- the **planning**, and **implementation** of a management strategy through:
  - allocation of resources (inputs), and
  - management actions (processes),
- the resulting products and services (**outputs**).

Process indicators focus on the efficiency and effectivity of the allocation of resources and management actions (the process). The output indicators verify in more detail whether the objectives have been realized and the results are sustainable. Details of this approach are given in Chapter 6.

5 Management Structure.

5.1 Introduction.

This chapter describes the management structure, the legislative framework and the institutional infrastructure that is required for an effective and efficient management of the Upper Svaneti Protected Areas. By and large, the management structure is dictated by national laws, regulations and the governance structure. As such it constitutes a boundary condition for the preparation of the management plans for the Protected Areas. For that reason it is presented before the management plans of individual protected areas are discussed.
Site specific issues for the respective protected areas, such as the required physical infrastructure and technical facilities, are described in Chapter 9.

5.2 The management concept and tools.

The management concept.

In order to be effective the management of the protected areas should be similar to the management of a business. It should be based upon a conservation approach and should include both strategic and operational activities and marketing. This implies amongst others:

- Management should be flexible and easily adaptable**;**
- Management should react on changes in social, cultural and economic conditions;
- Management should be financially sustainable;
- Long-term state-, private- and donor funding in combination with other financial resources should be used to ensure financial sustainability of the protected area.
- Management should be transparent and controllable;
- Decision making should be a transparent and well documented process.

A participatory management model should be applied that involves all levels of stakeholders.

The management tools.

This includes:

- Legal framework, the laws and regulations to provide the legal basis for the execution of the management plan;
- Administrative infrastructure, the institutional arrangements and staff;
- The advisory council;
- The physical infrastructure and technical facilities;
- Technical equipment and software;
- Management aids such as the WCPA tracking tool.

5.3 Legislative framework.

The governing law for the establishment and management of the protected areas is the Georgian Law on the System of Protected Areas. A framework law for the Upper Svaneti Protected Areas is now being developed that will enact the status of the various protected areas, their administrative and consultative bodies and will enforce the management plan for the individual protected areas. When the Georgian law on “Central Caucasus Protected Areas” will enter into force the Upper Svaneti Protected Areas are de jure established. Under this framework law the ownership of the USNP will be transferred to the legal entity, the Administration for the Upper Svaneti Protected Areas that will be part of the Agency for Protected Areas of the MoEPNR. The Protected Landscapes and Multiple Use Area s will remain under the jurisdiction of the local administrative bodies and the areas will remain the property of the present owners.

The APAwill be responsible for the strategic and financial aspects of management and will supervise the execution of the management plans. The Protected Landscape and the Multiple Use Area will be managed by the local governments in cooperation with the regional offices of the MoEPNR. These local governments should agree on a management statute and should coordinate their activities with the Administration of the Upper Svaneti Protected Areas and the local offices of the MoEPNR Environmental management of the Protected Landscape will focus on protection and conservation of the area and should control the activities that may hamper the achievement of the objectives of the protected areas. To that end, potentially harmful ongoing and future activities should be identified timely with participation of all stakeholders. The local government

should then control such activities. It is recommended that a management unit be established between these organizations to coordinate Environmental management.

5.4 Institutional arrangements.

General.

Institutions are required to plan, execute and monitor the implementation of the management plan. In order to involve all stakeholders in the management of the protected areas, a participatory management model should be applied that involves the various levels of stakeholders and defines their tasks and responsibilities. This includes amongst others:

1. *The Central government*.

   This level includes the Ministry of the Environment Protection and Natural Resources, the Ministry of Culture, Protection of Monuments and Sport, the Tourism Department of the Ministry of Economic development. Their function is to define a long term strategy, to secure funding for the implementation of the strategy, to plan and control the execution of the works and to coordinate the activities of all stakeholders at this level. The MoEPNR is assigned as the coordinating agency at this level.

2. *Local government– Administrative Boards (Sakrebulo).*

   These institutions are responsible for the management of the Protected Landscapes and Multiple Use Area s within their jurisdiction.

3. *Private- and civil sector.*

   Local population and business enterprises that have an interest in the protected area the beneficiaries of the project. They should participate in the decision making process. The civil sector (NGO's) and experts should act as external advisors.

4. *The administration of the Upper Svaneti Protected Areas.*

   The Administration of the USPA is the legal entity for the management of the Upper Svaneti National Park.

5. *Advisory council.*

   The MoEPNR should ensure an effective communication between the various sectors and levels of governance. Information sharing, consultation and cooperation are key words in this respect. To that end the Law on "Central Caucasus Protected Areas" prescribes that an advisory council be appointed. The tasks and responsibilities of the Advisory Council are shown in BOX 6.1.

   The Advisory Council may be a public or autonomous legal entity and may be formed at the national, regional or local level. A public legal entity, consisting of regional representatives of the central government, representatives of the local governments and stakeholders, appears the best alternative. Given the specific differences between Racha/Lechkhumi and Svaneti a council for each of the two regions will be required. The MoEPNR can act as "linking pin" to ensure coordination between the two bodies.

   The Advisory Council may elect an executive committee of 2-3 members which supervises the implementation of the regimes established by the management plan of the protected area, facilitates control, monitoring and identifies problems.
   It should be noted, however, that the structure of the existing advisory councils is under debate. Presently the APAis considering restructuring these units. As a result of this discussion the above structure may be changed.

BOX 5.1: The Advisory Council.

Members:
The members will be appointed by presidential decree. The following stakeholders should be represented in the council:

The central government.
The Ministry of the Environment Protection and Natural Resources, the Ministry of Culture, Protection of Monuments and Sport, the Ministry of Economic Development.

Universities.

The regional- and local government bodies.
Administrations and Administrative Boards (Sakrebulo), the regional offices of the above Ministries, the chief architect and the land use agency.

The private sector.
Representatives of the private stakeholder groups

Civil Society groups.
Local or national non-government organizations.

Local inhabitants.
Their interests should be defended directly through local interest groups or indirectly through local NGO's or the local governments. The latter model is preferred as it gives local inhabitants a stronger position in the council, when they are backed by the local executive bodies.

Tasks:
The tasks are defined by law and include inter alia ***:***

- Permanent control of planned or ongoing conservation activities in the area
- Coordination of the non-government and private stakeholders, who are involved in the implementation of the management plan;
- Cheking, along with ecological organizations (forestries, hunting units, environmental inspection, interested non-government organizations, etc) of the introduction of the management plan.
- Assess ment of community based initiatives to support the implementation of the management plan and creation of incentives and favourable conditions for such community based initiatives.
- Lobby with persuade competent organizations (central government, local administration) to restrict or prohibit activities harmful for the environment;
- Encourage sustainable economical activities;
- Facilitate information sharing with stakeholders regarding recommended, restricted or prohibited activities;
- Mediate if conflicts occur between the administration and stakeholders ;
- Support the implementation of applicable laws and normative acts;

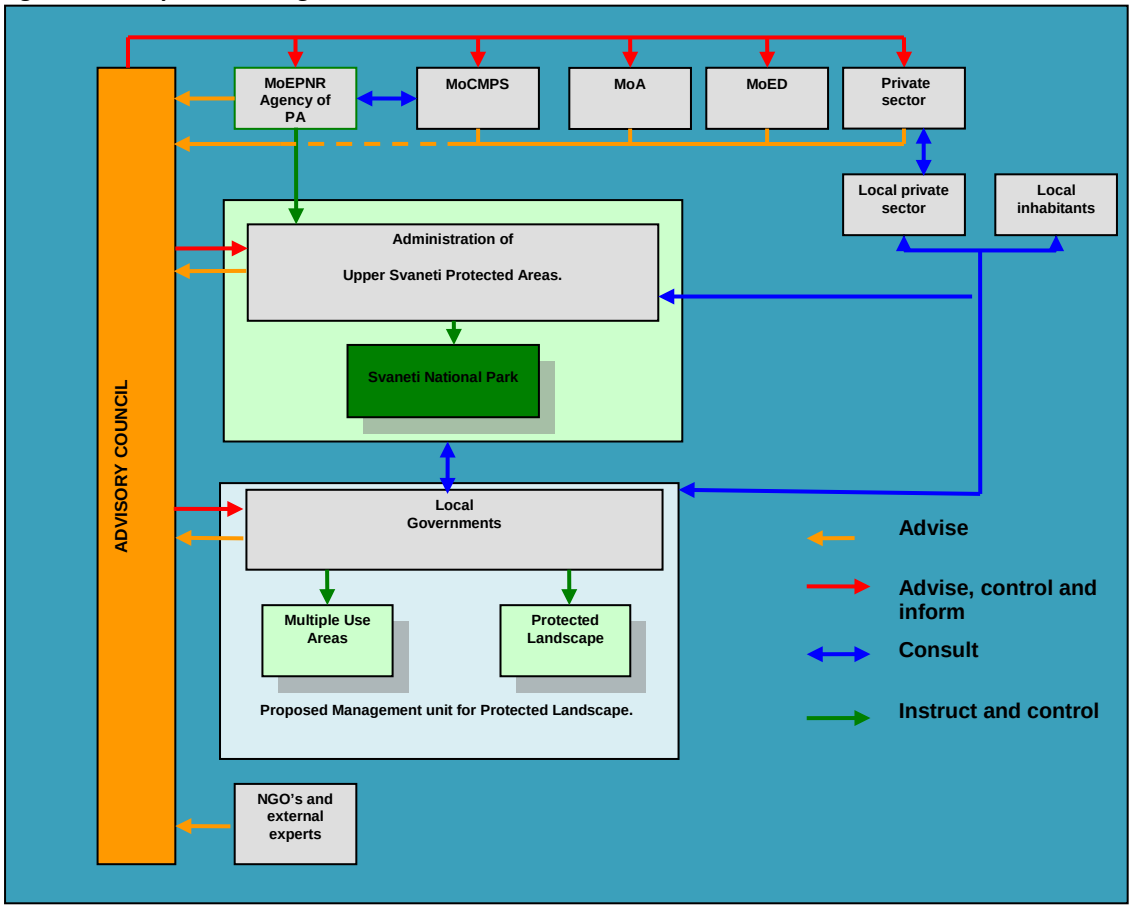
Modus operandi.
The modus operandi will be defined by law.To accomplish its task the council may use appropriate means such as recommendations, incentives (grants, long-term soft loans and credits), supporting measures (recent technologies and information) and sometimes through orders and regulations issued by regional and local authorities within their jurisdiction.
When necessary, the council invites appropriate experts / consultants.

Financing.
The financing of the council will be regulated by Law.

The proposed institutional arrangement is shown on Figure 5.1.
The stakeholders, the private and public institutions and NGO's of importance for the management are shown in the grey boxes. The box in orange symbolizes the advisory council with representatives of these stakeholders. The various categories of protected areas are represented by the green boxes.
The boxes are connected by arrows showing the relations between the various stakeholders, the colours of the arrow indicate its function. Orange arrows represent the advice of individual stakeholders, represented in the council. The red arrows originating from the advisory council represent the advice agreed by all council

members that is sent to the agencies responsible for management. The red arrow also represents the role of the council as a source of information and as a supervising agency.
The blue arrows show bilateral contacts between various agencies. At the national level this can be used to synchronize the strategies of various ministries (for instance Environment and Culture), to coordinate policies and plans between the national and local level (for instance between national and local stakeholder groups) and at the local level to coordinate the execution of the management plans (for instance between the local governments and local offices of MoEPNR and between the Administration of the protected areas and local stakeholders).

Figure 5.1: Proposed management structure.



Finally the green arrows show the management actions, the binding instructions of the MoEPNR to the Administration of the USPA and their various on site managers and the control of their actions. Green arrows are also used to represent the instructions of the local governments for the management of the areas under their jurisdiction.

5.5 Management of protected areas.

General.

The USNP is managed by the Administration of the Upper Svaneti Protected Areas. Director and staff are appointed by the head of the APA. A provisional organizational structure and description of functions and tasks is given below. The final tasks and responsibilities of the administration will be defined by the APA.

The Administration of the Svaneti Protected Areas

The proposed tasks, the staffing and the modus operandi for the Administration are described in the BOX 5.2.

Box 5.2. The Administration of Protected Areas.

Staff.

The director and deputy director are appointed by the Agency of Protected Areas after approval of the Ministry of Environment Protection and Natural Resources. Permanent staff members will be appointed by the Agency of Protected Areas and should

preferably be recruited from the Department of Forestry and the Agency of Protected Areas of the Ministry of Environment Protection and Natural Resources.

Tasks.
Core activities.
The tasks of the Administration will be described in a management statute but should at least include the following core activities;
To manage the Protected Areas in accordance with the governing laws and the approved management plan.
To coordinate with neighbouring Protected Landscapes and Multiple Use Areas in order to synchronize policies and actions.
To enforce the management regimes defined for the various Protected Areas and zones.
To increase awareness of local population through environmental education and interpretation services.
To enhance the standard of living of the local population.

These core activities are executed by the technical staff consisting of chief rangers and rangers, the scientist and researchers and the resource use specialist under the guidance and control of the director and the deputy director.
In order to support these core activities following services should also be provided:

Internal services:
Administrative support (staff management and training, legal advice, accountancy and book keeping, secretarial work);
Logistic support (housekeeping, food and beverage services, store-keeping, library service, security, transport services);
Technical support (maintenance of facilities and equipment, ICT services).

External services:
Public relations and promotion;
Educational activities and awareness building;
Visitor services.
Fund raising;
Business relations, procurement, outsourcing and concession.
A provisional organizational set up is shown on Figure 5.2.

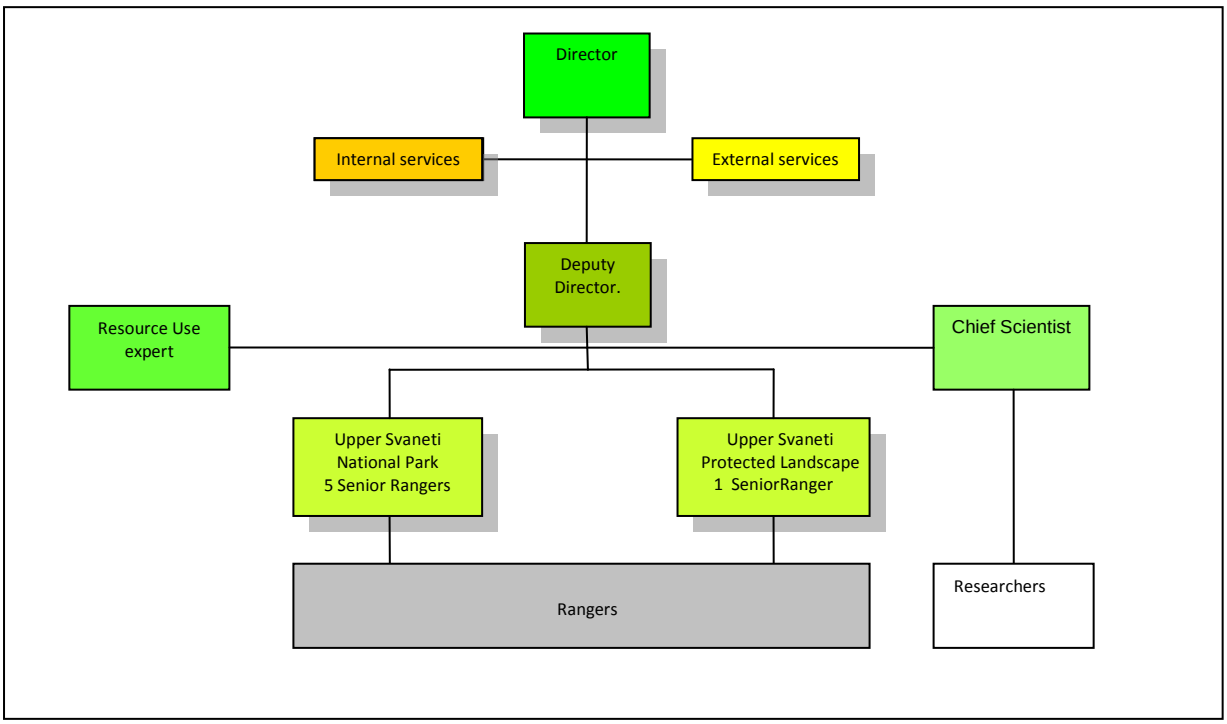
All tasks should be performed by qualified and experienced professionals in their respective fields. The Agency of Protected Areas will make a job description for each position and will establish selection criteria for each post. The Agencyt will provide education and training for the permanent staff . Wherever possible the above services should be outsourced.

Modus operandi.
The Administration functions in strict compliance with the governing laws and regulations in particular the Law on the Establishment of the Central Caucasus Protected Areas.
This law fully authorizes the Administration to manage the natural resources (pasture, river, forest, flora and fauna) and empowers the Administration to enforce the management regime in the various protected areas by patrolling, prevention of violations and imposition of administrative sanctions; it authorizes the Administration to take measures as defined by law in case of emergencies and allows the administration to transfer cases to the judicial authorities in duly prescribed cases.

The administration operates from central offices in Mestia and site offices. The Administration will avail of an adequate administrative and physical infrastructure with adequate technical facilities and equipment in conformity with the above tasks.

Finances.
The Law on the Establishment of the Central Caucasus Protected Areas has appointed the Ministry of Environment Protection and Natural Resources as the agency responsible for financing the Administration in agreement with the five year financial plan given in the management plan.
The Administration will make an annual operating plan with a detailed and itemized disbursement scheme duly agreed with the Agency of Protected Areas.
Operational cost for core activities (salaries, running cost) are covered by State-budgetary financing mechanism in accordance with the governing laws and regulations. Revenues generated by the protected areas through rational use of natural resources may also be used to cover management cost. Cost of infrastructure and equipment will be financed from state budgets and/or donations.

Figure 5.2. Organization of the Administration of Svaneti Protected Areas.



The management unit for the USPL.

Environmental management is only one facet of the management of the USPL. Enforcement of an environmental management regime is more complicated, therefore.
For that reason it is recommended:

To prepare an overall (spatial) development plan for the Protected Landscape that integrates all relevant aspects. This plan should be prepared by the local governments in cooperation with the Ministry of Nature protection and Natural Resources and the Ministry of Culture, Protection of Monuments and Sports. The present management plan should be a corner stone of this strategic plan.

To set up a special management unit for the environmental management of the USPL. This unit should consist of representatives of the various local governments and the regional offices of the Ministries of Environment Protection and Natural Resources and the Ministry of Culture, Monument Protection and Sports. The task of the unit should be:

- to assist in the preparation of the (spatial) development plan for the USPL (spatial integration);
- to coordinate ecological, cultural and socio-economic strategies for the implementation of the plan (sectoral integration);
- to coordinate and supervise the Environmental Management activities of the various local- and central governments (inter governmental integration);
- to coordinate environmental Management activities with the Administration of the PA's.

6 Strategic Objectives and Criteria.

6.1 Introduction.

Table 6.1 shows the strategic objectives that should be achieved for the protected area as a whole. The objectives have been clustered as shown in the headings of the table and are discussed in section 6.2.
The chapter also gives the indicators and criteria that should be used to evaluate whether these objectives have been met. The main indicators are shown in the first column of the table and will be discussed in section 6.2. Finally the factors that influence the achievement of these objectives are discussed in section 6.3.

6.2 Strategic objectives.

The following clusters of objectives have been defined:

- Objectives related to nature conservation and awareness building. This includes nature conservation, interventions, research and monitoring and PR and awareness building.
- Objectives related to culture conservation. This includes protection and conservation of historical cultural and archaeological monuments.
- Objectives related to socio-economic development. This focuses on the implementation of a wise resource use regime, the development of ecotourism and the creation of business opportunities.
- Objectives related to management. This refers mainly to the set up of the required administrative arrangements and physical infrastructure.

The objectives for each cluster are shown in the table. These strategic objectives are the basis for the site specific objectives described in Chapter 7 and the strategies and measures presented in Chapter 9 and 10.
The strategic evaluation criteria are discussed in the following section.

Table 6.1. A. Strategic objectives.

	NATURE CONSERVATION OBJECTIVES				MANGEMENT
	Conservation	**Interventions**	**Research and Monitoring**	**PR, and awareness building**	
LANDSCAPE and NATURE VALUES	to establish a regional ecological network ; to maintain the diversity of landscapes, habitats and associated species;	to rehabilitate degraded habitats and rare, endangered and extinct species;	to improve the understanding of ecological processes through research and monitoring;		to integrate the conservation strategy for cultural and natural landscapes in collaboration with the competent government agencies
AWARENESS				to increase environmental awareness through environmental education;	to secure a high level of political commitment; To achieve a high degree of public commitment and participation through networking, information sharing, consultation and community based initiatives.

Table 6.1. B. Strategic objectives (Continued).

	CULTURE CONSERVATION OBJECTIVES	SOCIO ECONOMIC DEVELOPMENT OBJECTIVES	MANGEMENT
ENVIRONMENTAL and Social SUSTAINABILITY		to foster the harmonious interaction of nature and people through the continuation of traditional and sustainable land and resource use; to support lifestyles and economic activities which are in harmony with nature; to eliminate and thereafter prevent land uses and activities that are inappropriate in scale and/or character.	
CULTURAL VALUE	to preserve and protect the cultural and spiritual values of landscapes and/or its components; to preserve and protect architectural and urban monuments; to preserve and conserve archaeological sites; to increase awareness through education.		To support community based initiatives and agricultural reforms in the region that are based upon organic farming and clean food processing technologies.
EMPLOYMENT RATE, STANDARD OF LIVING		to promote the Protected Areas ; to provide opportunities for recreation and tourism appropriate in type and scale to the essential qualities of the areas; to create business opportunities through the sustainable use of natural products and services.	
EFFECTIVENESS, EFFICIENCY and FINANCIAL SUSTAINABILITY.			to implement the management plan and to enforce management regimes; to set up a fully operational and competent management organization and staff; to provide training and education of staff; to plan and construct the required physical infrastructure; To create sustainable financing mechanisms.

6.3 Indicators and evaluation criteria.

6.3.1 General.

Indicators are used to monitor whether objectives are being achieved. All indicators should be "SMART" i.e.: Specific for the related management objective, Measurable in quantitative or semi quantitative terms, Realistic in view of the available resources and Time bound so that results can be used as feedback for the project. Each indicator consists of a number of evaluation criteria that are described in the next sections. They should be used for the project evaluation during the implementation and after the 5 year planning period. Indicators and criteria should be further quantified as part of the monitoring programs.

6.3.2 Nature conservation and environmental education.

- **Landscape value.**
  No further degradation of natural, cultural and mixed landscapes;

- **Nature value.**
  System of protected areas in place and functioning as a network.
  Ecological corridors between protected areas operational;
  Free migration of animals between protected areas possible.
  Database with ecological information operational.
  Increase or at least no further loss of habitat area in protected areas;
  Increase or at least no further loss of biodiversity in protected areas;
  Increase or at least no further loss of rare, endangered and endemic species.

- **Awareness.**
  System for environmental education in place and functioning;
  Increased awareness of mass media and inhabitants of environmental issues;
  Political commitment of central and local governments.

6.3.3 Culture conservation.

- **Cultural value.**
  Database with information on historical cultural monuments operational;
  All monuments within Protected Areas described and documented;
  No further degradation of historical cultural monuments;
  Emergency repairs of endangered monuments completed;
  One pilot conservation project completed.
- **Awareness.**
  Increased awareness of mass media and inhabitants of cultural issues;
  Political commitment of central and local governments.

6.3.4 Socio-economic development.

- **Environmental sustainability.**
  Wise resource use regime implemented and functioning;
  No further illegal and uncontrolled resource use;
  Reduced fuel wood consumption;
  Facilities for ecotourism in place and functioning.

- **Social sustainability.**
  Active involvement of local population in management of protected areas.

- **Employment and standard of living.**
  Increased employment rate in neighbouring villages;
  Improved standard of living in neighbouring villages.
  Reduced out migration.

6.3.5 Management.

- **Administrative structure.**

  Law on the Establishment of Central Caucasus Protected Areas enacted;
  Administration for Upper Svaneti Protected Areas in place and functioning;
  Management unit for Protected Landscape in place and functioning;
  A joint conservation strategy for historic cultural monuments and nature protection in the Protected Landscape accepted by the competent government agencies and the required administrative infrastructure in place.

- **Physical infrastructure.**

  Borders legalized and marked in the field.
  Central office and site offices completed.
  One third of proposed visitor infrastructure completed.

- **Management process.**

  GEF recommends using the following criteria to evaluate the management process:

  Relevance: The extent to which the project output is suited to local and national development priorities and organizational policies, including changes over time;

  Effectiveness: The extent to which an objective has been achieved or how likely it is to be achieved;

  Efficiency: The extent to which results have been delivered with the least costly resources possible. Also called cost-effectiveness or efficacy.

  Results: The positive and negative, and foreseen and unforeseen, changes to and effects produced by a development intervention. In GEF terms, results include direct project outputs, short- to medium term outcomes, and longer-term impact including global environmental benefits, replication effects and other, local effects.

  Sustainability: The likely ability of an intervention to continue to deliver benefits for an extended period of time after completion. Projects need to be financially as well as environmentally and socially sustainable and should have political support. This approach is well suited for a strategic assessment of the project but needs a further refinement for monitoring of the progress.

The WCPA tracking tool is a more suitable tool to monitor progress. Table 6.2 contains a very brief summary of the tool and the criteria that can be assessed. A data sheet and assessment form has been designed to facilitate the evaluation.

Table 1: Summary of the WCPA Framework.

Elements of evaluation	Explanation	Criteria that are assessed	Focus of evaluation
Context	*Where are we now?* Assessment of importance, threats and policy environment	- Significance - Threats - Vulnerability - National context - Partners	Status
Planning	*Where do we want to be?* Assessment of protected area design and planning	- Protected area legislation and policy - Protected area spatial planning - Reserve design - Management planning	Appropriateness
Inputs	***What do we need?*** Assessment of resources needed to carry out management	- Resourcing of agency - Resourcing of site	Resources
Processes	*How do we go about it?* Assessment of the way in which management is conducted	- Suitability of management processes	Efficiency and appropriateness
Outputs	*What were the results?* Assessment of the implementation of management programs and actions; delivery of products and services	- Results of management actions - Services and products	Effectiveness
Outcomes	*What did we achieve?* Assessment of the outcomes and the extent to which they achieved objectives	- Impacts: effects of management in relation to objectives	Effectiveness and appropriateness

6.4 Factors influencing achievement of the strategic objectives.

6.4.1 General.

If and when the management objectives can be achieved is influenced by natural and human factors both may affect the protected areas (the internal factors) and may effect a larger area (the external factors). This distinction is made as the first group can be addressed by management actions, the second group cannot. Finally, the governance and administrative system is another factor of importance. These factors are shown in Table 6.3. and are described below.

6.4.2 Factors that influence nature conservation.

Natural factors.

The physical-geographical conditions within the Upper Svaneti Protected Areas are the most determinant internal natural factor. They determine the frequency and extent of natural hazards as well as the ability to recover from negative impacts. The following natural hazards are important in this respect:

Mudflows.

Mudflows are large amounts of rock and mud that flows down the mountain slopes at high speed; they inflict great damage (sometimes totally destroy) ecosystems, various engineering works and buildings and settlements. Mudflows occur in areas where large amounts of sediments (boulders of various sizes, gravel, and clay) accumulated due to erosion of steep slopes consisting of less resistant material. These sediments are washed out by rain and due to gravitation descend to the bottom of the slope at a high speed. Large parts of the USPA, especially the following areas experience extensive mudflows: the northern slopes of the Svaneti ridge and the southern slopes of the main watershed of Caucasus.

Table 6.3. Factors that Influence the achievement of the management objectives.

	NATURAL FACTORS	**HUMAN FACTORS**		**GOVERNANCE AND ADMINISTRATION**	
	Internal	External	Internal	External	Laws for management of environment and cultural monuments constitute a good basis for management. Normative acts and regulations are not available or not properly enforced. No regional lead agency responsible for management of natural environment and historic cultural monuments. The Law on the Central Caucasus Protected Areas, once implemented, will be instrumental to improve this situation. Land ownership is not well documented. Administrative segregation of planning area complicates management. Conflicts of interest between stakeholders are not properly managed and are a threat for management.
OBJECTIVES RELATED TO NATURE CONSERVATION.	Physical geographic conditions create a large variety of healthy ecosystems with great potential for self regulation and recuperation but create also conditions for inundations during floods. Geomorphologic conditions make areas inaccessible but create also conditions for natural hazards (landslides, mudflows, rockslides, avalanches, diseases).	Seismic activity and floods are damaging ecosystems.	Hunting , poaching Gathering plants, cones and fruits threatens the resource base. Hunting farms may provide opportunities for environmental control. Uncontrolled mass tourism can be detrimental for nature and cultural monuments.	Poor socio economic conditions have a strong negative effect on all interventions. Inappropriate land use and inadequate agro technology endanger the protected areas. Deforestation increases the risk of natural disasters. Mining and construction of large engineering works (Roads, hydro-power stations) can have negative environmental impact	
OBJECTIVES RELATED TO SOCIAL-ECONOMIC ASPECTS.	Potential for health tourism and recreation. Landslides and mudflows threaten life and property, but forest rehabilitation in protected areas may reduce risk of natural hazards. for neighbouring areas.	Seismic activity and floods cause material damage and endanger lives of people.	Controlled ecotourism and recreation may generate additional income.	Poor socio economic conditions have a strong negative effect on all interventions.	
OBJECTIVES RELATED TO HISTORICAL-CULTURAL ASPECTS	Landslides and mudflows threaten cultural monuments. Forest rehabilitation in protected areas may reduce risk of these natural hazards.	Seismic activity, harsh climate conditions and floods are threatening the monuments.	Controlled cultural tourism may generate additional income. Poor maintenance is threatening monuments.	Little awareness of the importance of historical cultural heritage. Poor socio economic conditions limit the budgets for restoration.	

Local landslides.

The location of USPA in a zone of high seismic activity in combination with the high precipitation and the steep slopes creates the conditions for the development of landslides, especially in areas where the bottom consists of clay layers. Svaneti is included in the region that has a medium risk of landslides (0.3-0.1 risk category).

The intensity of landslides has increased in the last decades due to intensive timber logging, construction of roads on steep slopes, etc. Natural ecosystems and historical-cultural monuments were almost entirely destroyed within the movement area of the landslide. Such landslides can negatively affect the achievement of the objectives related to the protection of ecosystems and historical-cultural monuments.

Rockslides.

The high seismic activity in the area along with the rocky steep high slopes and fissures of the rock cause gravitational instability that leads to rockslides. Rockslides are observed in the areas where slopes consist of flat strata or cornices that can easily be disintegrated. Rockslides are triggered by earthquakes. The geomorphologic conditions in the main watershed of Caucasus and the Svaneti ridges at altitude higher than 1500-2000 m above MSL are especially favorable for the formation of rockslides.

Rockslides are an external natural factor that has a negative impact on the development of natural ecosystems. In the area where they occur, ecosystems are totally or partially destroyed and it is difficult to achieve the objectives related to nature conservation in these areas, therefore.

Avalanches.

Avalanches are one of the important natural factors that influence the achievement of the objectives related to the natural environment. Avalanches occur in the USPA – especially within the National Park, which is located on the steep slopes of the main watershed of Caucasus and connected Kodori (right part of r. Nenskra water catchment basin), Shtavleri, Tsalgmili, Ushba, Gvaldi, Atkveri and other branch-ridges and the Svaneti ridge. The proximity of the Black Sea and the predominant westerly winds bring humid air masses into Svaneti that cause large amount of precipitations. At altitudes higher than 1600-1700 m above MSL usually snow falls from November. Locations altitudes higher than 1000 m above MSL are covered with snow for 3-7 months. The height of the cover often reaches 3-4 m; in some areas it could even exceed 5 m. These are favorable conditions for the formation of avalanches on the slopes of the ridges. The risk of avalanches is most pronounced in areas with steep slopes without forests, especially – sub-alpine and alpine meadows. From this area avalanches descend to the forest belt and inflict great damage to the forest ecosystems. Strong avalanches could even damage some historical-cultural monuments within the Protected Landscape. The intensity of the avalanches has prominently increased in the last decades, which is directly connected with the intensive timber logging.

The local climate, which is characterized in the larger part of the territory by sufficient humidity, cold winters and warm summers, is of prime importance for the recovery from the effects of natural hazards and human activities.

Finally, also the inhospitality of the terrain, should be mentioned; the majority of Racha-Lechkhumi Protected Area is hardly accessible, which makes the implementation of the activities prescribed by the management plan more difficult; on the other hand it makes protection easier; for that reason primary or close to primary ecosystems have been preserved within the protected area.

The following external risk factors should be considered: these risks are related to natural hazards that endanger areas much larger that the protected areas proper.

Seismic threats.

Upper Svaneti along with Lower Svaneti and Racha-Lechkhumi is included in the zone of intensive tectonic activities, due to its geological structure and the related tectonic movements of the territory of Georgia. This results in a high seismic risk in these regions.

Strong earthquakes could cause damage or destruction of historical-cultural monuments (churches, fortress-towers) and destruction or severe modification of the ecosystems in some areas of Svaneti,

namely, a strong earthquake could result in sudden rockslides on steep slopes, formation of landslides, etc; the later events could destroy both historical-cultural monuments and natural ecosystems. During the same earthquake a landslide was formed on the northern slope (r. Jejori water catchment basin) of Racha ridge; its volume exceeded 150 million m^3. The ecosystems that were hit by these slides were entirely destroyed.
Strong earthquake could damage various ecosystems and historical-cultural monuments and may have a negative effect on the achievement of the management objectives.

Extensive floods.
In the past both Upper and Lower Svaneti were characterized by weak and medium floods. Strong catastrophic floods rarely occurred. Ecosystems of all types, historical-cultural monuments and other buildings were naturally adapted to these floods. Throughout the last two centuries intensive timber logging within the river gorges (wood cutting has become the most intensive after the 90s of XX c due to socio-economic crisis) resulted in severe disruption of the hydrological regime of the rivers; surface flow of the waters has substantially increased, floods have become stronger and more frequent. Consequently, the erosion has increased within the river gorges. Large amount of sediments have been moved downwards, etc. These intensive floods could have negative impact on various ecosystems and normal functioning of historical-cultural landscapes within the USPA and may negatively affect the achievement of the goals related to the protection, rehabilitation and conservation on the natural and human environment.

Human factors.
Human activities can have a dramatic impact on the protected areas. Such activities are the uncontrolled and extensive use of the natural resources in the protected area, which means timber logging (breaching every norm), intensive cattle grazing, uncontrolled fishing and hunting, use of fruits and plants. Such activities have a direct negative impact on the ecosystems of the protected area, but also increase the risk of natural disasters. Examples are timber logging that causes an increase in surface run off and the disruption of the hydrological regime of the rivers; as a result the frequency and intensity of the floods will increase. Moreover erosive processes on the slopes will become more intensive; these processes trigger landslides and mudflows and deposit material in the riverbeds that disrupt the hydrological regime even further. All these factors have a negative impact on the functioning of the protected areas.

Certain activities, once properly managed and controlled, can have a positive effect. The Management Statute of hunting farms (that are allowed in a protected landscape and a multiple use area), if correctly implemented, should have a positive effect on the conservation of wildlife and bio- diversity. Presently, there are no hunting farms within USPA, however, Once the Law on the Establishment and Management of the Central Caucasus Protected areas is enforced all types of hunting will be considered illegal within the protected areas, except for the hunting on migratory birds.

Most of these internal factors are influenced by larger scale socio economic factors. The economic conditions and the political system of the country in the previous century have been largely responsible for the present poor economic situation in the region. This in its turn had a negative effect on the number of inhabitants, the level of education and agricultural skills and the availability of equipment. This aggravated the situation at the local level even further and has driven many individuals into poverty. Natural resources and land were used in a non-sustainable way in order to survive, despite the fact that local traditions and culture was based upon a harmonious coexistence of man and nature. Without further economic incentives in combination with education and training this will continue to affect the achievement of the objectives in a negative way. Particularly agriculture will have an indirect negative impact on the ecosystems of the USPA. Although most settlements and arable lands are located outside the borders of the protected areas - with the exception of the USPL- pesticides, herbicides and fertilizer can be transported into the protected areas by surface- and groundwater.

6.4.3 Factors that influence conservation of historical cultural monuments.

Natural factors.

The harsh climate and natural hazards and the high seismic risk endanger the integrity of the cultural monuments in the protected area and its surroundings. Interventions in the protected areas, such as reforestation may, however, have a positive effect and may reduce these risks in future.

Human factors.

Once properly managed, the rich cultural heritage will create a potential for tourism that can generate additional income.

However, the population is not well aware of the value of its historic cultural heritage. This results in inadequate conservation and poor maintenance of these monuments.

6.4.4 Factors that influence socio-economic development.

Natural factors.

The USPA have a healthy natural environment and diverse biological, climate-hydrological and recreational resources. Protection, maintenance of the natural environment and sustainable use of its resources will improve the social-economic conditions of the population. Recreation facilities, if properly implemented, will definitely play a quit important positive role in this respect.

The above mentioned natural hazards that are threatening the natural environment are also detrimental for man and may negatively affect economic progress.

Once remedial measures have been implemented within the protected areas to reduce the ecological damage caused by these natural disasters, people living in the neighboring areas may probably also benefit from the measures to reduce the risk of natural disasters that are implemented within the protected areas.

Human factors.

As stated above the per capita income in the region is low and the unemployment high. The protected areas offer possibilities to improve these socio-economic conditions, as they create new jobs and alternative livelihoods. This is instrumental to reduce or stop the out migration.

The protected areas offer possibilities for individuals to work in the protected areas, it gives the local businesses the possibility to provide goods and services and will help do develop income from eco-tourism. The large and motivated labour force in the area is a factor that will help to develop these opportunities Governmental support in combination with private initiatives is required, however, to create the proper conditions for these developments.

Agriculture will still remain one of the most important sectors in the area for the years to come. The protected areas should therefore also play a leading role in initiating agricultural reforms through sustainable farming practices and promoting clean food processing technologies and should support community based initiatives in these fields. The further development of this sector is hampered, however, by severe constraints. The inability to get loans is one of such factors and soft loans should be provided to help people to invest in equipment and material. The level of professional skills should be enhanced through training and education and the poor infrastructure should be improved to facilitate export. Again the role of the government is instrumental to create the proper conditions for such a development.

6.4.5 Governance and administration.

A proper legal base and effective administrative infrastructure is essential for a proper management. The Georgian legislation creates favorable conditions for the implementation of the objectives defined by the management plan of the USPA. The main documents, in this respect are the Georgian Laws “on the System of the Protected Areas”, “the Protection of the Environment”, “Fauna”, “Water”, “Forest Code of Georgia”, etc. International and regional conventions and agreements, signed or ratified Georgia are also helpful, in particular: conventions on “Biodiversity”, “Forested Areas, Especially Usable for Bird Hunting”, “International Trade of Endangered Wild Fauna and Flora Species”, etc.

In spite of the fact that the legal base is in place, the required legal instruments and institutions for the implementation of these laws are as yet not available or not enforced in the USPA. The Law on the System of Protected Areas in Central Caucasus, once enacted and enforced may improve this situation Some of Georgian Laws and sub-legislative normative acts are contradictory or even conflicting and should be harmonized. Especially the legislation on the land use and land property should be more specific. As privatization was

introduced too rapidly and without the help of a properly functioning cadastre system, leases and ownership rights were not properly documented and are now often disputed. In any cases reliable information regarding plots is not available or difficult to access; this will of course have a negative impact on the implementation of the objectives defined by the management plan.

Although the USPA are under the jurisdiction of the Forestry Department of the Ministry of the Protection of the Environment and Natural Resources, it does not have a special protection status, a fact that may negatively affect the implementation of the plan. The level of administrative responsibility of the local management is low and no efforts are being made to ensure a sustainable development of the areas. The location of the USPA within several administrative districts, often with conflicting interests, complicates the situation even further.

Resource use conflicts are not properly managed a fact that could also have a negative effect on the achievement of the objectives. In the past natural resources were exploited while totally ignoring the governing legislation: extensive poaching and illegal timber logging was the result. A regulation of the use of the natural resources in the protected areas, restrictions and control will surely meet with opposition of certain stakeholders. The restriction of traditional activities such as hunting, fishing and grazing within the protected areas will be difficult and the local population will oppose this. On the other hand, various other stakeholders will welcome and support the introduction of a regime of sustainable and traditional use of natural resources prescribed by the management plan.

7 Site-specific Objectives.

7.1 Introduction.

This chapter describes the site specific operational objectives for each protected area. These objectives should be achieved in order to accomplish the strategic objectives that have been described in Chapter 4. For each protected area the operational objectives are grouped in accordance with these objectives and include:

Objectives related to nature conservation;
Objectives related to historical cultural aspects.
Objectives related to social-economic aspects;
Objectives related to infrastructure

This includes the USNP that is under the direct responsibility of the MoEPNR and is managed by the Administration of the Upper Svaneti Protected Areas in accordance with the Law on Establishment and Management of the Central Caucasus Protected areas.

It includes also the objectives for the USPL. This area is managed by the various local governments, however, and a statute for its management still has to be established and agreed between the MoEPNR and the various local governments.

Finally, also the objectives for the Upper Svaneti Multiple Use Area are given, although this area is not included in the Management Plan. As the Multiple Use Area also functions as a buffer zone for the National Park, there is a close linkage, however, with the management of the National Park. For that reason the present management plan gives also recommendations for the operational objectives and territorial functional plan regarding this aspect.

7.2 Upper Svaneti National Park (USNP).

7.2.1 Objectives related to nature conservation and awareness building.

Flora.

1. zProtection, rehabilitation and conservation of natural- or close to natural and at some areas – variously degraded-- oak, beech-oak, beech, beech-fir, fir, spruce, spruce-fir and pine forests located on the southern slope of Caucasus, in the upper reaches of the catchments of the right tributaries of r. Enguri: Nenskra, Nakra, Dolra, Mestiachala, Mulkhra and the upper reaches of the catchment-basin of r. Enguri itself (including r. Adishistskhali estuary and the areas above), on the eastern slopes of the Kodori ridge (the catchment basins of the right tributaries of r. Nenskra: the Ormeleti, Lakhani, Devra, etc) average located in hardly accessible areas at an altitude of 1200-1900 m above MSL.
2. Protection, rehabilitation and conservation of high mountain beech, beech-oak, pine, high-mountain pine, birch, birch-ash and birch-willow forests, with rhododendron under storey, high mountain maple, high mountain asp and very rare birch-asp-rhododendron communities, distributed in the catchment basin of r. Mulkhura on the southern slopes of Caucasus and eastern slopes of Kodori ridge within the catchments of the above mentioned rivers at average altitudes higher than 1900 m above MSL.
3. Protection, rehabilitation and conservation of sub-alpine shrubbery and scattered forests consisting of juniper, Pontic azalea, rhododendron, paradise plant, whortleberry, crowberry on the southern slope of the main watershed of Caucasus and the slopes of its southern branches – Kodori, Shtavleri, Tsalgmili, Ushba, Gvaldi, Atkveri and other ridges at altitudes higher than 2000-2500 m above MSL.
4. Protection, rehabilitation and conservation of forb grassy meadows, alpine vegetation patches and micro communities of loose gravel plants of dense or thin structure, also – rhododendron distributed at some areas in the understorey of the sub-alpine belt on the southern slope of the main watershed of Caucasus and the connection with these branch-ridges at the altitudes higher than about 2400-2500 m above MSL.

5. Protection, rehabilitation and conservation of one of the significant components of biodiversity, the Colchic tall grass consisting of many endemic genus and species, found on the main watershed of Caucasus and connected ridges: Kodori, Shtavleri, Tsalgmili, Ushba, Gvaldi, Atkveri, along the river gorges at altitudes higher than 1600-1700 m above MSL, and on some areas of sub-alpine belt at altitudes of 2000-2400 m above MSL.
6. Protection and conservation of sub-nival open canopy communities consisting of many Caucasian endemics and developed on the sedimentary rock and rocky substrate of the main watershed of Caucasus and its southern branch-ridges (Kodori, Shtavleri, Tsalgmili, etc) at average altitudes higher than 3000 m above MSL.
7. Protection, rehabilitation and conservation of beech, beech-fir, fir forests and their understoreys (rhododendron, holly, Pontic azalea, eastern cranberry) on the northern slope of the Svaneti ridge in the catchment basins of the right tributaries of r. Enguri: the Lasili, Arshira, Lailachala, Laila (Khomfreri), Khelra, Ifari, Khaishura (Kasleti) at altitudes higher than 1300-1400 m above MSL .
8. Protection and conservation of thin sub-alpine crook stem forests of park type (high mountain maple, beech, fir, spruce, rarely – pine) and their lower layer – Colchic under storey (Pontic azalea, rhododendron, holly, cherry laurel, Caucasian rhododendron, etc) preserved on the northern slope of the Svaneti ridge, in the upper reaches of the water catchment basins of these rivers at altitudes higher than 1900-2000 m above MSL.
9. Protection and conservation of forb grass, rich with many endemic and relict genus and species that is preserved on the northern slope of the Svaneti ridge, within the sub-alpine and in parts of the upper forest belt.
10. Protection and conservation of alpine forb grass, geranium edges and rhododendron distributed in the habitats of these sub-alpine belt on the upper part of the northern slope of the Svaneti ridge at altitudes higher than 2200-2400 m above MSL.
11. Rehabilitation of variously degraded broad leaved – coniferous forests distributed on the south-eastern slope of Kodori ridge – upper reaches of the water catchment basins of r. Ormeleti and Lakhani (right tributary of r. Nenskra), middle and upper reaches of r. Kasleti (right tributary of r. Khaishura), Khelra, Ifari (left tributaries of r. Enguri), at altitudes higher than 1400-1500 m above MSL.

Fauna.

12. Protection, rehabilitation and conservation of the brown bear (*Ursus arctos*) included in the Georgian Red List and distributed within the catchment basin of r. Enguri
13. Protection, rehabilitation and conservation of the tur (Capra *caucasica EN*) still preserved on the sub-nival, alpine, sub-alpine and upper forest belts.
14. Protection, rehabilitation and conservation of the chamois (*Rupicapra rupicapra EN*) distributed on the main watershed of Caucasus and its branches: the Kodori, Shtavleri, Tsalgmili, Ushba, Adkveri, Svaneti and other ridge.
15. Protection, rehabilitation and conservation of the golden eagle (*Aquila crysaetus),* the bearded vulture (*Gypaetus barbatus)*, the black vulture (*Aegypius monachus*), the griffon vulture (*Gyps fulvus)* and the boreal owl (*Aegolius funereus*) included in Georgian Red List and distributed on the slopes of the main watershed of Caucasus and its branch-ridges.

Awareness building.

16. Increased environmental awareness at local, regional, national and international level regarding the values of USNP.
17. Promotion/publication of USNP

7.2.2 Objectives related to the historical cultural aspects.

1. Inventory of the historical cultural monuments and suitable documentation with GIS map.
2. Action plan for conservation and monitoring of the cultural heritage. The list of buildings that require reconstruction (requiring disassemble and restoration of the main part) will be developed based on the acquired information and necessary photo and graphical fixation will be undertaken.
3. Emergency protection of endangered monuments through reinforcement piling / support stacks, moving of the undamaged details to safe place, arrangement of safety barriers, etc.
4. Preparation of a program for monitoring and maintenance of the monuments.

7.2.3 Objectives related to socio-economic aspects.

1. Enforcement of a wise resource use regime (controlled grazing, hay making and wood cutting, in the sustainable/traditional use zone;
2. Agricultural reforms and promotion of organic farming; education and training to develop profitable family enterprises;
3. Inventory of alternative sources of income and development of facilities and services for eco-cultural tourism as part of a regional tourism development plan;
4. Promotion of clean technologies and the use of alternative energy sources to reduce use of wood;
5. Support the improvement of road connections within the region and with other regions of Georgia.

7.2.4 Infrastructure.

1. Design and construction of demarcation,
2. Design and construction of the following infrastructure and technical facilities for administration:
   - Central office in Mestia
   - Five main entrances, site offices with information centers.
   - Eleven entrance gates and barriers.
3. Design and construction of infrastructure for visitor services.

7.2.5 Specific geo-morphological features.

1. Protection of one of the most beautiful glaciers, and ice waterfall located 3880-2380 m above MSL (length – 7.6 km), its great ice flow (– 1500 m and width – 800 m) and 2.5 km wide fan-shaped tongue
2. Protection and conservation of the crook stem birch forests and loose sediment communities of the alpine meadows near the Adishi glacier;
3. Protection and conservation of the alpine meadows and alpine vegetation patches around the Perkulskva block.
4. Protection of one of the largest old erratic boulders (20×20×18 m3), to prevent that it is used as material for construction and other engineering works (building, road construction)
5. Access to these monuments and facilities for tourists.

7.3 Upper Svaneti Protected Landscape (USPL).

7.3.1 Objectives related to nature conservation.

Flora.

1. Conservation and rehabilitation of the degraded dark coniferous (spruce-fir) and mixed (beech-fir, beech-spruce) forest derivatives, secondary thin forests, forest-shrubbery and meadows.
2. Conservation of the natural and close to natural forests along the left side of the gorge of r. Enguri, at the foot of the northern slope of the Svaneti ridge and along the slopes of the Ughviri ridge, etc).
3. Conservation and protection of the Chestnut (*Castanea sativa*) included in Georgian Red List within the beech forests of the western part of the Protected Landscape on both sides of the gorge in the upper reaches of r. Nakra and at the foot of the northern slope of the Svaneti ridge.
4. Protection, rehabilitation and conservation of chestnut *(Castanea sativa),* English yew (*Taxus baccata),* high mountain oak (*Quercus macrathera),* elm *(Ulmus glabra),* paradise plant (*Daphne alboviana)* included in Georgian Red List.
5. Protection and conservation of rare endemic species – Enguri bellflower (*Campanula svanetica),* Svaneti cerastium (*Cerastium svanicum),* Svaneti buttercup (*Ranunculus),* etc.

Fauna.

6. Protection, rehabilitation and conservation of golden eagle (*Aquila chrysaetos),* bearded vulture (*Gypaetus barbatus),* long legged buzzard (*Buteos rufinus),* white winged redstart *(Phoenicurus erythrogaster*), and great rosefinch (*Carpodacus rubicilla)* included in Georgian Red List and distributed within the Protected Landscape, in the areas adjacent to historical-cultural monuments.
7. Protection and conservation of endangered (for this region) brown bear (*Ursus arctos).*
8. Introduction of strictly defined, limited norms of hunting on other fauna species.

Specific geo-morphological features.

9. Protection of the huge Lahilachala moraine in the Valley of r. Lahilachala.
10. Access to these monuments and facilities for tourists.

7.3.2 Objectives related to historical-cultural aspects.

1. Preparation of an integrated plan for the protection, conservation and development of Upper Svaneti, that should include the historical cultural monuments of the historical villages, medieval church architecture and monument paintings, the unique Svan School, and the treasury of the holy places together with the most spectacular landscape and archaic ethnography, traditional living and ancient traditions preserved within the villages. The plan should include twelve of the fifteen Temis of the region (above Bali: Ushguli, Kala, Ifari, Mulakhi, Mujhali, Mestia, Lenjeri, Latali; below Bali: Becho, Etseri, Tskhumari, Fari)
2. Establishing the status of protected area of cultural landscapes for Upper Svaneti that should encompass the following Temi: Ushguli, Kala, Ifari, Mulakhi, Muhali, Mestia, Lenjeri, Latali; Becho, Etseri, Tskhumari, Fari (except for Lakhamula, Khaishi and Nakra Temi*).* The majority of the villages of the Temi are urban monuments, which is the result of the harmonious connection of the historical urban pattern with the environment. In addition, Upper Svaneti is a living society with specific socio-economic problems. The establishment of the protected areas with a distinct administrative structure, an adequate legislative base and adequate management plan with conservation standards shall support the protection of the main values of the protected areas and facilitate their use for the development of local Temi.

7.3.3 Objectives related to socio-economic aspects.

1. Enforcement of a wise resource use regime (controlled grazing, hay making and wood cutting, in the sustainable/traditional use area;
2. Agricultural reforms and promotion of organic farming; education and training to develop profitable family enterprises;
3. Inventory of alternative sources of income and development of facilities and services for eco-cultural tourism as part of a regional tourism development plan;
4. Promotion of clean technologies and the use of alternative energy sources to reduce use of wood;
5. Support the improvement of road connections within the region and with other regions of Georgia.

7.3.4. Objectives related to Infrastructure.

6. Design and construction of demarcation.
7. Design and construction of infrastructure for visitor services.

7.4 Upper Svaneti Multiple Use Area.

7.4.1 Objectives related to nature conservation.

8. Include a support zone to separate the National Park from harmful human activities in the Multiple Use Area.
9. Minimize harmful human activities in the Multiple Use Area.
10. Provide ecological corridors for animal migration.

7.4.2 Objectives related to socio-economic aspects.

1. Implement a wise resource use regime.
2. Provide areas for wood cutting to compensate for the volume that can no longer be cut in the other protected areas.
3. Provide areas for grazing and hay making to compensate for the areas that can no longer be used in other protected areas
4. Promote organic farming.

8 Territorial functional plan and zoning.

8.1 Introduction.

This chapter describes the territorial functional plan and related zoning.
Zoning is required

to protect habitats, species and natural processes;
to protect historical cultural sites;
to restore degraded areas;
to separate nature from harmful human activities;
to allocate areas for visitors;
to allocate areas for controlled economic and social activities and
to facilitate management actions (law enforcement, surveillance, monitoring).

The chapter includes the planning for the USNP that is under the direct responsibility of the MoEPNR. These areas are planned and managed strictly in accordance with the Law on the Establishment of a System of Protected Areas.

It includes also the planning for the USPL. This area is managed by the various local governments, however, and a statute for its management still has to be established and agreed between the MoEPNR and the various local governments. These areas are planned and managed in accordance with the Law on the Establishment of a System of Protected Areas but the plan also includes the guidelines of the WHC, the World Heritage Council, to allow a future application for the status of World Heritage Monument.

Finally, also the zoning for the proposed Upper Svaneti Multiple Use Area is given, although this area is not included in the Management Plan. As the Multiple Use Area also functions as a buffer zone for the National Park, there is a close linkage, however, with the management of the National Park. For that reason the present management plan gives also recommendations for the site specific objectives and territorial functional plan regarding this aspect.

The areas of the various protected categories and their zoning are shown in Table 8.1.

Areas have been computed based on information provided by Forestry Department of the Ministry of Environment and Natural Resources, collected during the years (1984-2006). The legalization of the borders requires a more accurate calculation based upon ortho-photo and in situ geodesic surveys.

Table 8.1. Area of protected categories.

Category		**Area ha**	**Area ha**
Upper Svaneti National Park (USNP).		**74,056.33**	**74,056.33**
	Strict Nature Protection Zone	*47,417.57*	
	Managed Nature Protection Zone	*13,758.69*	
	Recuperation Zone	*883.02*	
	Traditional Use Zone	*11,611.80*	
	Visitors zone	*385.00*	
	Administration zone	*0.25*	
Upper Svaneti Protected Landscape (USPL).		**46,637.91**	**46,637.91**
	Nature Conservation and Recuperation Area	*7,658.30*	
	Historical-Cultural Conservation Area	7,893.71	
	Sustainable/Traditional Use Area	*31,085.90*	
Upper Svaneti Multiple Use Area.		**52,913.69**	**52,913.69**
Total			**173,607.93**

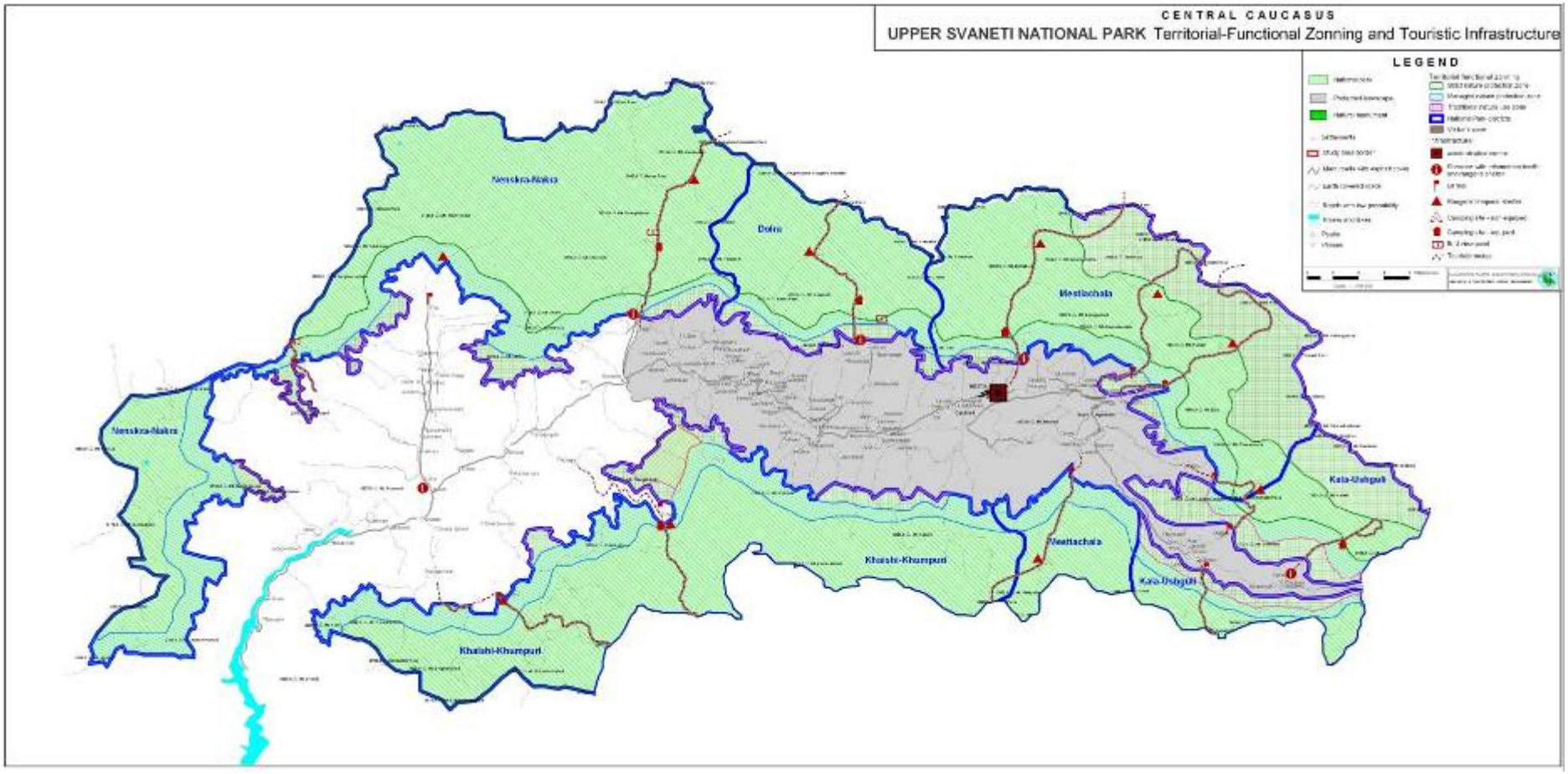
8.2 The Upper Svaneti National Park (USNP).

8.2.1. General.

National parks are areas with high ecological value and a potential for ecotourism, where nature conservation, environmental education and wise resource use go hand in hand. National parks, also known as category II protected areas, are planned and managed in accordance with the IUCN guidelines. As this approach is also the basis for the Georgian legislation for protected areas, this approach has been followed here.
According to this law following zones should be established:

Strict nature protection zone;
Managed protection zone
Recuperation zone;
Visitor zone
Administrative zone.
Traditional use zone.
The various zones are described in section 8.2.2. The zoning is shown on Figure 8.1 below and on the Map 10.4. in Annex 10.

Figure 8.1 Zoning of the National Park



8.2.2. Territorial functional planning and zoning.

8.2.2.1 Strict nature protection zone.

Location and description.

This zone consists of the following natural (intact) and close to natural (relatively less modified) ecosystems with significant ecological value located on the crown and slopes of the main watershed of Caucasus and its southern branch-ridges – Kodori, Shtavleri, Tsalgmili, Ushba, Atkveri, northern slope of Svaneti ridge.

1. Sub-nival and nival belts located at altitudes between 3200-3400 m above MSL;

The following parts of the nival belt:

- the crown of the western part of the main watershed of Caucasus with eastern slopes of p. Ghvandra (3984 m), slopes of p. Dalara (3988 m), Donghuzvoruni (4452 m), Shkheldi (4322 m) and connected branch-ridges of Kodori (highest peak – Moguashirkha: 3852 m), Shtavleri (highest peak – Shtavleri: 3993 m), Tsalgmili (highest peak – 3992 m), Ushba (highest peak – Ushba: 4710 m) with glaciers

Rationale for selection.

Due to the severe climate there is no soil-vegetation cover on the nival belt. This belt is the realm of permanent snow and glaciers, with steep rocky peaks weathered due to intensive freezing disintegration and gravitational processes. The upper reaches of some of the rivers (Enguri, Nenskra, Nakra, Dolra, etc) which flow from the main watershed of Caucasus form a great amphitheatre covered with permanent snow and glaciers. Rocky-icy peaks are erected on the walls of these amphitheatres; the pride of Caucasus ridge – Ushba (4710 m) should be noted among these peaks for strict and fairy-tale like scenery. Generally, the nival and sub-nival belts of Upper Svaneti National Park, with their glaciers and rocky-snowy peaks form picturesque scenery.

The following parts of the sub- nival belt:

- The crown and snow covered slopes of the Svaneti ridge and southern slopes between p. Lasili (3494 m) and Leshnili (3900 m) at altitudes higher than 3000 m above MSL.

Rationale for conservation

The sub-nival belt comprises the stripe adjacent to the zone of permanent snow and glaciers. Erosive, paleo-glacial (circuses, doors, trough gorges) and exarational relief (rocky, steep mountains and peaks) is typical for this area. Mainly mono-dominant open micro habitats with specific plant species are developed on loose gravel and rocky substrata. Most of the plants are Caucasian endemics. The following mammal species should be noted: East Caucasian tur (C*apra cylindricornis*), West Caucasian tur (*Capra caucasica*), brown bear *(Ursus arctos)* and chamois (*Rupicapra rupicapra*). The numbers of the three species have significantly decreased and they are included in Georgian Red List. Moreover, East Caucasian tur and West Caucasian tur are Caucasian endemics that live only in this area.

The following bird species included in the Georgian Red List live in the area bearded vulture *(Gypaetus barbatus)*, griffon vulture *(Gyps fulvus)*, golden eagle *(Aquila crysaetus*), the Eurasian black vulture (*Aegypius monachus*), which is not nesting here, can also occasionally be observed.

2. Sub-alpine and alpine belts located at altitudes between 1900-3200 m above MSL;

The following parts of the alpine and sub alpine belt:

- The western part of the main watershed of Caucasus between the passes of Ghvandra (3984 m) and Tviberi (3607 m), at altitudes higher than 1900 m above MSL.
- The slopes of Kodori, Shtavleri, Tsalgmili, Ushba, Gvaldi.
- The crown, northern slope of the western and eastern parts of the Svaneti ridge at altitudes higher than 1900 m above MSL.

Rationale for selection.

The sub-alpine and alpine belts contain areas of high ecological value that are significant for its biodiversity. These areas include rare and original plant communities – park forests, sub-alpine crook-stem forests, sub-alpine high grass, forb grassy meadows, meadows with thick and thin turfing, alpine with many communities of relict endemics. In addition, the above mentioned belts along with the upper sub-belt of forests form the main habitat of the East Caucasian Tur and the West Caucasian Tur. For that reason these belts are also important for the conservation of endangered Tur population. Also the following protected mammals are resident here:

Brown bear (*Ursus arctos*), lynx (*Linx linx),* kluchor birch mouse (*Sicista kluchorica*), long-clawed mole-vole (*Prometheomys schaposchnikowvi*) and chamois (*Rupicapra rupicapra).*

The following bird species included in the Georgian Red List live here : Bearded vulture (*Gypaetus barbatus*), griffon vulture (*Gyps fulvus*), Eurasian black vulture (*Aegypius monachus*), Egyptian vulture (*Neophron percnopterus*), golden eagle (*Aquila crysaetus*),white winged redstart (*Phoenicurus erythrogastrus*), great rose finch (*Carpodacus rubicilla*) and long-legged buzzard (*Buteo rufinus*).

The Caucasian endemic Caucasian black grouse (*Tetrao mlokosiewiczi*) can be found here and the migratory birds greater spotted eagle (*Aquila clanga*), saker falcon (*Falco cherrug*) and red-footed falcon (*Falco vespertinus*) can be observed occasionally.

3. Natural and close to natural broad leaved, mixed and dark coniferous forests occupying various areas at an average altitude of 1200-1900 m above MSL.

Landscape in Upper Svaneti National Park.

The following parts of the natural and close to natural broad leaved, mixed and dark coniferous forests:

- Various beech formations (beech-hornbeam - *Fageto-Carpineta*, beech-chestnut-hornbeam – *Fageto-Castanieto-Carpineta*, and beech-fir – *Fageto-Abietetum*, beech-spruce – *Fageto-Piceetum*) with diverse plant species in the middle forest belt at altitudes of 900-1600 m above MSL. Beech (*Fagus orientalis*) forests with evergreen Colchic under storey (cherry laurel – *Zaurocerasus officinalis*; holly – *Ilex colchica*; Colchic ivy – *Hedera colchica*; Colchic boxwood – *Buxus colchica*; Pontic azalea – *Rhododendron liteum*; Caucasian whortleberry – *Vaccinium arctostaphylos*; etc), beech forest with holly (*Ilex colchica*) sub-layer, beech-chestnut forests with cherry laurel (*Zaurocerasus officinalis*) under storey, etc. groves of various areas have been mainly preserved on the steep rocky mountain slopes.
- Natural or close to natural dark coniferous , natural and close to natural broad leaved, mixed and coniferous forests in the middle and upper forest belts at altitudes of 900-1900 m above MSL.
- Forests of various modification of beech, substituted with dark coniferous forests at the upper part of the forest belt at altitudes of 1600-1900 m above MSL. Along with coniferous species beech is also

present in this part of the forest belt; on the northern expositions mountain maple (Acer sosnowskyi), birch (*Betula pendula*), ash *(Sorbus aucuparia),* goat willow (*Salix caprea*) are also developed.

Rationale for selection.
The forest ecosystems are examples of almost pristine ecosystems that are highly valuable as most of the functions of nature are still intact, such as production of resources, regulation of air and water quality and protection of the area against surface erosion, landslides and mudflows.

8.2.2.2 Adishi Glacier.

Location and description.
The Adishi glacier is located in the upper reaches of r. Adishi trough gorge that is formed by ancient glaciers the slope of the gorge, without glaciers and permanent snow is locally covered with open canopy vegetation complexes typical for the sub-nival belt. The areas near the glacier tongue are mainly alpine meadows, which are substituted with crook stem birch forests and loose sediment communities.
It is located on the crown of the main watershed of Caucasus and its southern slope between p. Distola (4859 m) and Shota Rustaveli (4860 m). The feeding area of the glacier is located at altitudes higher than 4000 m above MSL. From the feeding area the glacier (length – 7.6 km, width of the middle and upper parts – 800 m) forms a vertical wall up to r. Adishistskhali creek. Here it forms a great ice waterfall; its fan-shaped and deeply cracked tongue descends up to 2400 m above MSL.

Rationale for selection.
The Adishi glacier is an object of unique value and has special significance for its beauty, its spectacular scenery due to its geo-morphological and paleo-glacial features. The Adishi glacier is distinctly prominent among all other glaciers of Caucasus Mountains, due to its beauty, splendor and landscape value.

8.2.2.3 Perkhuliskva Block.

Location and description.
The block, the Ferkhuli Stone as it is called by the Svans, is located on an alpine meadow in the upper reaches of r. Khaldechala on the southern slope of the main watershed of the Caucasus. The size of the boulder is: 20×20×18 m3 that is larger than all old glacier boulders of the Caucasus.
The Ferkhuli Stone is a huge rock mass brought from the main watershed of Caucasus by an old glacier of Khalde during the old glaciation of quaternary period,
The vegetation cover of the areas adjacent to Ferkhuli Stone is mainly represented by alpine meadows and alpine vegetation patches of local distribution.

Rationale for selection.
The boulder is important for the study of the natural events in the geological past and forms a picturesque and original scenery together with the snow covered peaks of the Caucasus , the so called Bezingi wall, at the background. This is one of the largest ancient erratic blocks in the Caucasus.
The key goal of the management plan is to protect and conserve the habitats and plant and animal species in this zone through a strict protection regime.

Total area strict nature protection zone.
47,417.57 ha.

Allowed activities.
In order to achieve the site specific conservation objectives, the following activities are only allowed in the strict nature protection zone:

- scientific research;
- educational activities;
- monitoring;
- cadastre activities;
- law enforcement;
- use of cars and aircraft in case of emergency (disasters, etc) and for rehabilitation, construction and maintenance activities;

- Construction of the infrastructure that is necessary to separate trails from the strictly protected nature zone,, in strict compliance with environmental requirements. The negative impact of these facilities on the ecosystems should be assessed and measures should be taken to prevent these effects.

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Forest Landscape in Strict Nature Protection Zone.

8.2.2.2 Managed protection zone.

Location and description.

The Managed Protection Zone is adjacent to the Strict Nature Protection Zone and comprises the areas located below the Strict Protection Zone on the southern slope and slopes of its branch ridges (Kodori, Shtavleri, Tsalgmili and the northern slopes of the Svnaeti ridges), The Managed Protection Zone includes variously modified forests and alpine and sub-alpine ecosystems.

Rationale for selection.

Despite the human pressure, these landscapes have preserved specific or even unique features – a fairly rich biodiversity and a number of rare, relict and endemic species. Controlled use of the artificially modified ecosystems, which still have some ecological value, for recreational purpose in combination with measures to protect and maintain the natural characteristics will help to conserve the natural environment and to maintain a satisfactory level of biodiversity.

Total area.

13,758.69 ha.

Allowed activities:

Only the following activities are allowed:

- scientific research;
- educational activities;
- rehabilitation activities;
- monitoring;
- cadastre activities;
- Law enforcement.
- Use of cars and aircraft in case of emergency and for rehabilitation.

Restricted use of some parts for recreational purposes could be allowed with the objective to relieve the human pressure on other areas in the Managed Zone and in the Strict Nature Protection Zone.

8.2.2.3 Recuperation Zone.

Location and description.
In some areas within the National Park, the ecosystems are severely degraded due to human activities. However, these ecosystems still include plant species and populations of high conservation value. Such territories do not form a continuous zone but consist of isolated patches. These patches are included in the Rehabilitation Zone. Once recuperated these areas can be included in the Strict Nature Protection Zone.

The recuperation zone includes:

- The areas along the southern, northern and western borders of the Multiple Use Area (the catchment basins of r. Ormeleti and Lakhami – a right tributaries of r. Nenskra and a right tributary of r. Enguri respectively) where trees were cut and degraded beech, oak, beech-fir and at some areas fir forests with Colchis under storey (rhododendron, Colchic holly, cherry laurel, Eastern cranberry) were left;
- The severely degraded fir and beech-fir forests with Colchic under storey (rhododendron, Colchic holly, Pontic azalea, Eastern cranberry) on the northern, southern and eastern slopes of m, Tekrashdudi (2825 m) in the catchment basins of the right tributaries of r. Enguri – Khumfreri, Khelra and Iprari;

  Rationale for selection.
  Rehabilitation and protection of such ecosystems is very important for the conservation of the biodiversity of the National Park and the entire region. As the climate and soil conditions are favorable for recuperation effective restoration measures can be planned and implemented at low cost.

Total area.
883.02 ha.

Allowed activities.
Only the following activities are allowed in the rehabilitation zone:

- scientific research
- educational activities;
- ecotourism and alpinism (seasonally);
- rehabilitation activities;
- monitoring;
- cadastre activities;
- Law enforcement.
- Use of cars and aircraft in case of emergency and for rehabilitation.

8.2.2.4 Visitors zone.

Location and description.
The visitor's zone includes all areas that are accessible for tourists. This includes tourist facilities (information center, entrances, information boards, etc), trails with pick nick facilities, camp sites etc. The location of the various objects and elements of the visitor zone are shown on Figure 8.1. and on the map of Teritorial-functional zoning in Annex 10, They are described in Chapter 9.
A green belt (buffer zone) is planned around the infrastrucural objects, , to avoide the negative impact of the visitors on the ecosystems.

*Rationale for selection**.***
One of the main objectives of the park is to promote nature conservation and environmental education through education, excursions and interpretation services. The visitor zone is an indispensable expedient to realize this objective.

Total area*.*
385.00 ha.

Allowed activities.
*On*ly the following activities are allowed in the visitor's zone:

- ecotourism;

- educational activities;
- monitoring;
- cadastre activities;
- use of cars and air transport in case of emergency and for rehabilitation activities;
- specified visitor services in designated areas, such as climbing, rafting, skiing.;
- Construction of the infrastructure necessary for visitor services in strict accordance with environmental requirements.

Nature trails may cross the Strict Nature Protection Zone. These trails and appropriate resting areas and camp sites will be part of the visitors zone, however. Care should be taken that the impact of the visitor flow does not disturb nature. In order to avoid disturbance to nature, the number of visitors may be limited in certain areas or certain seasons.

8.2.2.5 Traditional Use Zone.

Location and description.

Presently the park area is used extensively for grazing and wood cutting. These activities are of paramount importance for the local population, but will be restricted in most areas. Controlled resource use will be allowed, however, in the traditional use zone of the National Park

The Traditional Use Zone comprises the following:

- The areas directly adjacent to the Multiple Use Area between the gorges of r. Nenskra and Nakra;
- The secondary forest-shrubbery and meadow-shrubbery (along r. Dolra, Mestiachala and Mulkhura gorges) along the northern border of the Upper Svaneti Protected Landscape from the mouth of r. Nakra to the mouth of r. Mulkhura and Tsaneri;
- The crown with permanent snow and ice of the eastern part of Svaneti Caucasus, with adjacent southern slopes between the passes Tviberi (3607m) and Sharivtseki (3434 m), Gistola (4960 m), Jangha (5059 m), Shkhara (5201 m), Tikhtigeni (4617 m), Namkvami (4293 m) and other peaks with neighboring slopes of the Namkodri, Kareta, Atkveri, branch ridges.
- The secondary forests, forest-shrubbery and meadow-shrubbery between the gorges of r. Enguri and its tributaries – Adishichala and Khaldechala;
- The lower belt of secondary forests, forest-shrubberies and meadow-shrubberies on the northern slope of the Svaneti ridge along the border with the Upper Svaneti Protected Landscape.

Rationale for selection.

The zone comprises the territory of the Upper Svaneti National Park, which has been intensively used by the local population throughout centuries, for crop cultivation, grazing, hay making and wood cutting. Consequently, the natural landscape is severely modified and has been replaced by a cultural landscape with little conservation value.

Total area.

11,611.80 ha

Allowed activities.

Only the following activities are allowed:

- scientific research;
- educational activities;
- ecotourism and alpinism (seasonal);
- rehabilitation activities;
- grazing, haymaking, collection of fire wood (restricted and controlled);
- monitoring;
- cadastre activities;
- Law enforcement.
- use of cars and air transport in case of emergency and for rehabilitation, construction and maintenance activities;
- construction of the necessary infrastructure (fencing)

8.2.2.6 Administrative zone.

Location and description.
The administration zone includes all administrative facilities within the park borders, in particular the site offices with information centers and the entrance gates. The location is described in Chapter 9.

Rationale for selection.
In order to facilitate the management of the National Park, administrative buildings and other facilities are required. Central office will be constructed in Mestia, but site offices with information centers are required within the National Park to support the activities "on the ground".

Total area.
Five site offices with green belt 0.25 ha.

Allowed activities.
Only the following activities are allowed:

- educational activities;
- ecotourism and visitor services;
- monitoring;
- cadastre activities;
- use of cars and aircraft in case of emergency (disasters, etc) and for rehabilitation, construction and maintenance activities;
- specified visitor services in designated areas;
- construction of the required infrastructure (entrances, administrative buildings) in compliance with environmental legislation;

8.2.2.7 Cultural monuments.

The cultural monuments are scattered over the territory and will be managed as individual monuments.

8.3Upper Svaneti Protected Landscape (USPL).

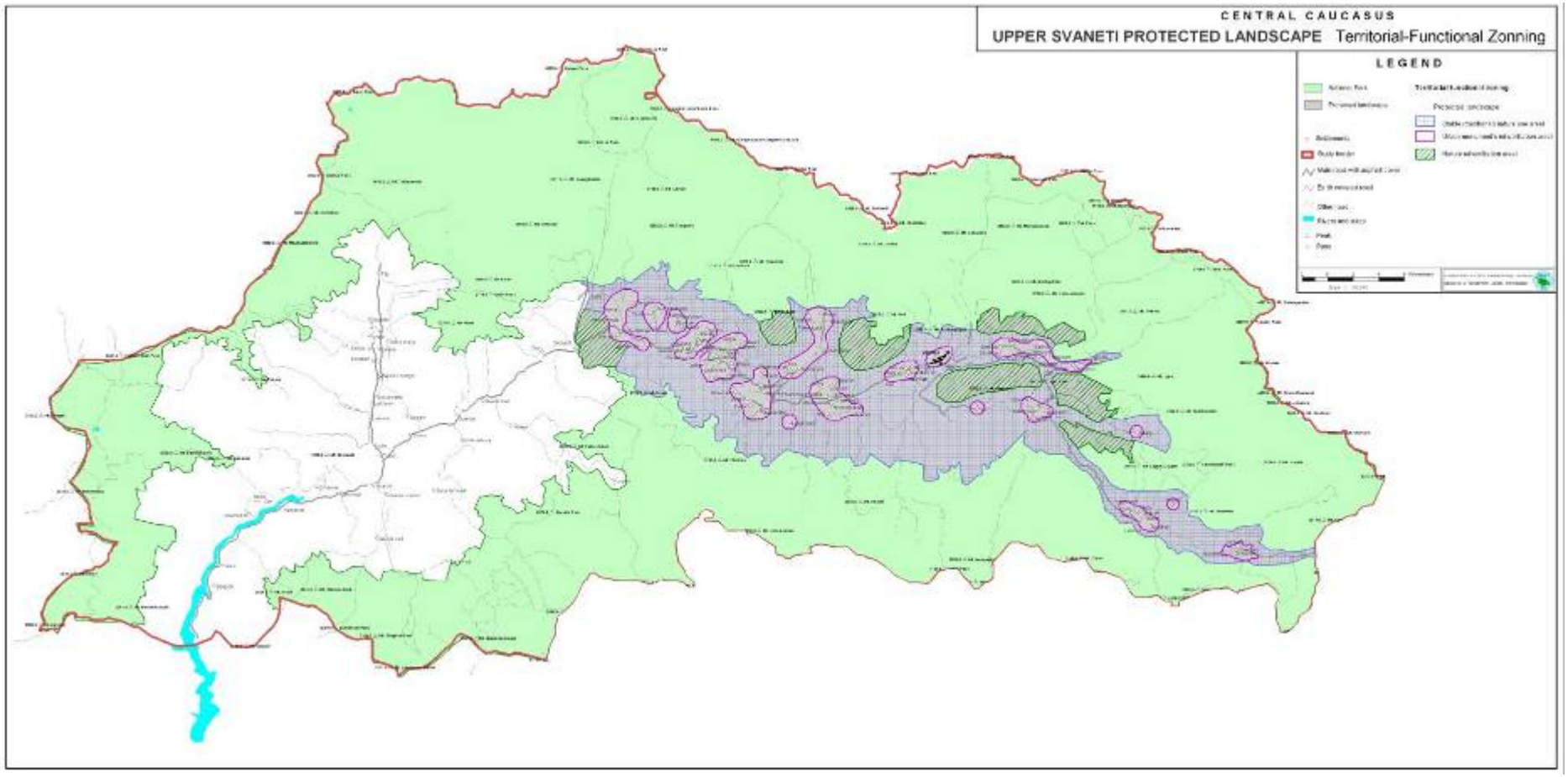
8.3.1. General.

Protected landscapes are territories where the interaction of people and nature over time has produced an area of distinct character often with significant aesthetic, ecological and/or cultural value and often with high biological diversity. Various institutions have developed initiatives to protect these landscape values. These initiatives were initially sectoral and addressed only specific aspects. Both the World Heritage Convention and the IUCN played a leading role in the formulation of guidelines for the selection and management cultural and natural monuments of outstanding global significance. Lately the two agencies developed an integrated approach that encompasses both the ecological and cultural aspects.
In this Management Plan an integrated approach has been adopted for the initial planning of the Protected Landscape that is largely based upon the criteria for IUCN category V, protected landscapes. The Georgian Law on protected areas does not include another category and describes that protected areas should be classified according to the Georgian Law on the Establishment of a Protected Areas System before any international classification can be assigned to it.
Based upon the environmental assessment the following zoning was applied within the Upper Svaneti Protected Landscape to facilitate the achievement of the operational objectives mentioned above:

1. Nature conservation and rehabilitation area.
2. Area with urban monuments with high historical-cultural value.
3. Traditional Resource Use Area.

The various zones are described in section 8.3.2. The zoning is shown on Figure 8.2 below and on the Map 10.5. In Annex 10.

Figure 8.2. Zoning of the Protected Landscape.



8.3.2. Territorial functional plan.

8.3.2.1 Nature conservation and rehabilitation area.

Location and description.

The *nature conservation area* comprises the narrow forest belt along the edges of the Protected Landscape and on the steep slopes between the Protected Landscape and the National Park.

The *nature rehabilitation* area is spread over the USPL in the form of separate territories. These are found in the eastern part of the Protected Landscape in the following locations.

- on the slopes of the Ghviri pass (1992 m) and p. Meptashi (2472 m) to the east of the large village Mestia, between r. Enguri and Murkhra gorge.
- on the slopes of p. Lakhilda (3001 m) to the east of large village Mestia, between r. Enguri and the Adishistskhali gorge.
- on part of the southern slope of the main watershed of Caucasus, between r. Mestiachala and Tviberi gorges, at altitude of 2100-2400 m above MSL.
- on the southern slope of the main watershed of Caucasus on the south-eastern slope of Baki pass (2416 m), on the right side of r. Dolrachala, at altitudes of 1800-2400 m above MSL.
- in the upper reaches of r. Nenskra – the southernmost part of Tsalgmili ridge and the left slope of r. Enguri gorge, at altitudes of 900-1800 m above MSL

Rationale for conservation.

In spite of severe anthropogenic impacts the natural flora is still intact in some areas and, more or less close to natural (at various levels) forest, sub-alpine and alpine meadow habitats have been preserved at some inaccessible areas. High mountain oak *(Quercus machrantera)* along with Somie's cowparsnip *(Heracleum sommieri),* Svanetian cerastium *(Cerastium svanicum),* Kazbegi willow *(Salix kazbekensis),* etc species included in Georgian Red List are represented within the habitats, on Ughviri ridge and p. Dalagilda, Meptashi slopes as well as in the form of separate stands on the southern slope of the main watershed of Caucasus. Separate specimen (mainly shrubs) of English yew *(Taxus baccata)* included in the Georgian Red List are found on the southern and south-western slopes habitats of Baki pass. Somie's cowparsnip *(Heracleum sommieri)* is present in the upper reaches of r. Nakra, on the both sides of r. Enguri gorge - chestnut *(Castanea sativa)* and Somies cowparsnip *(Heracleum sommieri)* included in Georgian Red List are also observed in the area. The above species have high conservation value. In addition, they are threatened due to anthropogenic pressure and thus they need protection, rehabilitation and conservation.

Total area.

7,658.30 ha

Allowed and restricted activities.

Regulations for the management of this area will be established by te local governments in cooperation with the APA, once the Protected Landscape is established**.**

Pending this decision, all activities, that are detrimental for the mentioned habitats, should be prohibited.

8.3.2.2 Culture conservation and rehabilitation area.

Location.

This area comprises the following temi with the villages and the monuments of civil and cult architecture located within these above villages: Ushguli (villages Chajhashi, Murkmeli, Jhibiani, Chvibiani), Kala (Ifrari, Davberi, Vichnashi, Khalde), Ifari (Tsvirimi, Nakifari, Bogreshi, Zegani, Ieli), Lenjeri (Nezguni, Lemsia, Lashtkhveri, Kashveti, Kaeri, Soli, Kheshkili), large village Mestia, Mulakhi (Jhabeshi, Chvabiani, Cholashi, Jhamushi, Artskheli, Mushkeli, Zardalashi, Ghvebra, lakhiri, Majvdiri, Tsaldashi), Latali (Ifkhvi, Kvanchianari, Lakhushdi, Lakhili, Lelebagi, Leshukvi, Matskhvarishi, Namkvam-Zagrali, Sidianari, Shtaleri), Becho (Baghvdanarai, Doli, Nankhvari, Nashtkoli, Tvebishi, Ushkhvanari, Kartvani, Chkidanarai, Chokhuldi), Etseri (Barshi, Gvalderi, Kalashi, Ladreri, Lanteli, Lashkhreri, Uzgviri, Ughvali, Frutreri, Kurashi, Tsalanari, Cheliri, Khebudi), Lakhamuri (Dizi, Nodashi, Lower Ifari, Kazakhi, Shdighiri, Khelra, Hamashi-Totleshi).

It should be noted that the majority of the listed villages are urban monuments of great historical-cultural value in their own right.

Description.
Svaneti in general and especially Upper Svaneti (Mestia district) have outstanding significance within Central Caucasus Protected Areas due to the unique pieces of residential, defensive and cult architecture. Almost two hundred small churches of chamber type have been preserved in the villages of Upper Svaneti and adjacent areas – their majority was built in X-XIV c.c. Almost all churches of Svaneti contain the treasure of Georgian arts. Despite modest architectural value, hewn or drawn icons, illuminated manuscripts, wooden curved doors, murals (mainly – variously damaged) of high cultural heritage value have been preserved within these churches. Civil architecture has especial significance in Svaneti cultural heritage. First of all, it should be mentioned, that the majority of the residential areas in Upper Svaneti were small free "reign-less" counties with local population in permanent concern for their defense. The above mentioned resulted in high defensive features of the residential buildings. Svan house was a family shelter from attackers either feudals or neighboring population (due to conflicts and inner hostility). Svan civil architecture had been developing from the ancient period based on the tower residences of Georgia. Svans chose residential areas which complied with the necessary defensive requirements. Throughout centuries entirely unique Svan villages located on the mountain slopes and along the river gorges with houses and exquisite Svan towers erected nearby as tough soldiers ready for battle have been constructed. Silhouettes of Svan villages and especially towers with the background of alpine and sub-alpine meadows of Rocky Mountains covered with permanent snow and glaciers and deep gorges leave deep impression on the viewer.
Archeological monuments form significant part of Svan cultural heritage. Dozens of archeological monuments of various epochs of the past have been discovered and partially studied in Svaneti; the oldest monuments date back to old Neolith period. From the studied monuments of the USPL and directly adjacent areas the following should be mentioned: Ushguli, Etseri, Skareshi hills-remnants of settlement, metallurgical production squares of Kali, Etseri, Ifari and Chuberi and burial mounds.

Rationale for Conservation.
The historical-cultural heritage of the USPL and directly adjacent territories is of international importance. This area entirely complies with the requirements of the guidelines for the selection of world heritage sites developed by World Heritage Committee (WHC – international organization responsible for the implementation of World Heritage Convention). These requirements mainly focus on cultural monuments. However, during the evaluation of the world heritage sites by the International Council of the World Heritage and Sites and Center of the Conservation and Rehabilitation of Cultural Heritage Property in addition to the cultural aspects of the areas the direct connections of the monuments of cultural heritage with the anthropogenic environment created by man were also considered.

Total area.
7,893.71 ha

Allowed activities.
Regulations for the management of this area will be established by te local governments in cooperation with the APA, once the Protected Landscape is established. Pending this decision, all activities that are detrimental for the historical-cultural monuments of this area, should be prohibited and restoration, reconstruction activities of the monuments should be approved and supervised by specialists.

8.3.2.3 Traditional use area.

Location and description.
This area comprises the territories adjacent to the area with urban monuments of historical-cultural value and includes mainly cultivated land (arable land, pastures, and hay meadows) and forests, forest-shrubbery, secondary meadow-shrubbery and meadows that are variously degraded due to the agricultural activities.

Rationale for selection.
Sustainable / traditional resource use area of the USPL is also located within the protected area – around historical-cultural monuments. The landscape in this territory has been used by people for centuries for agriculture and other economic activities and is strongly modified. The habitats of the sustainable / traditional resources use area, despite their modification, still have landscape, aesthetic and natural values. These values should be conserved by a sustainable use regime.

Total area.
31,085.90 ha.
Regulations for the management of this area will be established by te local governments in cooperation with the APA, once the Protected Landscape is established***.***

8.4 Upper Svaneti Multiple Use Area .

The Multiple Use Area s are areas that contain predominantly unmodified natural systems that are managed to ensure long term protection and maintenance of its biodiversity, while providing at the same time a sustainable flow of natural products and services to meet community needs. The IUCN approach should be used to manage these areas. As the Management Plan for the Multiple Use Area will be prepared as part of an other project these aspects are not included in this management plan, however.

9 Strategies and Measures.

9.1 Introduction.

This chapter describes the strategies and measures to achieve the strategic objectives defined in Table 6.1. Of Chapter 6. Strategies are elaborated for each management aspect. (Nature conservation, Culture conservation, Socio-economic development) and for the construction of the supporting infrastructure. Each strategy includes a cluster of measures.

The *nature conservation strategy* includes: Enforcement of the protection regime, interventions, research and monitoring, and environmental education/awareness building.

The *culture conservation strategy* includes: Documentation and enforcement of a conservation regime and interventions.

The *socio-economic development strategy* includes: Implementation of a wise resource use regime, measures to promote ecotourism and monitoring of the effect of these measures on the local population.

Moreover measures are described to construct the physical infrastructure needed for the above measures.
A detailed action plan with programs to implement the measures is given in Chapter 10.

9.2 Nature Conservation.

9.2.1 Enforcement of a protection regime.

General.

The prime objective of the Protected Areas is

to establish a regional ecological network

to maintain the diversity of landscapes, habitats and associated species;

This section describes the complex of measures to achieve these objectives.

***Enforcement of a strict protection regime through surveillance,* patrolling etc.**

Law enforcement is carried out by the senior rangers and rangers in strict conformity with the governing laws, normative laws, regulations and other legal documents that are in force. Patrolling along borders with the Russian Federation should be carried out in close cooperation with Georgian border police.
To facilitate law enforcement and patrolling, the protected areas under the jurisdiction of the Administration are divided in ranger districts. Each district is supervised by a senior ranger. The National Park includes five ranger districts. The law enforcement within the Protected Landscape will be the task of the local governments.
The Senior Ranger, together with the Rangers participates in patrolling. Rangers conduct patrolling in their district. Six to eight rangers work in one district in shifts with fortnight turns (three persons per each shift). In case external support is required the chief ranger, after approval of the Director, can call police, border guards, or other security agencies for assistance.
After completion of each patrolling route, the Senior Ranger fills out a patrolling sheet with the time of patrolling, the route, name of the rangers and a brief description of particulars such as observed damage, law violation etc. Completed reports are analyzed by the chef ranger and are used to adjust the plan of patrolling and as a basis for monthly and annual reports.
Apart from patrolling, rangers participate in the following activities:

Monitoring resource use (wood cutting, fishing, grazing, collecting of cones, berries and fruit etc). and effects of tourism They may check at any time resource users and visitors and may undertake measures as prescribed by the law in case of violation of regulations.

Research and monitoring, visitor's services and interpretation.

Rescue operations in case of natural calamities and emergencies (fire, outburst of flora and fauna diseases, floods, etc.).

Training of staff.
Training of staff is required to prepare them for their role in law enforcement. This training should be provided as part of the general human resources development program of the Agency Protected Areas.

9.2.2 Interventions.

General.
Part of the protected areas are degraded due to human activities these areas should be rehabilitated in order to restore the valuable habitats and rare, endangered and extinct species in these areas. This section described the measures that should be taken to achieve this objective.

Rehabilitation of degraded forest habitats;
Large parts of the forests in the lower forest belts have been damaged due to woodcutting. Part of these forests will recuperate as natural conditions are favorable for self recuperation. In other areas, however, plantations and other interventions will be required to reinstate natural conditions for self regulation. .

Protection of the brown bear.
The brown bear is a natural inhabitant of the Caucasus Mountains. Studies by a.o, NACRES have shown that, like in other parts of the world, it is threatened by increasing demographic pressure that limits its habitat and decreases the feeding base. Moreover bear hunting is a favorite sport in the area and has strongly reduced the brown bear population. The protection strategy aims at protection of the natural habitats within the protected areas, conservation of the feeding base in these habitats and initiatives to change the hunting habits of local population.

Rehabilitation of the ungulate population.
By the same token also the ungulate population is under severe threat and some typical Caucasian mountain species are on the verge of extinction. The protection strategy aims at protection of the habitats and feeding base of these animals and may include reintroduction of some endangered species from other areas.

9.2.3 Monitoring and research.

General.
Monitoring is needed to verify whether the management objectives are being met. Research is required to improve the understanding of ecological processes. This section describes the activities that should be undertaken to that end.

Preparation, workshop.
The research sites and the indicators will be selected prior to the start of the project in a workshop with leading biologists (botanists and zoologists).

Baseline survey.
The survey will be carried out in the National Park and the Protected Landscape. And includes: Floristic- and faunal survey and bird survey in 4 selected sites for a period of one week per site.

Monitoring.
Floristic survey in the 4 selected habitats, every year for a period of 1 week per site Monitoring will be carried out in spring and summer and will include the species composition, density and coverage of the vegetation in randomly selected plots of 100 m^2 and the status of the rare and endangered species.

Zoological survey of endangered mammal population in 2 of the 4 characteristic habitats every year for a period of 1 month every year per site.
Monitoring will be carried out in summer and winter and will include the extent of the feeding base of the endangered mammals and the composition of the mammal population.

Survey of bird population. Survey of bird population in the 4 selected sites every year for a period of 1 week per site 1 Monitoring will be carried out in summer and winter and will include counting of migratory and nesting birds.

Development of a data base. The data base will be a geo referenced data base with facilities to archive the collected data and to visualize the results through thematic maps (vegetation, bio diversity, species composition etc)

These surveys will be performed in the strict nature protection zones and the managed zones of the protected areas. In addition following aspects will be monitored in specific parts of the protected areas:

- the effect of the rehabilitation measures. This part of the monitoring program will be executed in the rehabilitation zones;
- the effect of the wise resource use regime. This part of the monitoring program will be carried out in the traditional use zones of the protected areas.
- the effect of visitors. This part of the monitoring program will be carried out in the areas adjacent to the visitor's zone.

Training of staff.
Training of staff in the preparation of protocols for monitoring and in biodiversity monitoring and bird counting is required. This training should be provided as part of the general human resources development program of the Agency of Protected Areas.

9.2.4 Awareness building and environmental education.

9.2.4.1 General.

One of the major objectives of the protected area is to raise the level of environmental awareness and understanding of the values of the protected areas among the public. The awareness building strategy is based upon the recommendations of the UNESCO Conferences on International Actions in the Field of Environmental Education[7] and envisages the development of a full range of measures for full comprehension of the wildlife and its ecosystems, advocating the role and significance of protected areas for biodiversity protection. The target groups include the local population and various visitor groups. These groups have different interests and require a broad spectrum of services ranging from general information to in depth presentations on specific topics.
The strategy includes the following:

9.2.4.2 Educating and informing the general public.

Media related programs and use of new communication tools.
A Web site will be prepared with a general description of the Protected Areas and updated information on excursions and other events. Moreover, mass media like local and central press, radio and television will be involved for the purpose of informing the population of the region and the country on activities of the protected areas.

Bank of audio visual programs
General information, brochures of the Protected Areas and video /audio material will be prepared that can be used to demonstrate their significance. They will be used as hand outs for interested visitors and as back ground information for guided tours and educative excursions. The material can also be used for environmental education
ongoing at schools and universities.
Moreover information panels will be prepared that will be placed along the tourist trails.
Most of this material will be prepared in the first two years, in the last three years targeted information will be produced tailored to the needs of interest groups that were identified in the first two years.

Exhibitions.
A presentation of the Protected areas will be set up in the central administration in Mestia This presentation will include exhibits, diorama's and video presentations that give a general impression of the various protected areas, the rationale for their protection and the various measures that are being taken to protect them. This presentation will serve as an introduction for interested visitors and can be used as an input for educational projects for local schools.

[7] UNESCO UNEP International Congress on Environmental Education and Training, International Strategies for Actions in the Nineties, Moscow 1987

Information material.

General information, brochures of the protected areas and video /audio material will be prepared that can be used to demonstrate the significance of protected areas. They will be used as hand outs for interested visitors and as back ground information for guided tours and educative excursions. The material can also be used for environmental education ongoing at schools and universities.

9.2.4.3 Visitor services.

Guided tours will be organized in the National Park at fixed times during the year and are meant to give general information on the protected areas. Thematic excursions will be organized randomly during the year to inform interested visitors on specific issues or achievements.

At request educational excursions can be organized for schools and other interest groups. In order to support environmental education, the best way is to arrange excursions along the educational routes of the Protected Areas. The pupils can watch the information panels and digest the information. Interpretation specialists will provide information on the role of protected areas in protecting the ecosystem and will teach them how to behave in nature. Nature camps will be organized in summer to combine recreation and education. These excursions should preferably be part of educational projects that can be developed together with the Administration of the PA. To that end the PA will set up a training program for school teachers.

9.2.4.4 Training of staff.

Training of staff in environmental education and interpretation is required to prepare them for their role as instructor and teacher. Moreover first aid techniques should be learned and rescue operations should be practiced. This training should be provided as part of the general human resources development program of the Agency of Protected Areas.

9.2.5 Wise resource use regime.

This strategy will be discussed in section 9.4.1

9.3 Culture conservation strategy.

9.3.1 Conservation strategy.

General.

The strategy of the protection of cultural heritage will be developed in cooperation with the Ministry of Sports and Culture and will be based on the guiding principles of the renewed version (February, 2005) of the convention on world heritage; the Charter of Venice (1964); the Charter of Bura (1997, renewed in 1999); the charter on the protection and management of archeological heritage (1999); the guiding principles of training and education regarding conservation of monuments, complexes and sights (1993); the principles of registration of monuments, groups of buildings and sights (1996); the charter of international cultural tourism (1999); the charter of folk architecture (1999) and the Georgian law on the protection of cultural heritage (1999, renewed in 2002).

Inventory and documentation of historic cultural monuments.

The first phase includes a description of the archaeological sites and typical architectural and urban monuments present within the various Protected Areas in close cooperation with the Ministry of Sports and Cultural Monuments. Subsequently a conservation plan will be made for the protection of these monuments.

9.3.2 Interventions.

In order to demonstrate how the strategy should be implemented, one ore more selected monuments in the Protected Landscape will be restored.

9.4 Socio-economic development strategy.

9.4.1 Wise resource use regime.

General
Agriculture is one of the important economic sectors in the area. In order to meet the objectives of the Protected Areas, a controlled resource use regime will be enforce d in the zones where controlled wood cutting, grazing and hay making is allowed. This section describes the measures that are envisaged to that end.

Woodcutting.
Wood cutting within the Protected Areas is only allowed in the traditional use zones- and areas. Every year the Administration will make an inventory of the required volume of wood for private consumption and will designate the plots where wood may be cut. Rangers will supervise and control wood cutting and will ensure that damage to the environment is minimized. In accordance with the Forestry Code, wood cutting in protected areas is limited to "sanitary felling" implying that only dead trees and trees affected by diseases may be cut.

Grazing and hay making.
Grazing is allowed in traditional use zones- and areas. Every year the Administration will make an inventory of local inhabitants that graze their cattle within the protected areas. In consultation with the users a grazing plan will be developed that designates the zones where grazing may take place, the period and the allowable number of cattle. In consultation with the local inhabitants the administration will also designate the areas where hay making is allowed. Rangers will supervise and control grazing and hay making and will ensure that damage to the environment is minimized.

Together with the enforcement of the wise use regime within the protected areas, the administration should also play a leading role in promoting agricultural reforms in areas bordering the protected areas. To that end the following objectives should be achieved:

- to support lifestyles and economic activities which are in harmony with nature;
- to eliminate and thereafter prevent land uses and activities that are inappropriate in scale and/or character;

In order to achieve these objectives following supporting activities are envisaged:

- Training in agro technical reforms;
- Training in organic farming;
- Promotion of the use of clean technologies and alternative energy sources.

9.4.2 Ecotourism.

General.
Ecotourism is one of the means to create alternative livelihoods for the local population.
Ecotourism is a fast growing branch of the tourist industry and has a great potential for protected areas, in particular National Parks. An evaluation of inbound nature tourism to Georgia and its impact on the protected areas has been made in a national eco-tourism study[8]. The major conclusions of this study were that Georgia has a **medium** to **high** potential as an eco-tourist destination for both international and domestic visitors; its primary attraction is the Caucasus mountain areas and their local people, culture and history.

The visitors are expected to largely fall into one of four main categories:

a. Local day and weekend visitors requiring low cost access for walking, picnicking and possibly camping.
b. National Georgian day and weekend visitors requiring low cost access and simple facilities for camping and picnicking.
c. Expatriate day and weekend visitors (mostly from Tbilisi) demanding western-style, high quality visitor facilities. This segment would have an interest in natural and cultural history but would also be interested in multi-day hiking, horseback riding and rafting.

[8] Tourism Assessment and Work Plan for Nature/Culture Tourism to
The Republic of Georgia, Report to GEF/WB, Olaf Malver, March, 2000.

d. Foreign visitors with a general interest in natural and cultural history, as well as physical activities, such as multi-day hiking, rafting, bird watching and horseback-riding. They would be mainly from Eastern and Western Europe (fewer from the US and Japan), requiring relative easy access and western-style, high-quality visitor facilities.

Visitor services.

In order to create appropriate conditions for ecotourism, following visitor services will be developed, tailored to the needs of the above interest groups:

Information services;
Guided tours;
Hiking and horse-back riding along natural trails;
Bird watching points;
Ecological activities (ecological camps, excursions);
Cultural and aesthetic activities (painting, photo- and video courses, demonstrations of traditional handicrafts).
Special programs for disabled persons.

These facilities will be developed in the first two years. In the remaining three years the facilities will be improved and extended to include also wild water rafting, mountain climbing etc. Whenever possible (part of) these services will be subcontracted to local entrepreneurs.

Supporting services.

In order to cater for the need of visitors following supporting services will be made available:

Food and beverage services;
Guest house (mountain cabin);
Camping facilities for overnight stay;
Rental of equipment;

Whenever possible (part of) these services will be subcontracted to local entrepreneurs.

Survey and rescue services will be available to ensure a maximum level of safety for the visitors.

9.4.3 Business development strategy.

General.

Ecotourism will create new jobs but an added value can be achieved by developing also new goods and services Through the sustainable use of natural products. Business opportunities may include a.o:

Rent of equipment and transport services;
Guiding services;
Food and beverage services (catering);
Arrangement of cam pings;
Operation of family hotels;
Publishing of information and promotional material (posters, guides, booklets);
Production of souvenirs (T-shirts, glasses, pens, backpacks) decorated with the logo of the National Park;

Outsourcing of selected activities by the administration.

At the first stage of the functioning of the protected areas, the administration could outsource any of the above mentioned activities within the Protected Areas (i.e. publishing of interpretative material, etc). In future, these activities should be followed by concessions.

Seminars.

Seminars will be organized to educate and train local business men in consumer-oriented marketing- and sales techniques and to promote the use of agricultural products.

Small grants

A budget will be allocated to stimulate sustainable resource-use projects and environmental friendly enterprises.

9.4.4 PR and marketing.

General.

In order to promote the Protected Areas it is required to establish good relations with private and public stakeholders, to develop professional relations with branch organizations through exchange of information and publications and to acquire commercial contacts through active marketing.

PR development.

This includes the following activities:

Preparation of promotion material;
Information sharing, communication and cooperation with stakeholders;
Presentations for stakeholders and other interest groups;

The Web site of the PA will be used to support these activities.

Establish professiuonal exchange.

This includes:

Membership of international branch organizations.
Participation in international networks;
Presentations at national and international fora.

Marketing.

This includes:

Advertising in thematic and popular newspapers and magazines and on state and commercial TV channels
Exhibits at visitor centers of other protected areas in Georgia.
Participation at national and international trade fairs and tourism exhibitions/markets;

9.4.5 Socio-economic monitoring.

In order to monitor the effects of the propped measures on the neighbouring population, a socio-economic survey will be performed annually. The survey will apply generally accepted methods and will be performed by qualified external experts. Experience obtained in other protected areas in East Georgia should be reviewed and should be included in the program.

9.5 Infrastructure.

9.5.1 General.

This includes the infrastructure for law enforcement, the administrative buildings(the central office in Mestia, the smaller site offices with information centres and the temporary shelters for rangers)
and the required facilities for visitor services (natural trails for hiking and horseback riding, marked trails for day trips, mountain huts and campsites). Reference is made to Figures 8.1 and 8.2 in Chapter 8 and the Map 10.4 and 10.5 in Annex 10 for the location of the infrastructure.. The infrastructure will be built in phases. The infrastructure for law enforcement will be constructed in the first year; the administration buildings should be designed in the first year and should be constructed in the second year. The tourist facilities will be realized in accordance with the development of the tourism.

9.5.2 Infrastructure for law enforcement.

9.5.2.1 Demarcation.

This will include the physical demarcation of the official borders of the park by means of border posts and signs and the construction of entrance gates in the locations indicated on Figures 8.1 and 8.2 in Chapter 8, also the Map 10.4 and 10.5 in Annex 10. Given the hostility and inaccessibility of the terrain, border marking will be concentrated in those areas where land use conflicts may easily occur i.e along access roads and near villages and settlements. Moreover the border will be marked in areas that are frequently visited by tourists. In other areas border posts will be erected only in easily accessible places. GPS will be used in the sections between these official

border posts. The borders with the Russian Federation will be marked in accordance with the requirements for State Borders.

9.5.2.2 Entrances.

General.

The location of the entrances is determined by the following considerations:

- The physical characteristics of the area
- The territorial functional plan and the requirement of users, the visitors and local inhabitants.
- The division into ranger districts.

National Park.

The USNP includes a number of watersheds of the Enguri, separated by steep mountain ridges. This determines to a large extent the planning of the entrances.

The plan includes two territories that are open for people: the tourist zone and the traditional use zone. Both should be easily accessible by visitors and local inhabitants respectively. The borders of these zones are to a large extent dictated by the relief of the area. Most of these areas can be accessed from the valley of the Enguri.

To facilitate patrolling and law enforcement the area is divided into 5 ranger districts. Each district encompasses one or more catchment areas of the tributaries of the Enguri and is bordered by a mountain ridge. Each includes the above two zones that should be easily accessible by people and by rangers for frequent control of visitors and resource use by local inhabitants and in case of emergencies. Moreover the units include nature and managed areas zones that have to be surveyed less frequently.

Each district will be accessible through one main entrance and a number of secondary gates, the main entrances are equipped with an information center and permanent ranger shelters. They are located in areas that can easily be reached by car and give access to the tourist facilities. The following five main entrances have been planned: *Ushguli , Mestiachala, Ushba, Nakra and Tobari.*

Ten secondary entrances will be constructed to facilitate access for local farmers for grazing and hay making and for management purposes. These entrances will be closed by barriers that can be passed by hikers. It will be opened for other users only when needed. See for location Figure 8.1 in Chapter 8, the Map 10.4 in Annex 10.

Protected Landscape.

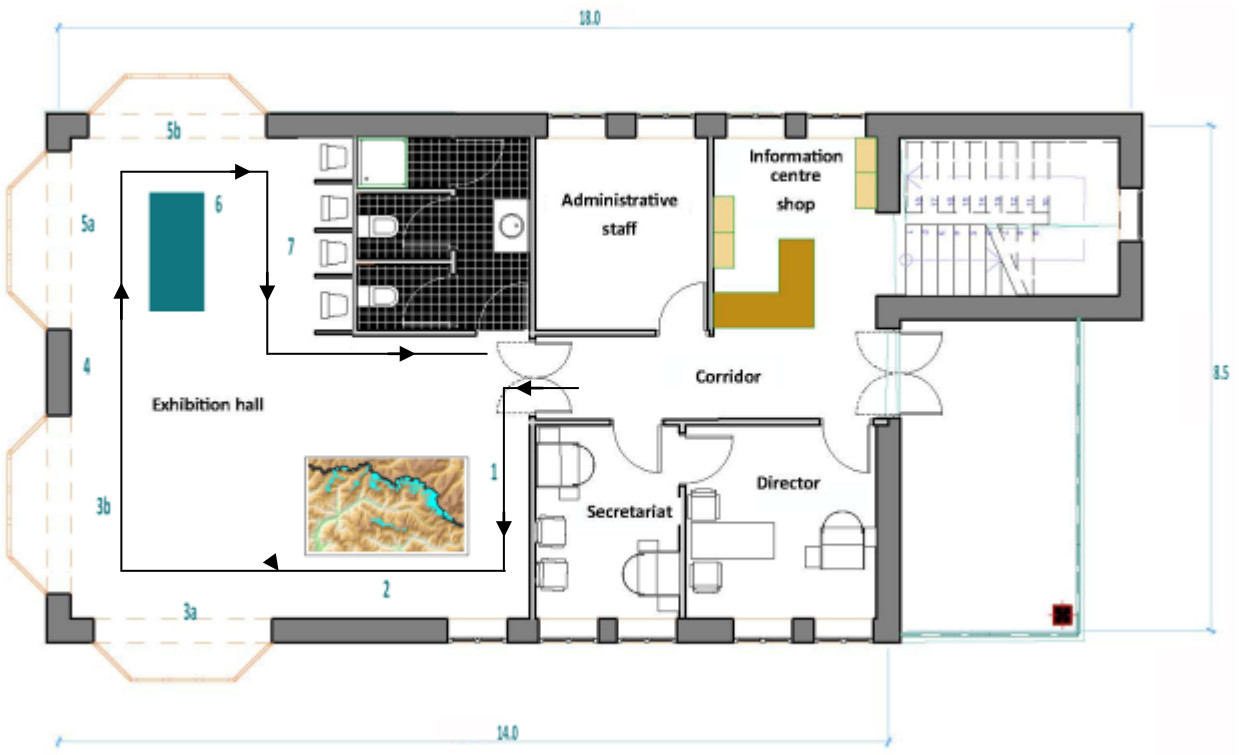
No entrances are planned in the Protected Landscape.

9.5.3 Administrative buildings.

9.5.3.1 The main administrative building in Mestia.

The main administrative buildings will be located in Mestia. It will serve as the administrative center for the Upper Svaneti Protected Areas. A provisional ground plan (first phase) is shown on the Figure 9.1A below.

Fig 9.1A. Ground plan administrative building Mestia.



The ground floor contains the following:

Information center (see legend)	9.0 m^2
Director	11.0 m^2
Secretariat	8.0 m^2
Administrative staff	9.5 m^2
Exhibition hall	53.0 m^2
Toilets	9.5 m^2
Corridor	9.0 m^2
Stairs	10.0 m^2
Total	**119.0 m^2**

Total external area 145 $m^{2.}$

Legend:

1. A 3D model of Protected Areas with flowing water in rivers; Buttons to locate various PA's, their infrastructure and zoning.
2. Information panels. Resources:
   - air, water, land;
   - Plants, animals.

3 Dioramas, resources:
   - 3a. plants;
   - 3b. animals.

4. Information panels. Functions for man
5. Dioramas values for man:
   - 5a.Functions of nature
   - 5b. Historical cultural monuments, recreation

6. Experimental corner
7. Kids computer corner

For future extension a first floor is foreseen as shown on Figure 9.1 B.

Fig 9.1B. First floor administrative building Mestia.

The first floor contains the following:

Store archive	3.5 m^2
4 Offices a 9.5 m^2	39.0 m^2
Conference room 1	23.0 m^2
Conference room 2	15.5m^2
Toilets	9.5 m^2
Corridors and hall	18.5 m^2
Stairs	10.0 m^2
Terrace	16,0 m^2
Total excluding terrace	**119.0 m^2**

Total external area, excluding terrace 145 m^2

9.5.3.2 Site offices with information Center and guard shelters.

Site offices will serve as local service centers for the protected areas. They will be permanently occupied by members of the park staff that control access to protected area and can provide information to the visitors. The ground plan of these site offices is shown on Figure 9.3.

Fig.9.3. Ground floor site offices.

The ground floor contains the following:

Information center	12.0 m^2
Office	8.0 m^2
Pantry	7.0 m^2
Sleeping	14.0 m^2
Toilets	8.5 m^2
Entree	2.0 m^2
Corridor	4.5 m^2
Total	**56.0 m^2**

Note: All plans are provisional and not to scale.

9.5.3.3 Temporary ranger shelters.

Temporary shelters will be constructed at strategic locations in the protected areas and will be used for surveillance in the summer season. They are simple wooden (log) cabins with basic facilities for overnight stay.

9.5.4 Tourist infrastructure.

9.5.4.1 General.

This includes the facilities to support the visitors. pick nick facilities for day tourism and bird watching points. The location of this infrastructure is shown on the Figures 8.1 and 8.2 in Chapter 8 and the Map 10.4 and 10.5 in Annex 10.

9.5.4.2 Trails.

Trails follow the paths that were used in the past by local inhabitants. Such trails will be part of the visitor zone but will remain in their present natural state where they cross the strict nature area. Where possible, circular trails are used. In some areas, however, public transport or cars have to be used to return to the head of the trail. The Trails are described in more detail in Annex 8.

The US forestry code defines 5 classes of trails:

Trail Class 1: Minimal/Undeveloped Trail.
Trail Class 2: Simple/Minor Development Trail.
Trail Class 3: Developed/Improved Trail.
Trail Class 4: Highly Developed Trail.
Trail Class 5: Fully Developed Trail.

The classification is determined by the following natural and manmade aspects:

The natural characteristics of the terrain: maximum
Pitch grade and length, clearing width and height, tread width, and surface.
The man made improvements: infrastructure like bridges and stairs, pavement, railings etc.

The trails in the PA are all class 1 and 2 trails as minimal improvements have been made to ensure the safety of visitors in dangerous sections of the trails. Day trails are class 3 trails and are provided with facilities for day tourism. The Trails are described in more detail in Annex 8

The suitability of the trail for a specific use is determined by the type of use and the experience level of the user. In the PA all trails are suitable for hiking but require different experience levels. They are categorized as easiest, more difficult and difficult. Difficult trails include mountain scrambling that is a transition between hiking and mountain climbing. Some trails can be used also for horseback riding.

9.5.4.3 Trails for day tourism.

These trails are class 3 trails that are provided with facilities for day tourism such as pick nick places and with information panels along the trail.

9.5.4.4 Camp sites.

Camp sites will be provided along the natural trails. In each management unit a base camp will be constructed in the lower areas near the beginning of the trail or in places that can be easily accessed for administration and servicing. Base camps will be equipped with a portable cabin with ranger office and basic sanitary conveniences. In higher areas camp sites for overnight stay with tents will be provided. Hikers can bring their own tent or can rent tents at the base camp. These camps are located near brooks or small stream but will not have sanitary facilities.

9.5.4.5 Hotels.

Guest houses and small family hotels will be located in the villages around the protected areas.

9.6 Financial arrangements.

Financing of the core activities –the salary cost of staff, the running cost of facilities and equipment, cost of consumables and replacement of equipment - should be financed from the State budget in accordance with the Law on the Establishment and Management of the Central Caucasus Protected Areas. As the Administration still has to decide on the organization and staffing these budgets cannot be assessed as yet.

The Law allows the Protected Areas to use other sources of income besides the State budget to achieve the management objectives. The major source of additional income will be payment for the following services and concessions.

Entrance fees National Park;
Concessions for food and beverage;
Camping fees;
Rent of equipment;
Grazing fees.

Major investments should be financed by the government or by national or international donors. In order to secure donor funding following activities are foreseen:

- Lobbying at national and international donor organizations, private companies and individuals;
- Workshops and seminars for potential donors;
- Visits of VIP's to the protected areas.

10 Programs.

10.1. Introduction.

This chapter gives a detailed review of the programs to implement the strategies and measures described in Chapter 9. The programs are shown in an environmental management matrix (EMM) based upon the process framework shown in Figure 4.1. The rows in the matrix give the zones of the respective protected areas as defined in Chapter 8. The columns in the matrix show the cluster of measures proposed in section 9 to achieve the site specific objectives. The related programs are shown in the cells of the matrix.
The various sections describe in a tabular form the programs for each protected area. This description includes:

- The rationale for selection.
- The location where the program will be executed.
- A description of the proposed activities.
- The expected output.
- The agency responsible for the execution.
- The composition of the project team.
- A provisional planning and cost estimate. A summary of the cost and a disbursement schedule is given in Chapter 11.
- The priority of the program. This is the ideal priority based upon scientific considerations. The actual priority will depend on availability of financial and human resources. This is also described in Chapter 11.

10.2. Upper Svaneti National Park (USNP).

10.2.1. General.

This section includes the Programs for the USNP. The programs are shown in the Environmental Management Matrix on Figure 10.1 and include the following clusters of measures:

- Nature Conservation (Enforcement of conservation regime, Intervention and monitoring) and PR and awareness building.
- Cultural Conservation (Conservation,)
- Social-economic development (Wise resource use, alternative energy sources, Ecotourism)
- Infrastructure (Facilities for law enforcement, administrative buildings and tourism).

All programs will be carried out together with the programs for other protected areas as far as possible. The Administration of the Upper Svanti Protected Areas will be responsible for the coordination and proper execution of all programs.

Figure 10.1. Environmental Management Matrix for the USNP.

No	National Park	NATURE CONSERVATION STRATEGY				CULTURE CONSERVATION STRATEGY		SOCIAL ECONOMIC DEVELOPMENT STRATEGY			Infra structure
		Conservation	Interventions	Monitoring	PR, and awareness building	Conservation	Intervention	Wise use	Eco- and cultural tourism and business development	Monitoring.	
1	**Strict nature protection zone**										
.		Enforcement conservation regime for:									Demarcation
		forest habitats and meadows in forest and alpine belts	Rehabilitate ungulate population		Protocol for biodiversity monitoring and training of staff.						
		Rock habitats	Protection brown bear.		Monitoring Selected habitats and species.						
		Rare and endangered species			Set up database.						
2	**Historical cultural Monuments**										
						Cultural monuments and archaeological sites as part of programs for Protected Landscape					Demarcation
3.	**Specific natural features**	Adishi Glacier									
		Perkhulisva Block									
4.	**Managed protection zone**										
		See 1.	Rehabilitation of chestnuts affected by chrophonectria	Effect rehabilitation				.	Development Ecotourism		Demarcation
			Rehabilitation degraded forests.								
			Protection Brown Bear.								
			Rehabilitate ungulate population								

5.	**Visitor zone**										
.				Effect visitors	Environmental education, Courses and interpretation services				Development Ecotourism		Demarcation Natural trails Tourist facilities
7.	**Traditional use zone**										
		Wise resource use regime for conservation of forest habitats and meadows in forest and alpine belts.		Effect wise resource use regime				Implement wise use regime. Agricultural reforms and training Alternative energy sources			Demarcation
8.	**Administration zone**										
											Site offices and info centers Temporary shelters for rangers
	Neighboring area.				PR and marketing				Development business opportunities	Socio-economic effects of USNP on neighboring areas.	Administrative building in Ambolauri and Lentekhi.

10.2.2. Nature conservation.

10.2.2.1. Enforcement of a nature conservation regime.

10.2.2.1-A CONSERVATION OF FOREST AND MEADOW HABITATS AND SPECIES.		
1	**Rationale and objective.** The ecosystems of the USNP have a great ecological value as they include large areas with specific Colchic vegetation and fauna. At the same time these ecosystems are under severe demographic pressure and are rapidly degrading. The objective of the program is to conserve these forest-, meadow- and rock habitats, to implement wild life management and to protect the rare and endangered species within these areas that are mentioned in the list of IUCN and CITES and in the Red book of Georgia. Moreover a wise resource use regime will be implemented in the Traditional Use Zone.	
2.	**Location.** Activities are performed in the areas of the Strict Nature Protection Zone, the Managed Protection Zone and the Traditional Use Zone described in section 8.2.	
3	**Description of the activities.** Nature conservation includes the following management actions: • demarcation of the area and fencing of vulnerable parts; • Enforcement of a strict protection regime, as described in section 8.2. through surveillance, patrolling etc • prevention of law infringement; • cooperation with judicial services; • cooperation with state border service; • Implementation of wise resource use regime. Management actions will be supported by the conservation and rehabilitation programs described in the next sections and will be facilitated by the administrative, physical and technical infrastructure described in section 10.2.4.	
4	**Expected output.** Conservation and protection of the biodiversity and high endemism of the specific Colchic forest and meadow vegetation.	
5	**Agency responsible for the execution.** APA of the MoEPNR.	
6	**Project team.** The work will be performed by the USPA staff, supported by local labor for demarcation and fencing. The services of an expert will be retained for technical assistance to the park staff.	
7	**Planning.** Activities will start after the management plan has been approved, demarcation will be finished in the first two years, and law enforcement and surveillance are continuous activities. The external expert will be contracted for the first two years on a part time basis.	
8	**Cost.**	**US$**
	Salary cost of staff is included in the budget for the core activities of the Administration.	0
	Cost of demarcation and fencing is included in section 10.2.4. “infrastructure”.	0
	Fee external expert, DSA and travel.	40,000
	Cost wise resource use regime included in section 10.2.3.1 “wise resource use”.	0
	Total	**40,000**
9	**Priority.** As protection and conservation of this ecosystem is a prime objective of the project this program has a high priority.	High
10	**Remarks.**	

10.2.2.1-B CONSERVATION OF SPECIFIC GEOMORFOLOGICAL FEATURES.		
1	**Rationale and objective.** The Adishi glacier and the Perkulskva block are specific natural features that need to be protected. The objective of the present program is to conserve and protect these monuments and their surroundings.	
2	**Location.** Activities are performed in and around the area where the monuments are located.	
3	**Description of activities.** • Protection and conservation of the crook stem birch forests and loose sediment communities of the alpine meadows near the Adishi glacier; • Demarcation and conservation of the Perkulskva block; • Protection and conservation of the alpine meadows and alpine vegetation patches around the Perkulskva block; • Access to these monuments and facilities for visitors.	
4	**Expected output.** Properly protected monument that offer possibilities for research and visit of interested tourists.	
5	**Agency responsible for the execution.** APA of MoEPNR.	
6	**Project team.** The work will be performed by the USPA staff, supported by local labor for construction works.	
7	**Planning.** Activities will be performed in the third year.	
8	**Cost.**	**US$**
	Cost of access trail, demarcation and fencing.	5,000
	Local labor. Salary of the staff is included in the State budget for core activities of the administration.	5,000
	Total.	**10,000**
9	**Priority.**	
	As the site is not under serious threat this program has low priority	
		Low
10	**Remarks.**	

10.2.2.2. Rehabilitation.

10.2.2.2 A REHABILITATION OF DEGRADED FOREST HABITATS.		
1	**Rationale and objective.** The forest ecosystems in the middle forest belts have been used extensively for wood cutting and grazing. These areas have been severely degraded but have still a substantial ecological value. As the soil and climate conditions are favorable, these areas can be re rehabilitated if a proper management regime is enforced. The objective of the program is, therefore, to give these areas the status of recuperation zone and to rehabilitate the forests in this zone through a complex of management actions.	
2	**Location.** Activities are performed in the recuperation zone described in section 8.2.2.	
3	**Description of activities.** The program includes: • enforcement of a strict protection regime, as described in section 8.2.2; • demarcation of the area and fencing of vulnerable parts; • continuous surveillance; • Implementation of measures to facilitate natural recuperation.	
4	**Expected output.** Healthy forest ecosystems.	
5	**Agency responsible for the execution.** Forest Department of the MoEPNR.	
6	**Project team.** The work will be performed by the USPA staff, supported by local labor to implement restoration measures.	
7	**Planning.** Activities will start after the management plan has been approved, demarcation of the recuperation zone will be finished in the first year, measures to facilitate recuperation will be finished after two years, law enforcement and surveillance will be permanent.	
8	**Cost.**	**US$**
	Salary cost of staff is included in the budget for the core activities of the Administration.	0
	Cost of demarcation and fencing is included in section 10.2.4.1 infrastructure	0
	Interventions, material	60,000
	Total	**60,000**
9	**Priority.** Forests are rapidly degrading and restoration should start as soon as possible. The program has a high priority, therefore.	High
10	**Remarks.** This project can be submitted for international co funding as part of programs to protect forests as a means to combat climate change.	

10.2.2.2 B PROTECTION BROWN BEAR.		
1	**Rationale and objective.** The brown bear population is under severe pressure due to illegal hunting. The situation will improve once a strict protection regime will be enforced as part of the conservation strategy for the USPA. The objective of the program is to support the conservation strategy by improving the conditions of the population of the brown bear within the USNP and by decreasing illegal hunting.	
2	**Location.** Measures apply to all zones.	
3	**Description of activities.** The program will be executed in close cooperation with the Racha-Lechkhumi-Lower Svaneti Protected Areas and includes the following: • Collection and analysis of baseline data with a view to determine the status of the population of the brown bear using statistical analysis of field data. Use will be made of results of recent studies made by ago. NACRES); • Socio-economic and sociological research with the aim to identify the reasons why the habitat of brown bear is destroyed and what factors cause poaching; • Interviews with local population to determine the attitude of local population towards hunting and poaching. • meetings with hunters and preparation of the program , were the most active hunters will be appointed and selected to involve them in the activities against illegal hunting (ago. patrolling); • Preparation of a draft action plan for the conservation of brown bear within the USNP and discussion with stakeholders.	
4	**Expected output.** Healthy brown bear population.	
5	**Agency responsible for the execution.** APA of the MoEPNR.	
6	**Project team.** The work will be performed by USPA staff.	
7	**Planning.** The baseline study will be performed in the first year after the management plan has been approved, concurrent with the socio-economic study. The interviews are planned in the second year and the draft plan will be presented at the end of the second year. Once approved the plan will be executed in the following years. The external experts will be contracted for the first 2 years.	
8	**Cost.**	**US$**
	Literature study.	7,500
	Socio-economic research, fee external expert and project cost.	10,000
	Interviews, fee external expert and project cost.	12,000
	Cost for involvement of the hunters in patrolling,	3,000
	Plan preparation, fee external expert and project cost.	7,500
	Total.	**40,000**
9	**Priority.** As the Brown Bear is an endangered species in many areas of the world, the project has a high priority.	High
10	**Remarks.**	

10.2.2.2 C REHABILITATION OF UNGULATES.		
1	**Rationale and objective.** Tur and roe deer are endemic species that are endangered and have now been included in the Georgian Red List; they are still found in Svaneti but are under serious threat due to hunting. The situation will improve once a strict protection regime will be enforced as part of the conservation strategy for the park. The objective of the program is to explore possibilities for a further improvement by re-introducing ungulate species.	
2	**Location.** Measures apply to all zones.	
3	**Description of activities.** The program will be executed in close cooperation with the Racha-Lechkhumi-Lower Svaneti Protected Areas and includes the following: • Study of the feasibility of various rehabilitation possibilities, selection of most preferred options and project preparation; • Preparation of plots for re-introduction of deer and strict protection of these areas; • Reintroduction and biotechnical measures for a quick adaptation and naturalization of the animals.	
4	**Expected output.** Healthy ungulate populations.	
5	**Agency responsible for the execution.** APA of the MoEPNR.	
6	**Project team.** The work will be performed by USPA staff, supported by local labor to prepare plots. An external expert will be contracted to assist the staff.	
7	**Planning.** The feasibility study will be performed in the first year after the management plan has been approved. Plot preparation and re-introduction of dear is planned for the second year. Monitoring will be continued for the remaining years as part of the monitoring program. The external expert will be contracted for the full 5 year program on a part time basis.	
8	**Cost.**	**US$**
	Feasibility study, fee and cost external expert.	10,000
	Plot selection, fee and cost external experts, project cost.	10,000
	Re-introduction of deer, fee and cost external expert, project cost.	105,000
	Total.	**125,000**
9	**Priority.** Rehabilitation of these large mammals will further improve the ecosystems and will increase the amount of visitors, so the program has a high priority.	High
10	**Remarks.**	

10.2.2.3. Monitoring.

10.2.2.3	MONITORING OF THE FOREST AND MEADOW HABITATS AND SPECIES.
1	**Rationale and objective.** Monitoring of habitats and its flora and fauna is required to evaluate the effectiveness of management, in particular the rehabilitation of forests, the effect of the wise resource use and the effect of visitor's programs and to adapt management actions if needed**.** The objective of the program is, therefore, to monitor a number of representative indicators in a number of characteristic habitats and to set up a data base to archive and process the collected data.
2	**Location.** Activities are performed in the Strict Nature Protection Zone, the Managed Protection Zone and the Recuperation zone that are described in section 8.2.
3	**Description of activities.** Monitoring will include: • Preparation, workshop. The research sites and the indicators will be selected prior to the start of the project in a workshop with leading biologists (botanists and zoologists); • Preparation of protocols for biodiversity monitoring and training of staff in biodiversity monitoring; • Baseline survey; Floristic- and faunal survey and bird survey in 4 selected sites for a period of one week per site. (Total 1 month for each survey) • Surveys; Floristic survey in the 4 selected habitats, every year for a period of 1 week per site (Total 1 month per year). Monitoring will be carried out in spring or summer and will include the species composition, density and coverage of the vegetation in randomly selected plots of 100 m^2 and the status of the rare and endangered species. Zoological survey of endangered mammal population in 2 of the 4 characteristic habitats every year for a period of 1 month every year per site. (Total 2 months per year). Monitoring will be carried out in summer and winter and will include the extent of the feeding base of the endangered mammals and the composition of the mammal population. Survey of bird population. Survey of bird population in the 4 selected sites every year. For a period of 1 week per site (Total 1 month per year). Monitoring will be carried out in summer and winter and will include counting of migratory and nesting birds. • Development of a data base. The data base will be a geo referenced data base with facilities to archive the collected data and to visualize the results through thematic maps (vegetation, bio diversity, species composition etc).
4	**Expected output.** Information on Status of forest and meadow habitats; Status of flora and fauna in these areas (biodiversity); Spatial and temporal development of these indicators. Operational data base.
5	**Agency responsible for the execution.** APA of the MoEPNR.
6	**Project team.** The baseline survey and the first monitoring survey will be performed by three expert teams: A botanical team, consisting of a floristic expert and a dendrologist (forester). A zoological team, consisting of one terreologist and a mammal expert. A team of two bird experts. The teams will be seconded by members of the USPA staff, who will be trained during this phase. The surveys in the following years will be carried out by the staff. Design and construction of the database will be subcontracted to an external consultant with proven

	experience in this field.	
7	**Planning.** Activities will start after the management plan has been approved. The baseline study will be carried out in the first year; the surveys will be performed in the following years.	
8	**Cost.**	**US$**
	Preparation, workshop.	15,000
	Preparation protocols and training.	20,000
	Baseline survey and training.	60,000
	First surveys and training staff.	60,000
	Database	**25,000**
	Total.	**180,000**
9	**Priority.**	High
	As monitoring is important for management, the program has a high priority.	
10	**Remarks.**	

10.2.2.4. Awareness building through environmental education.

10.2.2.4.A ENVIRONMENTAL EDUCATION AND OUTREACH.		
1	**Objective of the project.** Environmental education is a means to increase the awareness of the local population of the importance of the USPA. The objective of this program is to organize courses and interpretation services within the USNP.	
2	**Location.** Activities are performed in various sites inside and outside the USPA.	
3	**Description of activities.** The activities will include: • Preparation of brochures and information for general use; • Excursions and guided tours; • Courses and seminars for schools and universities; • Interpretation services.	
4	**Expected output.** Improved environmental awareness of the local population.	
5	**Agency responsible for the execution.** APA of the MoEPNR.	
6	**Project team.** The work will be performed by the USPA staff supported by external experts.	
7	**Planning.** Activities will start after the management plan has been approved, brochures and information material will be finished in the first year the other activities will be carried out continuously.	
8	**Cost.**	**US$**
	Material and printing cost, fee external experts.	35,000
	Salary cost of staff is included in the budget for core activities of the Administration.	0
	Total	**35,000**
9.	**Priority.**	High
	Environmental education is one of the main strategic objectives; this program has a high priority, therefore.	
10.	**Remarks**	

10.2.3. Socio-economic development.

10.2.3.1. Implementation of a wise resource use regime.

10.2.3.1 A IMPLEMENT WISE USE REGIME.	
1	**Rationale and Objective.** The area of the USNP is extensively used by local inhabitants for hay making, grazing and woodcutting. In some areas this results in over exploitation and depletion of these resources. For that reason resource use will be prohibited in most zones with the exception of controlled resource use in the traditional use zone, where a wise resource use regime will be maintained. The objective of this program is to develop this regime and to support the local population after it has been implemented.
2	**Location.** Activities are performed in the Traditional Use Zone that is described in section 8.2.2
3	**Description of activities.** The activities will include: • First phase: Inventory of resource use (grazing, wood cutting, hunting, fishing); Analysis of type and volume of resources used; Carrying capacity analysis. • Second phase: Pilot project

	In order to familiarize the local population with the wise resource use approach a demonstration project is planned in three selected areas within the Traditional Use Zone. The project focuses on grazing, hay making and wood cutting and includes hands on training and workshops for local inhabitants. Moreover a budget is allocated for community based initiatives to stimulate wise resource use in other areas. • Third phase: Implementation. In this stage the wise resource use regime will be implemented in all areas of the traditional use zone.	
4	**Expected output.** Sustainable regime for grazing, wood cutting, and fishing that balances the interests of local people and nature.	
5	**Agency responsible for the execution.** The APA of the MoEPNR will be responsible for the work.	
6	**Project team.** The first and second phase will be performed by the USPA staff seconded by a specialists from the Department of Forestry and the Ministry of Agriculture (forester, resource use specialist and agronomist. The third phase will be implemented under the responsibility of the USPA staff.	
7	**Planning.** Activities will start after the management plan has been approved, the first phase will be completed after one year, and the second phase will be finished in the following 4 years.	
8	**Cost.**	**US$**
	First phase. Fees external experts.	40,000
	Second phase. Cost pilot projects and fees external experts.	50,000
	Budget for community based projects	50,000
	Third phase. Salary cost of staff is included in the budget for core activities of the Administration.	
	Total.	**0**
		140,000
9	**Priority.**	High
	As inappropriate land and resource use is one of the major threats for the USPA this program has a high priority.	
10	**Remarks.** This project may be submitted for international co funding as part of agriculture development programs.	

10.2.3.1 B	AGRICULTURAL REFORMS AND ALTERNATIVE LIVELIHOODS.	
1	**Rationale and Objective.** If a wise use regime is effectuated, traditional agricultural practices should be revived and agricultural techniques should be improved. Moreover, farmers should look for alternative sources of income. The objective of this program is to make local farmers familiar with new agricultural technologies based upon the concept of traditional – and organic farming and to advice on alternative sources of income.	
2	**Location.** The program includes the USNP and the USPL the pilot projects described here will be implemented in the USNP. Activities in the National Park are performed in the Traditional Use Zone that is described in section 8.2.2 and are coordinated with the program for the Racha-Lechkhumi Lower Svaneti Protected Areas.	
3	**Description of activities.** The activities will include: • Workshops and training in modern agro technology and organic farming in particular new agricultural technologies, sustainable use of pastures (plot turnover) and information on organic farming practice; • Workshops to discuss alternative sources of income in particular inventory of new products and markets, information on new production and marketing techniques and financing of investments; • Pilot projects in organic farming and other promising alternatives for traditional farming.	
4	**Expected output.** Improved standard of living and sustainable use of resources within the USNP.	
5	**Agency responsible for the execution.** The APA of MoEPNR.	
6	**Project team.** The first and second phase will be performed by external experts; the third phase will be carried out by the USPA staff, in cooperation with the Ministry of Agriculture.	
7	**Planning.** Activities will start after the management plan has been approved, the workshops and training will be finished after one year, and the third phase will be finished in the following 4 years.	
8	**Cost.**	**US$**
	First phase. Cost seminars and fees external experts.	40,000
	Second phase. Cost seminars and fees external experts.	20,000
	Third phase. Cost pilot projects, salary cost staff included in the budget for core activities of the Administration.	100,000
	Total	**160,000**
9	**Priority.** As improvement of the living standard of the local population is a prime objective, this program has a high priority.	High
10	**Remarks.** This project may be submitted for international co funding as part of agriculture development programs and/or alternative livelihood programs.	

10.2.3.1 C	PROMOTE USE OF ALTERNATIVE ENERGY SOURCES.	
1	**Rationale and Objective.** The area of the USNP is extensively used by local inhabitants for woodcutting. If a wise use regime is effectuated, restrictions will be imposed on the use of fuel wood. It is essential ,therefore, to search for other energy sources to provide energy to the local households and/or to use more effective wood burning technologies. The objective of this program is to make local inhabitants familiar with new energy sources and to promote the use of such sources as an alternative for fuel wood.	
2	**Location.** Activities are performed in and outside the USPA.	
3	**Description of Activities.** The activities will include: • Workshops and training in the use of alternative energy. (Solar energy, wind, hydropower, biogas and high efficiency wood stoves).	
4	**Expected output.** Reduced use of fuel wood.	
5	**Agency responsible for the execution.** The APA of MoEPNR,	
6	**Project team.** The work will be performed by external experts in cooperation with the Ministry of Agriculture and the Ministry of Economic Development.	
7	**Planning.** Activities will start after the management plan has been approved, the first phase will be finished after one year, and the second and third phase will be finished in the remaining 4 years.	
8	**Cost.** Cost seminars and fees external experts. **Total.**	**US$** 15,000 **15,000**
9	**Priority.** As reduction of wood cutting is a prime objective, this program has a high priority.	High
10	**Remarks.** This project may be submitted for international co funding as part of programs to protect forests as a means to combat climate change.	

10.2.3.2 DEVELOPMENT ECOTOURISM.		
1	**Rationale and objective.** The unique scenery of the USNP offers possibilities for recreation in both summer and winter. However, a proper tourist infrastructure is lacking and transport facilities are poor, especially in winter. Moreover a regional tourism development plan does not exist. The objective of the program is to identify the economic potential of ecotourism within the USNP and to make a tourism development plan in cooperation with the regional government and the tourist industry.	
2.	**Location.** Activities are performed in and outside the USNP.	
3.	**Description of activities.** **First phase: Tourist development plan.** Inventory of economic potential for ecotourism in and around the USPA Evaluation and reporting; **Second phase: Development of visitor services.** Targeted activities and related services in the National Park for specific visitor groups. These activities include: Hiking and horse-back riding along natural trails, alpinism, rafting/kayaking along the rivers; Bird watching ; Ecological activities (ecological camps, excursions); Cultural and aesthetic activities (painting, photo- and video courses, demonstrations of traditional handicrafts); Special programs for disabled persons. Following supporting services will be made available: Guided tours; Food and beverage services; Lodging and camping facilities for overnight stay; Information services; Rental of equipment. Services to ensure a maximum level of safety for the visitors and immediate rescue in case of emergencies. The required infrastructure for the visitor's activities is described in 10.2.4.	
4	**Expected output.** Increased number of tourists per year.	
5	**Agency responsible for the execution.** The APA of MoEPNR in cooperation with the Ministry of Economic Development, Tourism Department.	
6	**Project team.** The first phase, the feasibility study will be performed by external consultants. Once the infrastructure is operational tourist services will be rendered by the staff of the USPA or will be outsourced.	
7	**Planning.** Activities will start after the management plan has been approved, the feasibility study will be finished in the first year. The various tourist activities will become operational in the next 4 years.	
8.	**Cost.** First phase: Fee external experts, project cost. Second Phase: Outsourcing of services (part time staff) Facilities and material, project cost. Cost of infrastructure included in 10.2.4 **Total.**	**US$** 20,000 25,000 25,000 0 **70,000**
9	**Priority.** Tourism is a possibility to improve environmental awareness and to enhance the living standard of the people. The program has a high priority, therefore	High
10	**Remarks.** *) A regional tourism development plan is required, to prevent unwanted social effects and ecological damage. Moreover, supporting initiatives are needed to upgrade the local tourist facilities and to make the region better accessible for visitors.	

10.2.3.3 BUSINESS DEVELOPMENT.		
1	**Rationale and objective.** The establishment of the USPA creates new opportunities for economic development. The objective of the program is to identify these opportunities and to develop promising opportunities in cooperation with the local entrepreneurs.	
2	**Location.** Activities are performed in and outside the USNP.	
3	**Description of the activities.** • Inventory of business opportunities and recommendations for follow up. • Seminars. • Small grants as incentives for sustainable resource use projects and environmental friendly enterprises.	
4	**Expected output.** Creation of job opportunities and increase in living standard of local population.	
5	**Agency responsible for the execution.** The APA of the MoEPNR in cooperation with the Ministry of Economic Development.	
6	**Project team.** The inventory will be made by an external consultant. The USPA staff will be responsible for the implementation of the recommendations.	
7	**Planning.** Activities will start after the management plan has been approved, the inventory will be finished in the first year. The recommendations should be implemented in the following 4 years.	
8	**Cost.** Inventory, fee experts. Seminars, fees and project cost Small grants **Total**	**US$** 20,000 20,000 200,000 **240,000**
9	**Priority.** These activities are important as they increase the local support for the protected areas. They have a high priority therefore.	High
10	**Remarks.** This project may be submitted for international co funding as part of business development programs and/or alternative livelihood programs	

10.2.3.4 PR AND MARKETING.		
1	**Objective of the project.** To promote the USPA an active PR- and marketing strategy is required. Public relations should be developed with all stakeholders relevant for the functioning of the USPA. Marketing includes those organizations and individuals that are of commercial interest.	
2	**Location.** Activities are performed in various sites outside the USPA.	
3	**Description of activities.** The activities will include: • Preparation of a PR and marketing plan; • Preparation of promotion material; • Information sharing, communication and cooperation with stakeholders and donors; • Informing mass media; • Presentations for stakeholders and other interest groups; • Preparation of scientific publications; • Guided tours for potential donors and VIP's; • Participation in national and international trade fairs and exhibitions; • National and international cooperation.	
4	**Expected output.** Support of politicians and general public for Protected Areas, project ownership shared with local stakeholders and project financing from external donors.	
5	**Agency responsible for the execution.** APA of MoEPNR.	
6	**Project team.** The work will be performed by the USPA staff supported by international and national experts.	
7	**Planning.** Activities will start after the management plan has been approved. The PR and Marketing plan will be prepared in the first year, together with the preparation of brochures, and other promotional material. The activities will be carried out permanently.	
8	**Cost.**	**US$**
	PR and marketing plan, cost external adviser.	15,000
	Promotion material, printing cost, fee external adviser.	30,000
	Presentations, promotion tours and participation in exhibitions, project cost	15,000
	National and international cooperation, project cost	5,000
	Total	**65,000**
9	**Priority.** PR and marketing is an important tool; this program has a high priority, therefore.	High
10	**Remarks**	

10.2.4.5 SOCIO-ECONOMIC IMPACT.		
1	**Rationale and objective.** The implementation of the management plan will create new opportunities for business but also threatens the traditional livelihoods, as resource use within the protected areas will be strictly controlled. The objective of this program is to monitor the socio-economic effect of these changes.	
2	**Location.** Activities are performed in the villages in the near vicinity of the USPA.	
3	**Description of the activities.** The changes of the social economic conditions of the local population, which may have been caused by the creation of the National Park, will be monitored annually by means of a survey of 200 randomly selected households. Results will be evaluated and may be used to adapt annual work plans and if necessary to adapt management strategies.	
4	**Expected output.** Updated information on socio-economic impact.	
5	**Agency responsible for the execution.** APA of the MoEPNR.	
6	**Project team.** During the first two years work will be performed by a team of 2 qualified socio-economists with proven experience in this field seconded by USPA staff that will be trained. The staff of the administration will carry out the surveys in the remaining three years.	
7	**Planning.** The survey will be performed each year.	
8	**Cost.**	**US$**
	Fee external experts, project cost.	30,000
	Cost in the following three years is included in the State budget for core activities of the Administration.	0
	Total.	**30,000**
9	**Priority.**	High
	Monitoring of the socio-economic effect of the USNP is important in order to create socio-economic sustainability. The program has a high priority, therefore**.**	
10	**Remarks.** This program may use the socio-economic monitoring tool developed by GORBI for the protected areas in Eastern Georgia.	

10.2.4. Infrastructure.

10.2.4.1 INFRASTRUCTURE FOR LAW ENFORCEMENT.		
1	**Rationale and objective.** Physical infrastructure is required to facilitate the various programs. This program includes the infrastructure to support law enforcement that includes demarcation of the borders and entrances. The objective of this program is to define design specifications and cost estimates for these facilities.	
2	**Location.** Activities are performed along the borders and inside of the USNP.	
3.	**Description of the activities** • **Demarcation.** This will include the marking of the official borders of the park by means of border posts and signs and the construction of entrance gates. The position of the borders will be determined by means of highly accurate large scale orthomaps with orthocorrection and RS images with a resolution of 1 m. Border signs will be located along the perimeter of the USNP (536,92 km), except for the northern border of the National Park, which coincides with the state border with Russian Federation and the border between the two National Parks. The distance between the posts varies; the distance will be larger in remote areas and in areas where the border coincides with natural features (gorges, riverbanks, ridges) and will be smaller in inhabited or tourist areas and in other areas where border conflicts may easily occur. • **Entrance gates** Five main entrances are planned at the locations described in Chapter 9. Ten secondary entrances will be constructed in some other locations when needed. Main entrances include site office with information centers and ranger shelters. All entrances to the park will be equipped with a barrier that can be passed by pedestrians but access for cars is denied except for authorized persons.	
4	**Expected output.** Facilities for law enforcement in place and operational.	
5	**Agency responsible for the execution.** APA of the MoEPNR.	
6	**Project team.** Demarcation will be subcontracted to a specialized external consultant that uses state of the art geodetic techniques.	
7	**Planning.** Demarcation will start after the borders have been officially approved and legalized. It will be finished in the second year.	
8	**Cost.**	**US$**
	Demarcation and entrances gates	400,000
	Total	**400,000**
9	**Priority.**	High
	The infrastructure is essential for a proper functioning of the USNP. Its construction has a high priority, therefore.	
10	**Remarks.**	

10.2.4.2 ADMINISTRATIVE BUILDINGS AND FACILITIES.		
1	**Rationale and objective.** This program includes main administrative building in Mestia and the administrative infrastructure for the USNP that are needed for a proper functioning of the USNP. The objective of this program is to define design specifications and cost estimates for these facilities.	
2.	**Location.** Activities are performed in Mestia and in the Administrative zone that is described in section 8.2.2.	
3	**Description of the activities.** • **Main administrative building in Mestia;** • **Site offices with information centers.** • Site offices will serve as local service centers for the three administrative units of the National Park. They will be permanently occupied by members of the park staff that control access to the park and provide information to the visitors. Five site offices with information center will be constructed at the locations shown on Figure 8.1. The administrative buildings and site offices will be accessible for wheelchairs. • **Temporary ranger shelters.** Temporary shelters will be constructed at strategic locations along the trails. They will be used for surveillance in the summer season. The shelters will be located at the points indicated on Figure 8.1. • **Facilities and equipment.** A list of the required equipment with a breakdown of cost is shown in ANNEX 9.	
4	**Expected output.** Facilities for administration in place and operational.	
5	**Agency responsible for the execution.** The APA of the MoEPNR.	
6	**Project team.** The design and construction of the infrastructure will be subtracted to architects and contractors with proven experience in this field in accordance with the legal tender procedures. In case of equal qualification, preference will be given to local architects and contractors.	
7	**Planning.** The design of the administrative buildings will start after the management plan has been approved, the design, the environmental assessment and the issuance of the required permits will take one year. The buildings will be constructed in the second year.	
8.	**Cost.**	**US$**
	Planning and design.	**20,000**
	Administrative buildings Mestia.	**125,000**
	Five site offices.	**225,000**
	Temporary ranger shelters	**10,000**
	Facilities and equipment (See Annex 9).	**200,000**
	Total.	**580,000**
9	**Priority.** The infrastructure is essential for a proper functioning of the Park. Its construction has a high priority, therefore.	High
10	**Remarks.**	

10.2.4.3 INFRASTRUCTURE FOR VISITORS SERVICES.		
1	**Rationale and objective.** This program includes the physical infrastructure that is required to make the area accessible and attractive for visitors. The objective of this program is to define design specifications for these facilities.	
2	**Location.** Activities are performed in the visitor's zone that is described in section 8.2.	
3.	**Description of the activities** In order to facilitate visitor services, the following tourist infrastructure will be provided: • Trails for hiking and horse riding (Class 1 and 2 trails) (25 % completion in first 5 years); Only minimal inprovements will be made in dangerous sections to ensure the safety of hikers • Trails, for day trips (class 3 trails), with pick nick places and information panels. (25% completion in first 5 years); These trails will be provided with stairs, railings and bridges to ensure safety of visitors all along the trail. • Camp grounds (5 sites). The location of the infrastructure is shown on Figure 8.1; the trails are described in Annex 8.	
4	**Expected output.** Facilities for visitors services in place and operational.	
5	**Agency responsible for the execution.** APA of the MoEPNR in cooperation with Tourist Department of the Ministry of Economic Development.	
6	**Project team.** The design and construction of the infrastructure will be subtracted to architects and contractors with proven experience in this field in accordance with the legal tender procedures. In case of equal qualification, preference will be given to local architects and contractors. The facilities will be constructed in phases.	
7	**Planning.** The tourist facilities will be designed in the first year and will be constructed in phases in the next 4 years, starting with the natural trails and information panels.	
8	**Cost.**	**US$**
	• Trails for hiking and horse riding,	20,000
	• Trails with pick nick places.	10,000
	• Camp grounds 5 sites	25,000
	Total.	55,000
9	**Priority** . The infrastructure is essential for a proper functioning of the Park. Its construction has a high priority, therefore.	High
10	**Remarks.**	

10.3. Upper Svaneti Protected Landscape (USPL).

10.3.1. General.

This section includes the Programs for the USPL. The programs are shown in the Environmental Management Matrix on Figure 10.2 and include the following clusters of measures:

- Nature Conservation (conservation, intervention, monitoring and environmental education).
- Cultural Conservation.(conservation, restoration and cultural education)
- Social programs (wise resource use, alternative energy sources, ecotourism)
- Infrastructure (infrastructure for law enforcement, administrative buildings and tourist facilities)

All programs should be coordinated by the proposed management unit for the USPL and will be carried out together with the programs for the USNP as far as possible. Moreover farmers can participate in the non site specific programs of the USNP.

As the programs have to be implemented by the local governments it is difficult to make a planning of the activities. For that reason it is assumed that all activities will be performed in the last three years.

No	Protected Landscape	NATURE CONSERVATION STRATEGY.			CULTURE CONSERVATION STRATEGY.			SOCIO-ECONOMIC DEVELOPMENT STRATEGY.			INFRASTRUCTURE
		Conservation	Interventions	Monitoring	Conservation	Interventions	Environmental education	Wise use	Eco education	Eco+ cultural tourism	
1	**Nature Conservation and rehabilitation**										
		Forest habitats and meadows in forest and alpine belts Rock habitats Rare and endangered species	Rehabilitation degraded forests	Selected habitats and species Effect rehabilitation							Demarcation
2	**Historic cultural area**										
					Inventory archaeological sites and historical cultural monuments	Restoration selected monuments	Education and interpretation services.				Demarcation
3	**Trad. Use Area**										
		Wise resource use regime for conservation of forest habitats and meadows in forest and alpine belts.						Implement wise use regime. Agricultural reforms and training. Alternative energy sources.	Courses and excursions	Development Eco- cultural tourism.	Demarcation Site office

Figure 10.2. Environmental Management Matrix for Upper Svaneti Protected Landscape.

10.3.2. Nature conservation.

10.3.2.1 Conservation of forest and meadow habitats and species.		
1	**Rationale and objective.** In spite of the severe human pressure some ecosystems of the USPL have still a great ecological value as they include large areas with specific Colchic vegetation and fauna. However, these ecosystems are under severe demographic pressure and are rapidly degrading. The objective of the program is to conserve these forest habitats and to protect the rare and endangered species mentioned in the list of IUCN and CITES and in the Red list of Georgia. Moreover a wise resource use regime will be implemented in the Traditional Use Area.	
2	**Location.** Activities are performed in the Nature conservation and rehabilitation area and Traditional Use Area described in section 8.3. 2.	
3	**Description of the activities** The conservation objectives will be realized by means of a complex of measures related to both the natural environment and the use of the natural resources and will include: • enforcement of a strict protection regime, as described in section 8.3 (zoning); • continuous surveillance; • Wise resource-use regime. Management actions will be supported by the conservation and rehabilitation programs described in the next sections and will be facilitated by the administrative, physical and technical infrastructure described in section 10.3.5.	
4	**Expected output.** Conservation and protection of the bio diversity and high endemism of the specific Colchic forest vegetation.	
5	**Agency responsible for the execution.** APA of Ministry of the MoEPNR together with local governmental bodies will be responsible for the work.	
6	**Project team.** The work will be performed by the USPA staff in cooperation with the local police and should be coordinated and supervised by the proposed management unit.	
7	**Planning.** Law enforcement and surveillance will start after the management plan has been approved, other activities will be executed in the remaining years conditional upon availability of budgets.	
8	**Cost.** All salary cost are included in the State budget for core activities of the Administration and the budgets of the local governments. **Total**	**US$** 0 **0**
9	**Prio**rity As protection and conservation of this ecosystem is a prime objective of the project this program has a high priority.	
10	**Remarks**	

10.3.2.2 REHABILITATION OF DEGRADED FOREST HABITATS.		
1	**Rationale and objective.** The forest ecosystems in the middle forest belts have been used extensively for wood cutting and grazing. These areas have been severely degraded but still have a substantial ecological value. As the soil and climate conditions are favorable, these areas can be re rehabilitated if a proper management regime is enforced. The objective of the program is therefore to rehabilitate these areas through a complex of management actions.	
2	**Location.** Activities are performed in the Nature conservation and rehabilitation area described in section 8.3.2.	
3	**Description of activities.** The rehabilitation objectives will be realized by means of a complex of measures related to both the natural environment and the use of the natural resources and will include: • Enforcement of a strict protection regime, as described in section 8.3. (zoning) • implementation of measures to facilitate natural recuperation • continuous surveillance	
4	**Expected output.** Healthy forest ecosystems.	
5	**Agency responsible for the execution.** Forest Department of the MoEPNR with cooperation of the APA.	
6	**Project team.** The work will be performed by the USPA staff, supported by local labor to implement restoration measures.	
7	**Planning.** Law enforcement and surveillance will start after the management plan has been approved, other activities will be executed in the remaining years conditional upon availability of budgets.	
8	**Cost.** Salary cost of staff is included in the budget for the core activities of the Administration Interventions, material. **Total.**	**US$** 0 60,000 **60,000**
9	**Priority.** Forests are rapidly degrading and restoration should start as soon as possible. The program has a high priority, therefore.	High
10	Remarks. This project may be submitted for international co funding as part of programs to protect forests as a means to combat climate change	

10.3.2.3 MONITORING OF THE FOREST AND MEADOW HABITATS AND SPECIES.		
1	**Rationale and objective.** Monitoring of forest habitats and species is required to evaluate the effectiveness of management in particular the rehabilitation of forests, the effect of the wise resource use and the effect of visitor's programs and to adapt management actions if needed**.** The objective of the program is therefore to monitor a number of representative indicators in a number of characteristic habitats and to set up a data base to archive and process the collected data.	
2	**Location.** Activities are performed in the Nature Conservation and Rehabilitation Area and the Traditional Resource Use Area that are described in section 8.3.2.	
3	Monitoring will include: • Preparation, workshop. The research sites and the indicators will be selected prior to the start of the project in a workshop with leading biologists (botanists and zoologists). • Preparation of protocols for biodiversity monitoring and training of staff in biodiversity monitoring • Baseline survey. Floristic- and faunal survey and bird survey in 4 selected sites for a period of one week per site. Total 1 month for each survey) • Floristic survey in the 4 selected habitats, every year for a period of 1 week per site (Total 1 month per year). Monitoring will be carried out in spring and summer and will include the species composition, density and coverage of the vegetation in randomly selected plots of 300 m2 and the status of the rare and endangered species. • Zoological survey of endangered mammal population in 2 of the 4 characteristic habitats every year for a period of 1 month every year per site. (Total 2 months per year). Monitoring will be carried out in summer and winter (if weather permits) and will include the extent of the feeding base of the endangered mammals and the composition of the mammal population. • Survey of bird population. Survey of bird population in the 4 selected sites every year. For a period of 1 week per site 1 (Total 1 month per year). Monitoring will be carried out in summer and winter (if weather permits) and will include counting of migratory and nesting birds. • Data processing The data base will be a geo referenced data base with facilities to archive the collected data and to visualize the results through thematic maps (vegetation, bio diversity, species composition etc)	
4	**Expected output.** Information on Status of forest and meadow habitats. Status of flora and fauna in these areas. Spatial and temporal development of these indicators. Operational data base.	
5	**Agency responsible for the execution.** APA of MoEPNR and Local Governments will be jointly responsible for the work.	
6	**Project team.** The surveys will be performed by the USPA staff that was trained in the National Park.	
7	**Planning.** Activities will start after the management plan has been approved.	
8	**Cost.** Salary cost of staff is included in the State budget for the core activities of the Administration. **Total**	**US$** **0** **0**
9	**Priority.** As monitoring is important for management, the program has a high priority.	High
10		

10.3.3. Culture conservation.

10.3.3.1A	INVENTORY, DOCUMENTATION AND CONSERVATION OF ARCHAEOLOGICAL SITES.	
1	**Rationale and objective.** Archeological mo s of various periods can be found within the USPL – they form a significant part of the cultural heritage of Svaneti. Dozens of archeological monuments of various periods were discovered and partially studied within the Protected Landscape. The oldest monument dates back to the Old Neolith. The objective of the program is to make and inventory and documentation of these sites.	
2	**Location.** Almost all monuments are located within the Historical Cultural area as described in section 8.3.	
3	**Description of activities.** The activities will include: GIS based site map	
4	**Expected output.** Properly documented data base with information on the sites that can be used for future scientific research. Moreover the data base can be used effectively to plan engineering works in and around archaeological sites and to perform excavations and supervision when engineering works are carried out in these areas.	
5	**Agency responsible for the execution.** Ministry of Culture, Monument Protection and Sports.	
6	**Project team.** The work will be carried out by an archaeologist with proven experience in this area.	
7	**Planning.** The work will be carried out during all five years, conditional upon availability of budgets.	
8	**Cost.**	**US$**
	Inventory of sites.	15,000
	Data base	25,000
	Total	**40,000**
9	**Priority.**	
	As many of the areas have already been documented the priority is moderate	Moderate
10	**Remarks.**	

10.3.3.1B INVENTORY, DOCUMENTATION AND CONSERVATION OF HISTORICAL CULTURAL MONUMENTS.		
1	**Rationale and objective.** The objective of this program is to make an inventory and documentation of the important historical cultural monuments and to develop a conservation plan for representative buildings and village monuments.	
2	**Location.** Most of the monuments are located within the Historical Cultural Area described in section 8.5, only a few monuments are located in the USNP.	
3	**Description of activities.** The activities will include: • Inventory of historical cultural monuments; • Professional documentation; • Conservation plan for architectural monuments, murals and urban monuments; Conservation measures and interventions include an inventory and documentation of the architectural monuments and the conservation plan for selected monuments. Conservation of the monuments is not included	
4	**Expected output.** Properly documented data base with information on the monuments.	
5	**Agency responsible for the execution.** Department of Monument Protection of Ministry of Culture and Sports.	
6	**Project team.** The work will be carried out by a team of architects and fine arts specialists with proven experience in their respective fields.	
7	**Planning.** The inventory and documentation activities will be carried out during all five years, conditional upon availability of budgets.	
8	**Cost.** Inventory of monuments. Professional documentation, 5,000 US$ per monument. Conservation plan. Pilot restoration project. **Total**	**US$** **225,000**
9	**Priority.** Given the high cultural value of the area the program has a high priority**.**	High
10.	**Remarks.** Funding may be obtained from national and international programs to conserve cultural heritage and from the Patriarchy to conserve the religious monuments.	

10.3.3.2 EMERGENCY REPAIRS AND RESTORATION WORKS.		
1	**Rationale and objective.** The historic-cultural monuments need urgent repairs. The objective of the program is to assist the local population in conserving and restoring their monuments and to provide financial support.	
2.	**Location.** • Lekhtegi Lamaria Churche (Mestia community); • Ienashi Jon Babtist Churche, Latali community; • Chokhuldi Churche, Becho community; • Ugvali St. George Churche, Mestia community; • Chaghashi Churche, Ushguli community.	
3	**Description of activities.** Technical and financial support for conservation and restoration of monuments.	
4	**Expected output.** Better understanding of techniques to maintain and conserve Svaneti monuments, properly restored monuments.	
5	**Agency responsible for the execution.** Ministry of Culture, Monument Protection and Sports.	
6	**Project team.** The work will be subcontracted to experts with proven experience in restoration works.	
7	**Planning.** The work will be carried out during all five years, conditional upon availability of budgets.	
8	**Cost.** Budget estimate	**US$** **150,000**
9	**Priority.** AS all monuments need urgent repair the priority is high.	High
10	**Remarks.** Funding may be obtained from national and international programs to conserve cultural heritage and from the Patriarchy to conserve the religious monuments.	

10.3.4. Socio-economic development.

10.3.4.1 IMPLEMENTATION WISE USE REGIME.		
1	**Rationale and objective.** The area of the USPL is extensively used by local inhabitants for hay making, grazing and woodcutting. In some areas this results in over exploitation and depletion of these resources. For that reason resource use will be prohibited in most zones with the exception of controlled resource use in the Traditional Use Area, where a wise resource use regime will be maintained. The objective of this program is to develop this regime and to support the local population after it has been implemented.	
2	**Location.** Activities are performed in the Traditional Use Area that is described in section 8.3.2.	
3	**Description of activities.** The activities will include; First phase: Inventory of resource use(grazing, wood cutting, hunting, fishing) Analysis of type and volume of resources used, Carrying capacity analysis, Second phase: Pilot projects; Third phase: Implementation of wise use regime and development of alternatives for local population. Local inhabitants can join the seminars and training in developing alternative livelihoods and alternative energy sources that are part of the program for the USNP.	
4	**Expected output.** Sustainable regime for grazing, wood cutting, hunting and fishing that balances the interests of man and nature.	
5	**Agency responsible for the execution.** APA of MoEPNR will be responsible for the work.	
6	**Project team.** The work will be performed by the park administration seconded by experts from the Department of Forestry and the Ministry of Agriculture (forester, resource use specialist and agronomist) and in close cooperation with the local governmental bodies.	
7	**Planning.** The wise resource use regime should be enforced as soon as the Management Plan has been approved, other activities should be executed in the following years	
8	**Cost.**	**US$**
	Phase 1. Cost is included in the budget for the USNP.	0
	Phase 2.Cost pilot projects and fees external experts.	50,000
	Phase 3.Salary cost is included in the budget for the core activities of the Administration.	**0**
	Total	**50,000**
9	**Priority.**	High
	As inappropriate land and resource use is one of the major threats for the protected areas, this program has first priority (high).	
10	**Remarks**	

10.5.4.2 DEVELOPMENT ECO-CULTURAL TOURISM.		
1	**Rationale and objective.** The unique scenery of the USPL offers possibilities for recreation in both summer and winter. However, a proper tourist infrastructure is lacking and transport facilities are poor, especially in winter. The objective of the program is to identify possibilities for eco-cultural tourism within the Protected Landscape and to develop such possibilities in cooperation with the government and the regional tourist industry.	
2.	**Location.** Activities are performed in the Nature Conservation- and Historical-Cultural Areas described in section 8.3.2.	
3	**Description of activities.** The activities will include: • Phase 1: Inventory of tourist potential within the Protected Landscape Feasibility study for tourism development with recommendations for action. • Phase 2: Phased implementation of the recommendation as part of a national/regional tourism development plan. This will include as a first step the following: Facilities for guided tours Nature and cultural trails These facilities are described in greater detail section 10.3.5. Infrastructure	
4	**Expected output.** Facilities for ecotourism in both summer and winter in place.	
5	**Agency responsible for the execution.** APA of MoEPNR in cooperation with The Ministry of Culture, Monument Protection and Sports and the Ministry of Economic Development, Tourism Department will be responsible for the work.	
6	**Project team.** The first phase, the feasibility study will be performed by an external consultant. The second phase, the construction of the necessary infrastructure will be subcontracted to local contractors.	
7	**Planning.** Activities will start immediately after the management plan has been approved, conditional upon the availability of funding.	
8	**Cost.** Phase 1: Tourist development plan. Cost included in budget RLLSNP Phase 2: Development visitor services **Total**	US$ 0 50,000 **50,000**
9	**Priority.** Tourism is a possibility to enhance the living standard of the people; The present program has, therefore, a high priority.	High
10	**Remarks.** A regional tourism development plan is required to prevent unwanted social effects and ecological damage.	

10.3.5. Infrastructure.

10.3.5.1. INFRASTRUCTURE.		
1	**Rationale and objective.** The infrastructure includes the demarcation of the area and a number of tourist trails. No administrative buildings have been foreseen as the local governments and the Administration of the USPA should agree on the facilities that are required for a proper functioning of the Protected Landscape. Probably existing facilities can be used.	
2	**Location.** Activities are performed along the borders and inside the USPL.	
3	**Description of the activities** • Demarcation. The borders of the USPL coincide with the borders of the USNP and the same border poles will be used for demarcation. Cost is included in the cost for USNP. As the PL is an open area no entrances and gates have been planned. • Tourist infrastructure. In order to facilitate tourism natural and cultural trails are planned in the locations shown on Figure 8.2. They are described in Annex 8.	
4	**Expected output.** Facilities for eco-cultural tourism in place.	
5	**Agency responsible for the execution.** The local governments will be responsible for the work.	
6	**Project team.** The design and construction of the tourist infrastructure will be subtracted to architects and contractors with proven experience in this field in accordance with the legal tender procedures. In case of equal qualification, priorities will be given to local architects and contractors. The facilities will be constructed in phases.	
7	**Planning.** Activities will start as soon as possible after the management plan has been approved conditional upon availability of budgets.	
8	**Cost.** Demarcation, included in cost of USNP Tourist facilities Eco cultural trails and info panels **Total (Estimate**)	**US$** 25,000 **25,000**
9	**Priority** Infrastructure is instrumental for a proper functioning of the Protected Landscape and has a high priority, therefore.	High
10	**Remarks.**	

11. Cost, disbursement and prioritization.

11.1. Introduction.

This chapter summarizes the cost of establishing and managing the system of protected areas in Upper Svaneti and defines the priority of the execution of the management programs.
The cost of the various programs is summarized in section 11.2. Cost estimates are based upon the price levels 01-01 2008. Salary cost for external consultants are based upon a fee of 100 US$ per calendar day and include 20% VAT and 5% unforeseen (Total 125 US$). The total cost of all programs is US $ 2,845,000 . The annual operating cost, -the salary cost of staff and the running cost of facilities - is not included in this figure as the organization and staffs still has to be defined by the Administration. As the set up of the Upper Svaneti Protected Landscape is as yet not clear, the proposed plans could not be discussed with the responsible agencies. These figures are therefore provisional.
Section 11.2. also includes a provisional disbursement schedule that specifies the budgets for the first two years and the remaining 3 years. This schedule is based upon the ideal planning given in the programs.
Section 11.3. defines a further prioritization of this planning. The priority of each program is assessed by comparing the expected outputs, for both nature and people with the availability of financial and human resources.

11.2. Cost and disbursement.

11.2.1. The Upper Svaneti National Park.

The cost of the programs for Upper Svaneti National Park is summarized in Table 11.1. below.

T able 11.1. Summary of cost USNP.

No	UPPER SVANETI NATIONAL PARK.	Cost (US$)	Subtotal (US$)	Year 1 (US$)	Year 2 (US$)	Year 3-5 (US$)
2	**NATURE CONSERVATION**					
2.1 Nature conservation.						
2.1A	Enforcement conservation regime	40,000		20,000	20,000	0
2.1B	Conservation natural monument	10,000				10000
			50,000	**20,000**	**20,000**	**10,000**
2.2. Interventions.						
2.2A	Rehabilitation chestnuts	0				
2.2B	Rehabilitation forests	60,000		20,000	20,000	20,000
2.2 C	Protection brown bear.	40,000		15,000	25,000	
2.2 D	Rehabilitation of ungulates	125,000		10,000	10,000	105,000
			225,000	**45,000**	**55,,000**	**125,000**
2.3. Monitoring (Year 3 and 5)						
	Seminar	15,000		15,000		
	Protocols, training	20,000		20,000		
	Baseline survey	60,000		60,000		
	First surveys and training	60,000				60,000
	Database	25,000		25,000		
			180,000	**120,000**	**0**	**60,000**
2.4. Awareness building.						
	Education and outreach	35,000		25,000	5,000	5,000
			35,000	**25,000**	**5,000**	**5,000**
			490,000	210,000	80,000	200,000
3	**CULTURE CONSERVATION**					
3.1	**Culture conservation.**					
	No activities foreseen					
4	**SOCIO-ECONOMIC DEVELOPMENT.**					
4.1	**Implement wise use regime.**					
4.1A	Establish wise use regime, seminars and training	140,000		40000	25000	75000

4.1B	Organic farming, pilot project and seminars	160,000		40,000	20,000	100,000
4.1C	Alterative energy systems	15,000		15,000		
			315,000	**95,000**	**45,000**	**175,000**
4.2	**Development potential for Ecotourism.**					
	Tourist development plan	20,000		20,000		
	Visitor services	50,000		**10,000**	10,000	30,000
			70,000	**30,000**	**10,000**	**30,000**
4.3.	**Business development and small grants program.**					
	Inventory opportunities	20,000		20,000		
	Seminars	20,000			20,000	
	Small grants	200,000		50,000	50,000	100,000
			240,000	**70,000**	**70,000**	**100,000**
4.4.	**PR and Marketing**					
	Marketing plan	15,000				
	Promotion material	30,000		30,000		
	Promotion activities	15,000		5,000	5,000	5,000
	National and international cooperation	5,000				5,000
			65,000	**35,000**	**5,000**	**10,000**
4.5.	**Monitoring socio-economic impact.**					
	Socio-economic surveys	30,000		15,000	15,000	
			30,000	**15,000**	**15,000**	
			720,000	**260,000**	**145,000**	**315,000**
5	**INFRASTRUCTURE**					
5.1.	Demarcation		400,000	200,000	200,000	
5.2.	Administrative infrastructure and equipment		580,000	80,000	200,000	300,000
5.3.	Tourist infrastructure		55,000	5,000	20,000	30,000
			1,035,000	**285,000**	**420,000**	**330,000**
Total	**Upper Svaneti National Park.**		**2,245,000**			

11.2.2. The Upper Svaneti Protected Landscape.

The cost of the programs for Upper Svaneti National Park is summarized in Table 11.1. below.

T able 11.2. Summary of cost USPL.

No	UPPER SVANETI PROTECTED LANDSCAPE	Cost (US$)	Subtotal (US$)	Year 1 (US$)	Year 2 (US$)	Year 3-5 (US$)
2	**NATURE CONSERVATION**					
2.1	**Nature conservation.**					
	Cost included in annual state budget for core activities.	0				
			0			
2.2.	**Interventions.**					
	Rehabilitation forests	60,000		20,000	20,000	20,000
			60,000			
2.3	**Monitoring.**					
	Cost included in annual state budget for core activities.	0				
			0			
			60,000	**20,000**	**20,000**	**20,000**
3	**CULTURE CONSERVATION**					
3.1	**Culture conservation.**					
	Conservation archaeological sites.	40,000		15,000	10,000	15,000
			40,000			
	Conservation Cultural Monuments	225,000		45,000	30,000	150,000
			225,000			
3.2	**Restoration.**					
	Emergency repairs	150,000		30,000	30,000	90,000

			150,000			
			415.000	**90,000**	**60,000**	**255,000**
4	**SOCIO-ECONOMIC DEVELOPMENT.**					
4.1	**Implement wise use regime.**					
	Establish wise use regime, seminars and training	50,000				50,000
			50,.000			
4.2	**Development potential for Eco-cultural tourism.**					
	Visitor services	50,000	50,000			
			100,000.			**50,000**
5	**INFRASTRUCTURE**					
5.1.	Demarcation. Included in USNP	0				
5.2.	Administrative infrastructure not foreseen.	0				
5.3.	Tourist infrastructure.	25,000				25,000
			25,000			**25,000**
Total	**Upper Svaneti Protected Landscape**		**600,000**			

11.3. Prioritization.

The WCPA Framework described in Chapter 6 (See Table 11.3) was used as a basis for the prioritization of the programs at the start of the implementation of the management plan. The criteria of importance in this phase are the inputs**,** the availability of human and financial resources, and the outputs, the effects these resources can produce for nature and people in relation to the management objectives.

Table 11.3: The WCPA Framework.

Elements of evaluation	Explanation	Criteria that are assessed	Focus of evaluation
Context	*Where are we now?* Assessment of importance, threats and policy environment	Significance Threats Vulnerability National context Partners	Status
Planning	*Where do we want to be?* Assessment of protected area design and planning	Protected area legislation and policy Protected area spatial planning Management planning	Appropriateness
Inputs	***What do we need?*** Assessment of resources needed to carry out management	Human and financial resources of agency Natural resources of site	Resources
Processes	*How do we go about it?* Assessment of the way in which management is conducted	Suitability of management processes	Efficiency and appropriateness
Outputs	*What will be the results?* Assessment of the implementation of management programs and actions; delivery of products and services	Results of management actions Services and products	Effectiveness
Outcomes	*What did we achieve?* Assessment of the outcomes and the extent to which they achieved objectives	Impacts: effects of management in relation to objectives	Effectiveness and appropriateness

The inputs, the various financial resources are assessed in the following way:

Financial resources are evaluated by the amount of money needed for the implementation of an activity. The possibility to realize a program with a cost lower that US $ 50,000 is rated as high, the probability is rated medium for programs with a cost between 50,000 and 250,000 and the possibilities of programs with a cost higher than 250,000 are classified as low as it will become increasingly difficult to allocate the money.

Human resources are assessed by the availability of staff to perform the work and to control subcontracts. Programs that can be implemented with existing staff are classified as high, programs that require trained staff that can be mobilized within 2 years are medium rated and programs that can only be started after two years are classified as low.

The expected outputs are evaluated by the effectiveness and appropriateness of the programs for nature and people.

The effect on nature is assessed by the positive impact of the program on the habitats and species within the Protected Areas. This effect is rated high medium and low.

The effect on people is assessed by the positive impact of the program on people in particular the people living around the protected areas. Again this impact is rated high medium and low.

The rating of the various programs that are planned for the first two years is shown in the score card below. Green indicates priority high; this includes programs that are appropriate and cost-effective. They can be carried out with existing staff and for acceptable budgets. Yellow includes projects that are also appropriate but less cost- effective and allocation of money and recruitment of staff takes more time. Finally the red projects still are adequate and effective but they may have to be postponed to the next three years due to problems with allocation of money and/or staff.

Table 11.4. Prioritization.

No	**UPPER SVANETI NATIONAL PARK.**	**Impact on nature**	**Impact on people**	**Required financial resources**	**Availability human resources**	**Overall rating and priority**
2	**NATURE CONSERVATION**					
2.1	**Nature conservation.**					
2.1A	Enforcement conservation regime					High
2.1B	Conservation natural monuments					Medium
2.2.	**Interventions.**					
2.2A	Rehabilitation chestnuts					NA
2.2B	Rehabilitation forests					High
2.2 C	Protection brown bear.					Medium
2.2 D	Rehabilitation of ungulates					Medium
2.3	**Monitoring (Year 3 and 5)**					
	Seminars					High
	Protocols, training					High
	Baseline survey					Medium
	First surveys and training					Medium
	Second surveys					Low
	Database					High

2.4.	**Awareness building.**					
	Education and outreach					High
3	**CULTURE CONSERVATION**					
3.1	**Culture conservation.**					
3.1A	Conservation archaeological site					NA
4	**SOCIO-ECONOMIC DEVELOPMENT.**					
4.1	**Implement wise use regime.**					
4.1A	Establish wise use regime, seminars and training					High
4.1B	Organic farming, pilot project and seminars					High
4.1C	Alterative energy systems					High
4.2	**Development potential for Ecotourism.**					
	Visitor services					High
4.3.	**Business development and small grants program.**					
	Inventory and seminars					High
	Small grants					Medium
4.4	**PR and Marketing**					
	Marketing plan					High
	Promotion material					High
	Promotion activities					High
	National and international cooperation					Medium
4.5.	Monitoring socio-economic impact.					High
5	**INFRASTRUCTURE**					
5.1.	Demarcation					Medium
5.2.	Administrative infrastructure and equipment					High
5.3.	Tourist infrastructure					Medium

No prioritization has been made for the Protected Landscape as no activities are foreseen in this area in the first two years. Financial -and human resources development will greatly restrain activities in the first two years and discussions regarding the future of the Protected Landscape may even take more time.

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GEORGIA

PROTECTED AREAS DEVELOPMENT PROJECT

(GEF TF 023968)

COMPONENT 1:

Development of a Detailed Plan for Biodiversity and Forest Conservation in the Central Caucasus Region and Corridor Conservation Planning in Eastern Georgia

UPPER SVANETI PROTECTED AREAS MANAGEMENT PLAN

Draft

ANNEXES

GPAP Tbilisi, December 2008

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<tr><td>1. Data collection</td><td>Compilation of available data.</td><td>Desk study and literature search</td><td>Literature review - First Interim Report.</td></tr>
<tr><td>2. Field work</td><td>Site surveys,</td><td>
<table>
<tr><th>Expert</th><th>July 05</th><th colspan="4">August 05</th><th colspan="5">September 05</th><th colspan="2">October 05</th></tr>
<tr><td></td><td>Week 3 0</td><td>Week 31</td><td>Week 32</td><td>week 33</td><td>week 34</td><td>week 35</td><td>week 36</td><td>week 37</td><td>week 38</td><td>week 39</td><td>week 40</td><td>week 41</td></tr>
<tr><td>Physical geographer.</td><td colspan="3">25/07 – 10/08</td><td></td><td>20-25</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Botanist</td><td colspan="3">25/07 – 10/08</td><td></td><td></td><td></td><td></td><td colspan="3">10/09 – 28/09</td><td></td><td></td></tr>
<tr><td>Zoologist</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>16/09 – 27/09</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Economist</td><td></td><td></td><td></td><td></td><td colspan="2">26/08 – 09/09</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Forrester</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td colspan="4">20/09 – 16/10</td><td></td></tr>
<tr><td>Cultural experts</td><td></td><td></td><td colspan="2">7/08-15/08</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
</table>
</td><td>Field reconnaissance assessment - Second Interim Report.</td></tr>
<tr><td></td><td>Geo physical:</td><td>Desk study: Seismic risk. The methodology used in most probabilistic seismic hazard analysis as first defined by Cornell.</td><td>Annex 1 of Second interim report.</td></tr>
<tr><td></td><td>Landscape</td><td>Site survey: Three main routes were selected for the field surveys:
1. Svaneti (Nakra and Nenskra gorge, Mestia, Ushguli) (23-27 July)
2. Racha (Ambrolauri, Gorges of Rioni and its tributaries, Oni district, Debi, Shovi and Shkmeri areas) (5-10 August)
3. Lechkhumi, Tsageri and Lentekhi districts (20-25 August)
During the surveys, meetings were arranged with both local authorities and inhabitants. During these meetings local statistical information has been collected and following questions were asked:
which geodynamic processes have occurred during the recent 5 years? What is expected? What about privatisation?
Which sites could a tourist visit?</td><td>Annex 2 of Second interim report.</td></tr>
<tr><td></td><td>Botanical:</td><td>Site survey: Botanical field research has been arranged in Racha (Oni, Ambrolauri district) Leckhumi and Lower Swaneti. Due to floods and landslides that occurred this year that made many roads inaccessible, it was impossible to reach some areas of supposed priority. The expedition could, therefore, not accomplish field work on m. Chutkhari massive (Ambrolauri district). Moreover, not all significant natural landscapes of Upper Racha could be visited this time. Additional trips were planned for next year to collect additional information.</td><td>Annex 3 of Second Interim Report.</td></tr>
<tr><td></td><td>Forestry</td><td>Forest inventory: The inventory is based on revised sources on forest organization, land organization, registration, etc. Due to the lack of recent forest organization data, forest characteristics are based on various calculations of forest organization data of the following years: 1984 – for Upper Svaneti forestry, 1996 – for Lentekhi and Tsageri forestry, 1995 – for Ambrolauri forestry, 1991 – for Oni forestry.</td><td>Annex 5 of Second Interim Report</td></tr>
</table>

	Zoological:	Site survey: The field research was carried out in two stages, namely: First stage – autumn, 2005 Second stage – spring-summer, 2006 The first stage comprised field activities in Oni district. The key objective was to collect and analyze field research data. This stage also comprises a comparison with literature sources and development of the draft version of the following synthesis report. This information will be used for Phase B of the project, The Management Guidelines. The second stage comprises studies in Ambrolauri, Lentekhi, Tsageri and Mestia districts. Based on these studies the synthesis report will be updated. This information will be used for the final planning of the Central Caucasus protected area and the development of the management plan for natural resources. The stratification method was applied during the field research. In this method the research area is divided into strata. During mammal research mainly linear transects with fixed width have been used; to identify traces of mammals. Regarding Cheiroptera, both direct observation and the Cheiroptera detector were used. The transect method was also applied to avifauna studies.	Annex 4 of Second Interim Report
	Cultural:	Sire survey: The data on the monuments provided by scientific literature was checked and analyzed. Fieldwork was carried out in Upper Svaneti. Moreover, the information regarding the current or planned activities within the borders of planning region of Georgian historical parts, collected by different organizations, was used. In 2005 the expedition was launched in Upper Svaneti. It exposed deterioration of the cultural heritage monuments in this region. During the expedition visual check and photos were made.	Annex 7 of Second Interim Report
	Socio economic:	Site visit to verify the information obtained from literature and to collect additional data from the local authorities, regarding demography, land and resource use, economic- and social structure.	Annex 6 of Second Interim Report
	GIS activity	Preparation base maps.	
3. Synthesis	Processing and evaluation of data.	Desk study preparation GIS overlays for thematic maps.	Information Synthesis Report.
PHASE B:			
4. GGGuidelines	Description, environmental assessment of planning region and selection of protected areas.	Desk study preparation GIS overlays for thematic maps.	Management Guidelines for Central Caucasus planning Region
5. Draft Law	Preparation legal documents for Draft Law.	Desk study, consultation with Agency of Protected Areas.	Draft Law on the Establishment and Management of the Central Caucasus Protected Areas.
PHASE C:			

<table>
<tr><td></td><td></td><td></td><td></td></tr>
<tr><td>6. Management Plan Racha-Lechkhumi-Lower Svaneti Protected Areas (RLPA)</td><td></td><td></td><td>Management Plan RLPA</td></tr>
<tr><td></td><td>Additional site surveys</td><td>
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<tr><td>Expert</td><td>July 06</td><td colspan="4">August 06</td><td colspan="5">September 06</td><td colspan="2">October 06</td></tr>
<tr><td></td><td>week30</td><td>week31</td><td>week32</td><td>week 33</td><td>week 34</td><td>week 35</td><td>week 36</td><td>week 37</td><td>week 38</td><td>week 39</td><td>week 40</td><td>week 41</td></tr>
<tr><td>Botanist</td><td colspan="4"></td><td></td><td></td><td></td><td colspan="3"></td><td></td><td></td></tr>
<tr><td>Economist</td><td></td><td></td><td></td><td></td><td colspan="4"></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Cultural experts</td><td></td><td></td><td colspan="2"></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td></td><td>Botanical</td><td>Site visit</td><td></td></tr>
<tr><td></td><td>Zoological</td><td>Site visit</td><td></td></tr>
<tr><td></td><td>Socio economic</td><td>Site visit</td><td></td></tr>
<tr><td></td><td>Management Plan: Objectives, borders and zoning, measures and programs.</td><td>Desk study preparation GIS overlays for thematic maps.</td><td></td></tr>
<tr><td>7. Management Plan Upper Svaneti Protected Areas. (SPA).</td><td></td><td></td><td>Management Plan SPA</td></tr>
<tr><td></td><td>Additional site surveys</td><td>
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<tr><td></td><td>Socio economic</td><td>Site visit</td><td></td></tr>
<tr><td></td><td>Management Plan; Objectives, borders zoning, measures and programs.</td><td>Desk study preparation GIS overlays for thematic maps.</td><td></td></tr>
</table>

Annex 2. Flora

A: Plants Included in the Georgian Red List that are found within Upper Svaneti Protected Areas.

	Latin Name	English Name	Category Indicating the State and Protection Status
Angiosperms			
1	*Buxus colchica*	Colchic boxwood	VU
2	*Castanea sativa*	Common chestnut	VU
3	*Corylus colchica*	Colchic hazel nut	VU
4	*Daphne albowiana*	Albov's paradise Plant	EN
5	*Daphne pseudosericea*	False silk paradise plant	EN
6	*Juglans regia*	Nut tree (is not distributed in natural habitats)	VU
7	*Ostya carpinifolia*	European hop hornbeam	EN
8	*Quercus hartwissiana*	Colchic oak	VU
9	*Quercus imeretina*	Imeretian oak	VU
10	*Quercus macranthera*	High mountain oak	VU
11	*Staphylea colchica*	Colchic bladder nut	VU
Gymnospermae			
12	*Taxus baccata*	English yew	VU

B: Plants with High Conservation Value found in Upper Svaneti Protected Areas.

	Latin Name	English Name
1	*Diospyros lotus*	Common persimmon
2	*Muscari alpanicum*	Grape hyacynth
3	*Campanula dzaaku*	Dzaaku's bellflower
4	*Silene markowiczii*	Markovich's silene
5	*Silene pygmaea*	Dwarf silene
6	*Alboviodoxa elegans*	Amphoricarpos
7	*Senecio massagetovii*	Massagetov's groundsel
8	*Nuphar lutea*	Yellow pond lily is distributed in Cheliaghele lake;
9	*Paeonia wittmanniana*	Witman's peony
10	*Cyclamen colchicum*	Colchic cyclamen
11	*Erythronium caucasicum*	Caucasian fawn lily
12	*Campanula svanetica*	Svanetian bellflower
13	*Symphyandra pendula*	Symphyandra
14	*Heracleum sommieri*	Somie's cowparsnip
15	*Polylophium panjutinii*	Panutin's polylophium

Data obtained from lierature ("Flora of Georgia", v. 1-14, Tbilisi, 1971-2004).

C: Georgian endemics.

The first 26 species are found in the National Park and could be present in other territories.

	Latin Name	English Name	Local Endemic species of Svaneti	USNP	USPL
1	*Astragalus chordorrhizus*	Astragalus		+	+
2	*Genista suanica*	Svanetian broom		+	+
3	*Delphinium irinorum*	Irene's delphinium		+	+
4	*Delphinium osseticum*	Osetian delphinium		+	+
5	*Paeonia ruprechtiana*	Ruprekht's peony		+	+
6	*Paeonia steveniana*	Steven's peony		+	+
7	*Cerastium svanicum*	Svanetian cerastium		+	+
8	*Cirsium imereticum*	Imeretian thistle		+	+
9	*Cirsium pugnax*	Thistle		+	+
10	*Helichrysum polyphyllum*	Starflower		+	+
11	*Hieracium latbariense*	Latbarian hawkweed		+	+
12	*Hieracium albellipes*		+	+	+
13	*Hieracium chlorochromum*		+	+	+
14	*Matricaria elongata*	Chamomile		+	+
15	*Psephellus colchicus*	Colchic psephellus		+	
16	*Pulsatila aurea*	Yellow pesqueflower		+	+
17	*Ranunculus lojkae*	Buttercup		+	+
18	*Euphrasia sosnowskyi*	Sosnovski's eyebright		+	
19	*Lamyropsis charadzeae*		+	+	+
20	*Heracleum osseticum*	Osetian cowparsnip		+	+
21	*Potentilla sommieri*		+	+	+
22	*Potentilla svanetica*	Svaneti Potentila	+	+	+
23	*Euphrasia svanica*		+	+	+
24	*Ranunculus helenae*	Kemularia's buttercup		+	+
25	*Asperula kemulariae*			+	+
26	*Heracleum sommieri*	Somie's cowparsnip		+	+
27	*Arabis colchica*			+	+
28	*Paeonia macrophylla*			+	+
29	*Scabiosa svanica*			+	+
30	*Scabiosa correvoniana*			+	+
31	*Heracleum mandenovae*			+	+
32	*Ophrys caucasica*			+	+
33	*Orchis viridifusca*			+	+
34	*Seseli rupicola*			+	+
35	*Seseli saxicola*			+	+
36	*Viola orthoceras*			+	+
37	*Thesium laxiflorum*			+	+
38	*Vicia caucasica*			+	+
39	*Thymus caucasicus*			+	+
40	*Draba mingrelica*			+	+

Data obtained from literature ("Flora of Georgia", v. 1-14, Tbilisi, 1971-2004) Anonymous, "Flora and Vegetation of Svaneti", works of Tbilisi Botanical Institute, volume XXX, Tbilisi, 1985; Ketskhoveli N., "Vegetation of Georgia", Tbilisi, 1960 and field observation

D: Caucasian endemic flora found in the USNP.

1. *Aetheopappus cauccasicus*
2. *Helleborus caucasicus*
3. *Symphytum ibericum*
4. *Symphytum caucasicum*
5. *Symphytum graveolens*
6. *Scrophularia minima*
7. *Delphinium caucasicum*
8. *Petasites fominii*
9. *Dryas caucasica*
10. *Campanula Hypopolia*
11. *Primula bayernii*
12. *Minuartia trautvetteriana*
13. *Euphorbia kemulariae*
14. *Silene marcowiczii*
15. *Papaver oreophilum*
16. *Campanula cordifolia*
17. *Campanula grossheimii*
18. *Campanula kryophila*
19. *Campanula ochroleuca*
20. *Campanula petrophila*
21. *Campanula saxifraga*
22. *Cerastium polymorphum*
23. *Cerastium undulatifolium*
24. *Dianthus caucasicus*
25. *Dianthus ruprechtii*
26. *Minuartia buschiana*
27. *Minuartia inamoena*
28. *Oberna lacera*
29. *Silene linearifolia*
30. *Silene pygmaea*
31. *Anthemis sosnovskyana*
32. *Carduus odpressus*
33. *Cicerbita macrophylla*
34. *Cicerbita prenanthoides*
35. *Cirsium buschianum*
36. *Cirsium erythrolepis*
37. *Crisium simplex*
38. *Cirsium uliginosus*
39. *Crepis caucasica*
40. *Dolichorhiza caucasica*
41. *Dolichorhiza renifolia*
42. *Echinops colchicus*
43. *Echinops caucasicus*
44. *Echinops venustus*
45. *Hieracium erythrocarpoides*
46. *Hieracium erythrocarpum*
47. *Hieracium pannoniciforme*
48. *Inula magnifica*
49. *Matricaria transcaucasica*
50. *Omalotheca caucasica*
51. *Podospermum meyeri*
52. *Senecio grandidentatus*
53. *Senecio karjaginii*
54. *Senecio kolenatianus*
55. *Senecio pojarkovae*
56. *Senecio rhombifolius*
57. *Senecio sosnovskyi*
58. *Alliaria brachycarpa*
59. *Dentaria bipinnata*
60. *Dentaria microphylla*
61. *Draba brioides*
62. *Draba repesn*
63. *Erysimum aureum*
64. *Erysimum ibericum*
65. *Eunomia rotundifolia*
66. *Pseudovesicaria digitata*
67. *Cephalaria gigantea*
68. *Knautia montana*
69. *Euphorbia glaberrima*
70. *Euphorbia macroceras*
71. *Corydalis emanuelii*
72. *Geranium renardii*
73. *Aconitum nasutum*
74. *Aconitum tuscheticum*
75. *Aquilegia caucasica*
76. *Delphinium bracteosum*
77. *Delphinium flexuosum*
78. *Lamium tomentosum*
79. *Scutellaria ossethica*
80. *Thymus caucasicus*
81. *Thymus collinus*
82. *Thymus nummularius*
83. *Anthyllis irenae*
84. *Anthyllis lachnophora*
85. *Astragalus brachytropis*
86. *Astragalus frickii*
87. *Astragalus kazbekii*
88. *Astragalus supinus*
89. *Galega orientalis*
90. *Hedysarum caucasicum*
91. *Lathyrus caucasicus*
92. *Medicago glutinosa*
93. *Medicago polychroa*
94. *Vicia antiqua*
95. *Vicia caucasica*
96. *Orobanche gamosepala*
97. *Polygonum panjutini*
98. *Androsace intermedia*
99. *Primula pseudoelatior*
100. *Primula woronowii*
101. *Anemonastrum speciosum*
102. *Pulsatilla violacea*
103. *Ranunculus abchasicus*
104. *Ranunculus acutilobus*
105. *Ranunculus osseticus*
106. *Ranunculus svaneticus*
107. *Thalictrum buschianum*
108. *Alchemilla chlorosericea*
109. *Alchemilla hypochloa*
110. *Alchemilla speciosa*
111. *Potentilla caucasica*
112. *Potentilla nordmanniana*
113. *Pyrus caucasucus*
114. *Rosa oplistes*

115. *Rubus nakeralicus*
116. *Rubus ponticus*
117. *Sorbus aucuparia*
118. *Asperula albovii*
119. *Salix kazbekensis*
120. *Salix pantosericea*
121. *Saxifraga pseudolaevis*
122. *Digitalis ciliata*
123. *Euphorbia amblyodonta*
124. *Euphorbia caucasica*
125. *Linaria caucasica*
126. *Melampyrum caucasicum*
127. *Pedicularis caucasica*
128. *Pedicularis crassirostris*
129. *Scrophularia divaricata*
130. *Scrophularia laterifolia*
131. *Verbascum atroviolaceum*
132. *Verbascum wilhelmsianum*
133. *Veronica umbrosa*
134. *Agasyllis latifolia*
135. *Angelica tatianae*
136. *Carum grossheimii*
137. *Chaeorphyllum humile*
138. *Heracleum asperum*
139. *Heracleum freinianum*
140. *Heracleum leskovii*
141. *Heracleum roseum*
142. *Heracleum sosnowskyi*
143. *Laserpitium stevenii*
144. *Ligusticcum physospermifolium*
145. *Valeriana cardamines*
146. *Valeriana colchica*
147. *Valeriana saxicola*
148. *Valeriana tiliifolia*
149. *Allium Kuntianum*
150. *Allium ruprechtii*
151. *Galanthus platyphyllus*
152. *Ruscus colchicus*
153. *Carex medwedewii*
154. *Carex meinshauseniana*
155. *Alopecurus dasyanthus*
156. *Catabrosella calvertii*
157. *Colpodium versicolor*
158. *Elimus buschianus*
159. *Helictotrichon aziaticum*
160. *Koeleria fominii*
161. *Crocus scharojanii*
162. *Erythronium caucasicum*
163. *Fritillaria latifolia*
164. *Gagea sulfurea*

Data obtained from literature (Anonymous."Flora of Georgia", v. 1-14, Tbilisi, 1971-2004; "Flora and Vegetation of Svaneti", works of Tbilisi Botanical Institute, volume XXX, Tbilisi, 1985; "Dendroflora of Caucasus", v. 1-5, 1959-1970; Ketskhoveli N., "Vegetation of Georgia", Tbilisi, 1960; Kimeridze K., "Fescue - Festuca versicolor - Meadows of Caucasus", Tbilisi, 1976;

ANNEX 3. Mammals of Upper Svaneti Protected Areas.

	Latin Name	English Name	Georgian Red List	IUCN
Forest Habitats				
1	*Talpa caucasica*	Caucasian mole		
2	*Sorex raddei*	Radde's shrew		
3	*Plecotus auritus*	Brown long eared bat		
4	*Nyctalus noctula*	Noctule bat		
5	*Nyctalus lasiopterus*	Greater noctule bat		
6	*Barbastella barbastellus*	Barbastelle bat	VU	
7	*Sciurus anomalus*	Caucasian squirrel	VU	
8	*Sciurus vulgaris*	Common squirrel		
9	*Myoxus glis*	Common dormouse		
10	*Driomys nitedula*	Forest dormouse		
11	*Terricola majori*	Ground vole		
12	*Sylvaemus mystacinus*	Minors asia forest mouse		
13	*Sylvaemus ponticus*	Caucasian mouse		
14	*Lutra lutra*	Common otter	VU	
15	*Martes foina*	Forest marten		
16	*Lynx lynx*	Lynx	CR	
17	*Capreolus capreolus*	Roe deer		
18	*Rupicapra rupicapra*	Chamois	EN	
	Cevus elaphus	Deer[9]		
Sub-alpine and alpine habitats.				
19	*Talpa levantis*	Lesser mole		
20	*Sorex satunin*	Caucasian shrew		
21	*Sicista kluchorica*	Klukhor birch mouse	VU	
22	*Prometheomys schaposchnikowi*	Prometheomys satunin	VU	
23	*Chionomys gud*	Gudauri vole		
24	*Terricola daghestanicus*	Daghestani vole		
25	*Rupicapra rupicapra*	Chamois		
26	*Capra cylindricornis*	East caucasian tur[10]	VU	
27	*Capra caucasica*	West caucasian tur[11]	EN	
Modified landscapes.				
28	*Erinaceus concolor*	East european hedgehog		
29	*Crocidura gueldenstaedti*	Shrew		
30	*Crocidura leucodonlasia*	White toothed shrew		
31	*Lepus europaeus*	European hare		
32	*Rattus rattus*	Black rat		
33	*Rattus norvegicus*	Grey rat		
34	*Mus musculus*	House mouse		
35	*Sylvaemus fulvipectus*	Caucasian forest mouse		
Habitats in all landscapes.				
36	*Sorex volnuchini*	Volnukhin's shrew		
37	*Neomys schelkovnikovi*	Caucasian water shrew		
38	*Rhinolophus hipposideros*	Lesser horseshoe bat		
39	*Rhinolophus ferrumequinum*	Greater horseshoe bat		
40	*Rhinolophus mehelii*	Mehel's horseshoe bat	VU	
41	*Rhinolophus euriale*	Southern horseshoe bat	VU	

[9] According to literature sources, it was distributed in the area, but is not observed now.
[10] There is no data on the recent presence of East Caucasian tur within Racha-Lechkhumi –Lower Svaneti National Park.
11 There is no data on the recent presence of West Caucasian tur within Racha-Lechkhumi- Lower Svaneti National Park.

42	*Myotis bechsteinii*	Long eared bat	VU	
43	*Myotis natereri*	Natterer's bat		
4	*Myotis mystacinus*	Whiskered bat		
45	*Myotis blythii*	Mouse eared bat		
46	*Eptesicus serotinus*	Serotine bat		
47	*Pipistrellus pipistrellus*,	Small brown bat		
48	*Pipistrellus nathusii*	Nathusius's bat		
49	*Miniopterus screibersii*	Common bent winged bat		
50	*Vespertilio murinus*	Common bat		
51	*Chionomys roberti*	Minor asian vole		
52	*Sylvaemus uralensis*	Lesser forest mouse		
53	*Mustela nivalis*	Weasele		
54	*Martes martes*	Rock marten		
55	*Meles meles*	Badger		
56	*Ursus arctos*	Brown bear	EN	
57	*Canis lupus*	Wolf		
58	*Vulpes vulpes*	Fox		
59	*Felis silvestris*	Wild cat		

Data from literature (Avaliani R., 1969a, Data on the Study of High Mountainous Mammals of Western Georgia (Tsagheri district) // The Herald of Georgia State Museum, volumes XXII-XXIII, pages 222-232; Bukhnikashvili, 2004, Data on Small Mammal (Insectivora, Chiroptera, Lagomorpha, Rodentia) Cadastre of Georgia // "Universal" Press, Tbilisi, page 144; Janashvili G., 1963, The Wildlife of Georgia. Vertabrates // The Collection of the Institute of Zoology, the Academy of Science of Georgia, Tbilisi, Volume III, page 460***) and field survey.***

ANNEX 4.

Birds of Upper Svaneti Protected Areas.

	Latin Name	English Name	Georgian Red List	Forest Habitats	Gorges, Rocks and culture Landscape	Sub-Alpine and Alpine Zone	River and Lake Shores	All Zones
	Podicipediformes	**Grebes**						
1	*Podiceps grisegena*	Red necked grebe	VU				+	
2	*Podiceps nigricollis*	Black necked grebe					+	
3	*Podiceps ruficollis*	Lesser grebe					+	
	Ciconiiformes	**Herons**						
4	*Ardea cinerea*	Grey heron					+	
5	*Egretta garzetta*	Lesser white heron					+	
6	*Nycticorax nycticorax*	Night heron					+	
7	*Ixobrychus minutus*	Little bittern					+	
8	*Botaurus stellaris*	Great bittern					+	
9	**Anseriformes**	**Goose**						
10	*Anas platyrhynchos*	Wild duck					+	
11	*Anas penelope*	Eurasian wigeon					+	
	Falconiformes	**Falcons**						
12	*Milvus migrans*	Black kite						+
13	*Accipiter nisus*	Eurasian sparrowhawk		+				
14	*Accipiter gentilis*	Northern goshawk		+				
15	*Buteo buteo*	Common buzzard		+				
16	*Buteo rufinus*	Long legged buzzard	VU					
17	*Aquila chrysaetos*	Golden eagle	VU			+		
18	*Circaetus gallicus*	Short toed snake eagle						
19	*Aquila pomarina*	Lesser spotted eagle		+				
20	*Pernis apivorus*	European honey buzzard						
21	*Hieraaetus pennantus*	Booted eagle		+				
22	*Neophron percnopterus*	Egyptian vulture	VU			+		
23	*Gypaetus barbatus*	Bearded vulture	VU			+		
24	*Gyps fulvus*	Eurasian griffon vulture	VU					
25	*Falco peregrinus*	Falcon		+				
26	*Falco subbuteo*	Eurasian hobby		+				
27	*Falco tinnunculus*	Common kestrel						+
	Galliformes	**Galliformes**						
29	*Tetrao mlokosiewiczi*	Caucasian grouse	VU			+		
30	*Tetraogallus caucasicus*	Caucasian snowcock				+		
31	*Coturnix coturnix*	Quail						
	Gruiformes	**Cranes**						
32	*Rallus aquaticus*	Water rail		+				
33	*Porzana parva*	Little crake		+				
34	*Crex crex*	Corncrake		+ 1)				
35	*Gallinula chloropus*	Common moorhen		+ 2)				
36	*Fulica atra*	Coot						

	Charadriiformes	**Charadriiformes**						
37	*Haematopus ostralegus*	Oystercatcher					+	
38	*Charadrius dubius*	Little rigned plover					+	
39	*Tringa ochropus*	Green sandpiper					+	
40	*Actitis hypoleucos*	Common sandpiper					+	
	Columbiformes	**Pigions**						
41	*Columba livia*	Wild pigeon			+			
42	*Columba oenas*	Stock dove		+				
43	*Columba palumbus*	Common woodpigeon		+				
44	*Streptopelia turtur*	Turtle dove		+				
	Cuculiformes	**Cuckoos**						
45	*Cuculus canorus*	Cuckoo		+				
	Strigiformes	**Owls**						
46	*Bubo bubo*	Eagle owl		+				
47	*Asio otus*	Long eared owl		+				
48	*Otus scops*	Scops owl		+				
49	*Aegolius funereus*	Boreal owl	VU	+				
50	*Strix aluco*	Eurasian tawny owl		+				
51	*Athene noctua*	Little owl			+			
	Caprimulgiformes	**Nightjars**						
52	*Caprimulgus europaeus*	Nightjar		+				
	Apodiformes	**Apodiformes**						
53	*Apus apus*	Water pipit			+			
54	*Apus melba*	Alpine swift			+			
	Coraciiformes	**Kingfishers**						
55	*Merops apiaster*	Golden bee eater			+			
56	*Alcedo atthis*	Kingfisher					+	
57	*Upupa epops*	Hoopoe			+			
	Piciformes	**Woodpeckers**						
58	*Dryocopus martius*	Black woodpecker		+				
59	*Picus viridis*	Green woodpecker		+ 3)				
60	*Dendrocopos syriacus*	Syrian woodpecker		+				
61	*Dendrocopos major*	Great spotted woodpecker		+				
62	*Dendrocopos medius*	Medium spotted woodpecker		+				
63	*Dendrocopos leucotos*	White backed woodpecker		+				
64	*Dendrocopos minor*	Lesser spotted woodpecker		+				
65	*Jynx torquilla*	Eurasian wryneck		+ 4)				
	Passeriformes	**Sparrows**						
66	*Eremophila alpestris*	Shore lark				+		
67	*Lullula arborea*	Woodlark			+ 5)			
68	*Alauda arvensis*	Skylark			+ 4) and 5)			
69	*Hirundo rustica*	Swallow			+ 5)			
70	*Ptyonoprogne rupestris*	Eurasian crag martin			+			
71	*Riparia riparia*	Bank swallow					+	
72	*Delichon urbica*	House martin			+			
73	*Anthus trivialis*	Tree pipit		+				
74	*Anthus spinoletta*	Water pipit				+		

75	*Anthus campestris*	Tawny pipit		+				
76	*Motacilla alba*	White wagtail					+	
77	*Motacilla cinerea*	Grey wagtail					+	
78	*Motacilla flava*	Yellow wagtail					+	
79	*Lanius collurio*	Red backed shrike						+
80	*Prunella modularis*	Dunnock		+				
81	*Prunella collaris*	Alpine accentor				+		
82	*Locustella naevia*	Grasshopper warbler		+				
83	*Acrocephalus scirpaceus*	Euarsian reed warbler					+	
84	*Acrocephalus palustris*	Marsh warbler					+	
85	*Acrocephalus arundinaceus*	Great reed warbler					+	
86	*Acrocephalus melanopogon*	Moustached warbler					+	
87	*Acrocephalus schoenobenus*	Sedge warbler				+		
88	*Sylvia communis*	Whitethroat		+ 5)	+			
89	*Sylvia curruca*	Lesser whitethroat		+ 5)				
90	*Sylvia borin*	Garden warbler			+			
91	*Sylvia nisoria*	Barred warbler						+
92	*Sylvia atricapilla*	Blackcap						
93	*Sylvia hortensis*	Orphean warbler		+				+
94	*Phylloscopus trochilus*	Willow warbler		+				
95	*Phylloscopus collybita*	Chiffchaff		+				
96	*Phylloscopus lorenzii*	Caucasian chiffchaff		+				
97	*Phylloscopus sibilatrix*	Wood warbler						
98	*Phylloscopus nitidus*	Greenish warbler		+ 6)				
99	*Regulus regulus*	Goldcrest		+				
100	*Muscicapa striata*	Spotted plycatcher						+
101	*Ficedula parva*	Red breasted plycatcher		+				
102	*Ficedula semitorquata*	Semi collared plycatcher		+				
103	*Saxicola rubetra*	Whinchat						+
104	*Saxicola torguata*	Pied bushchat						+
105	*Oenanthe oenanthe*	Wheatear						+
106	*Oenanthe hispanica*	Black eared wheatear				+		
107	*Phoenicurus ochruros*	Black redstart						+
108	*Phoenicurus phoenicurus*	Common redstart		+				
109	*Phoenicurus erythrogaster*	White winged redstart	VU			+		
110	*Erithacus rubecula*	Robin		+				
111	*Luscinia megarhynchos*	Nightingale		+				
112	*Turdus merula*	Blackbird						+
113	*Turdus torquatus*	Ring ouzel				+		
114	*Turdus philomelos*	Song thrush		+				
115	*Turdus viscivorus*	Mistle thrush		+				
116	*Panurus biarmicus*	Bearded tit					+	
117	*Aegithalos caudatus*	Long tailed tit		+				
118	*Remiz pendulinus*	European penduline tit					+	
119	*Parus ater*	Coal tit		+				
120	*Parus major*	Great tit		+				
121	*Parus caeruleus*	Blue Ttt		+				
122	*Sitta neumayer*	Rock nuthatch			+			
123	*Sitta krueperi*	Krueper's nuthatch		+				

124	*Sitta europaea*	Eurasian nuthatch		+				
125	*Tichodroma muraria*	Wallcreeper						+
126	*Certhia familiaris*	Brown creeper		+				
127	*Troglodytes troglodytes*	Wren						+
128	*Cinclus cinclus*	Dipper					+	
129	*Emberiza cia*	Rock bunting					+	+
130	*Emberiza schoeniclus*	Reed bunting						
131	*Fringilla coelebs*	Chaffinch		+				
132	*Carduelis carduelis*	Goldfinch						+
133	*Carduelis spinus*	Siskin		+				
134	*Carduelis chloris*	Greenfinch		+				
135	*Carduelis flavirostris*	Twite				+		
136	*Carduelis cannabina*	Linnet			+			
137	*Pyrrhula pyrrhula*	Bullfinch		+				
138	*Coccothraustes coccothraustes*	Hawfinch		+				
139	*Serinus pusillus*	Red fronted serin				+		
140	*Carpodacus erythrinus*	Rosefinch		+				
141	*Carpodacus rubicilla*	Great rosefinch	VU			+		
142	*Loxia curvirostra*	Common crossbill		+				
143	*Passer domesticus*	House sparrow						+
144	*Montifringilla nivalis*	Snowfinch				+		
145	*Sturnus vulgaris*	European starling						+
146	*Oriolus oriolus*	Golden oriole		+				
147	*Garrulus glandarius*	Jay						+
148	*Pica pica*	Magpie						+
149	*Pyrrhocorax pyrrhocorax*	Chough				+		
150	*Pyrrhocorax graculus*	Alpine chough				+		
151	*Corvus corax*	Raven						+
152	*Corvus corone cornix*	Hooded crow						+

1) Meadows in forest zone
2) Forest, reedbed, water)
3) Deciduous forests
4) Thin forests
5) culture landscape
6) Gorges
7) Above 1400 m, lower in winter

Data obtained from literature (Jordania R., Boeme R., Kuznetsov A. Birds of Georgia, Tbilisi, 1999).

ANNEX 5. Historic cultural monuments.

A: Mestia Ushguli Temi.

№		ZONE AND VILLAGE	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURES	NEW REGISTRATION CARD	REMARK
District	Historical zone	**1.Chajhashi**								
488	1	Village Chajhashi	Town-planning	WHM	Middle ages					
489	2	Saviour's Church – Matskhvar – Matskhovari	cult	republic	X-XI c.c.					
490	3	Church "Lashk-Duir" – Anvil and Lower Fortress	Cult-defensive	republic	Developed Middle Ages					
491	4	"Tamar's / Upper Fortress"- "Lenkveri"	defensive	republic	Late Middle Ages					
492	5	Ghuta Nijharadze' / Three Inhabitants' (Sami Mosakhle)Housing Complex	Civil-defensive	republic	Late Middle Ages					
493	6	Nikoloz / Kote and Davit Davituliani's II towers. State propperty	defensive	republic	Late Middle Ages					
494	7	Zurab / Kote Nijharadze's tower and Machubi	defensive	republic	Late Middle Ages					
495	8	Zurab / Kote Nijharadze's II towers. Complex	Civil-defensive	republic	Late Middle Ages					
496	9	Zurab / Semlar Nijharadze's II chamber-Machubs	civil	local	Late Middle Ages					
497	10	Konstantine Nijharadze's I tower	defensive	local	Late Middle Ages					
498	11	Dami / Konstantine Nijharadze's chamber-Machubi	civil	local	Late Middle Ages					
499	12	Sograt / Merab Nijharadze's chamber-Machubi	civil	local	Late Middle Ages					
500	13	Rafiel / Iaroslav II Nijharadze's chamber-Machubi	civil	local	Late Middle Ages XX c.					
501	14	Efrem / Epi Nijharadze's housing complex	Civil-defensive	republic	Late Middle Ages					
502	15	Sardion / Kote Nijharadze's chamber-Machubi	civil	local	Late Middle Ages					
503	16	Sardion / Iaroslav I Nijharadze's chamber-Machubi	civil	local	XX c.					
504	17	Jhora Nijharadze's chamber-Machubi	civil	local	Late Middle Ages					
505	18	Jhora NIjharadze's Machubi	civil	local	Late Middle Ages					

506	19	Selmar Nijharadze's I tower-Machubi and Bagi	civil	local	Late Middle Ages					
507	20	Epi Nijharadze's Machubi / Bagi	civil	local	Late Middle Ages					
508	21	Merab Nijharadze's chamber-Machubi	civil	local	Late Middle Ages					
509	22	Merab / Ghuta Nijharadze's chamber-Machubi	civil	local	Late Middle Ages					
510	23	Merab / Epi Nijharadze's tower	defensive	local	Late Middle Ages					
511	24	Ruta niJaraZis I darbaz-maCubi	civil	local	e Ages					
512	25	Ghuta Nijharadze's chamber-Machubi	civil	local						
513	26	Ghuta Nijharadze's Machubi	civil	local	Middle Ages					
514	27	Remnants of tower – "Tskhrakvsharesh"	defensive	republic	Middle Ages					
515	28	Ilia Nijharadze's / Levan Mushkudiani's ? fortress-house	defensive	republic	Late Middle Ages					
516	29	Ilia / Elward Nijharadze's tower	defensive	republic	Late Middle Ages					
517	30	Alexandre Nijharadze's house	civil		XX c.					
518	31	Tariel Nijharadze's housing complex	Civil-defensive		Middle Ages					
519	32	Tebrole Ratiani's / Nijharadze's Machubi	civil		Middle Ages					
520	33	Kali and Datiko / Muram Nijharadze's housing complex	Civil-defensive		Developed Middle Ages					
521	34	Leongi Nijharadze's fortress-house / property of the museum	Civil-defensive		Middle Ages					
522	35	House / the property of the museum	civil		XX c.					
523	36	Davit Davituliani's Complex / state property	Civil-defensive		Developed Middle Ages XX c.					
524	37	Jhora Nijharadze's house	civil		XX c.					
525	38	Nikoloz Davitualiani's I tower / Jhora Nijharadze's tower	defensive		Developed Middle Ages					
526	39	Merab Nijharadze's house	civil		XX c.					
527	40	Ilo and Konstantine / Spiridon Nijharadze's Machubi and house	civil		Developed Middle Ages XX c.					
528	41	Tea Nijharadze's house	civil		XX c.					
529	42	Murman Nijharadze's Bagi	civil		Middle Ages					

District	Historical zone	**Village Jhibiani.**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURES	NEW REGISTRATI	REMARK
530	1	Village Jhibiani	Town-supporting		Middle Ages.					
531	2	Church Lamaria – Virgin Mary's complex – "Ghvtismshobeli"	Cult-defensive	state	X-XI c.c.					
532	3	Church – "Jgrag" – St. George, pagan cult area "Vitini"	cult	state	ganviT. S.s.					
533	4	Erasti Ratiani's chamber-Machubi	civil	local	Middle Ages					
534	5	Varden Ratiani's I chamber-Machubi and remnants of tower	Civil-defensive	local	Middle Ages					
535	6	Varden Ratiani's II chamber-Machubi	civil	local	Middle Ages					
536	7	Varden Ratiani's tower	defensive	state	Middle Ages					
537	8	Mate Ratiani's complex	Civil-defensive	state	Middle Ages					
538	9	Odishar Ratiani's complex	Civil-defensive	state	Middle Ages					
539	10	Domenti Nijharadze's complex	Civil-defensive	state	Middle Ages					
540	11	Abram Nijharadze's chamber-Machubi	civil	local	Middle Ages					
541	12	Guram Nijharadze's complex	Civil-defensive	state	Middle Ages					
542	13	Mose Nijharadze's chamber-Machubi	civil	local	Middle Ages					
543	14	Onisime Nijharadze's complex	Civil-defensive	state	Middle Ages					
544	15	Semlar Nijharadze's chamber-Machubi	civil	local	Middle Ages					
545	16	Shura Nijharadze's complex	Civil-defensive	state	Middle Ages					
546	17	Davit Khachvani's complex	Civil-defensive	republic	Middle Ages					
547	18	Davit Khachvani's chamber-Machubi	civil	local	Middle Ages					
548	19	Jemal Khachvani's complex	Civil-defensive	state	Middle Ages					
549	20	Jemal Khachvani's I chamber-Machubi	civil	local	Middle Ages					
550	21	Jemal Khachvani's II chamber-Machubi	civil	local	Middle Ages					
551	22	Mahmed Khachvani's chamber-Machubi	civil	local	Middle Ages					
552	23	Murtaz Khachvani's chamber-Machubi	civil	local	Middle Ages					
553	24	Pimen Chelidze's complex	Civil-defensive	state	Middle Ages					
554	25	Erasti Khvistani's complex	Civil-defensive	state	Middle Ages					
555	26	Onisime Charkseliani's I chamber-Machubi	civil	local	Middle Ages					
556	27	Onisime Charkseliani's II chamber-Machubi	civil	state	Middle Ages					
557	28	Omar Charkseliani's chamber-Machubi	civil	local	Middle Ages					
558	29	Church "Fusdi" – "Uflisa" (Lord's Church)	cult	state	Middle Ages					

District	Historical zone	**Village Murkmeli.**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURES	NEW REGISTRATION CARD	REMARK
559	1	village Murkmeli	Town-supporting		Middle Ages					
560	2	Church “Barbal” – St. Barbara	cult	state	X c.					
561	3	Church “Matskhvar” – Christ’s church	cult	state	XI c.					
562	4	Arsen Ghvachliani’s chamber-Machubi	civil	state	Middle Ages					
563	5	Ermile Ghvacliani’s chamber-Machubi	civil	local	Middle Ages					
564	6	Varden Ghvachliani’s complex	Civil-defensive	state	Middle Ages					
565	7	Kako Ghvachliani’s complex	Civil-defensive	state	Middle Ages					
566	8	Seit Ghvachliani’s chamber-Machubi	civil	state	Middle Ages					
567	9	Davit Ghvachliani’s chamber-Machubi	civil	local	Middle Ages					
568	10	Boris Ghvachliani’s chamber-Machubi	civil	local	Middle Ages					
569	11	Bejhan Ghvachliani’s complex	Civil-defensive	state	Middle Ages					
570	12	Simon Ghvachliani’s and Misha Chelidze’s chamber-Machubi	civil	local	Middle Ages					
571	13	Vakhtang Chelidze’s tower	defensive	state	Middle Ages					
572	14	Vakhtan Chelidze’s chamber-Machubi	civil	state	Middle Ages					
573	15	Bilar Chelidze’s chamber-Machubi	civil	local	Middle Ages					
574	16	Artem Chelidze’s chamber-Machubi	civil	local	Middle Ages					
575	17	Aron Chelidze’s complex	Civil-defensive	state	Middle Ages					
576	18	Bajo Chelidze’s remnants of tower	defensive	local	Middle Ages					
577	19	Romanoz Charkseliani’s chamber-Machubi	civil	local	Middle Ages					
578	20	Bikenti Charkseliani’s chamber-Machubi	Civil-defensive	state	Middle Ages					
579	21	Filimon Charkseliani’s chamber-Machubi	civil	local	Middle Ages					
580	22	Kako Charkseliani’s chamber-Machubi	civil	local	Middle Ages					
581	23	Kosta Charkseliani’s I chamber-Machubi	civil	local	Middle Ages					
582	24	Kosta Charkseliani’s I chamber-Machubi	civil	local	Middle Ages					
583	25	Eva Charkseliani’s chamber-Machubi	civil	local	Middle Ages					
584	26	Eva Charkseliani’s Machi	civil	local	Middle Ages					
585	27	Salaref Charkseliani’s chamber-Machubi	civil	local	Middle Ages					
586	28	Rezo Gvarliani’s chamber-Machubi	civil	local	Middle Ages					
587	29	Giorgi Charkseliani’s complex	Civil-defensive	state	Middle Ages					
588	30	Chichiko Charkseliani’s chamber-Machubi	civil	local	Middle Ages					
589	31	Misha Kakriashvili’s chamber-Machubi	civil	local	Middle Ages					
590	32	Mariam Charkseliani’s chamber-Machubi and remnants of tower	Civil-defensive	local	Middle Ages					
591	33	Baju Kakriashvili’s chamber-Machubi	civil	local	Middle Ages					
592	34	Baju Kakriashvili’s complex	Civil-defensive	state	Middle Ages					
593	35	Voldimar Kakriashvili’s complex	Civil-defensive	state	Middle Ages					

594	36	Davit Kakriashvili's chamber-Machubi	civil	local	Middle Ages					
595	37	Maksime Kakriashvili's chamber-Machubi	civil	state	Middle Ages					
596	38	Germane Kakriashvili's chamber-Machubi	civil	local	Middle Ages					
597	39	Jhora Kakriashvili's chamber-Machubi	civil	local	Middle Ages					
598	40	Tariel (Grisha) Charkseliani's I tower	defensive	state	Middle Ages					
599	41	Tariel (Grisha) Charkseliani's II tower and chamber-Machubi	Civil-defensive	state	Middle Ages					

District	Historical zone	**Village Chvibiani**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURES	NEW REGISTRATION CARD	REMARK
600	1	Village Chvibiani	Town-planning		Middle Ages					
601	2	Tevdore Chelidze's complex	civil	state	Middle Ages					
602	3	Tavde Nijharadze's chamber-Machubi	civil	local	Middle Ages					
603	4	Giorgi Nijharadze's chamber-Machubi	civil	local	Middle Ages					
604	5	Ivane Charkviani's house, so called "Bapre-Kor" (monks' house)	civil	state	Middle Ages					
605	6	Baju Charkviani's complex	Civil-defensive	state	Middle Ages					
606	7	Klimeneti and Mushni Charkviani's chamber-Machubi	civil	local	Middle Ages					
607	8	Ivane Charkviani's chamber-Machubi	civil	local	Middle Ages					
608	9	Kukuri Charkviani's chamber-Machubi	civil	local	Middle Ages					
609	10	Fido Charkviani's chamber-Machubi	civil	local	Middle Ages					
610	11	Ivane Charkseliani's chamber-Machubi	civil	local	Middle Ages					
611	12	Boris Charkseliani's chamber-Machubi	civil	local	Middle Ages					
612	13	Ilia Charkseliani's chamber-Machubi	civil	local	Middle Ages					
613	14	Germane Kakriashvili's chamber-Machubi	civil	state	Middle Ages					
614	15	Church "Khosha-Fusdi" ("Lord")	cult	state	Middle Ages					

B: Mestia Mulakhi Temi.

District	Historical zone	**Village Zardlashi**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURES	NEW REGISTRATION CARD	REMARK
1	1	Church “St. Barbale”	cult	state	Late Middle Ages					
2	2	Church “Archangel”	cult	state	Late Middle Ages					
3	3	Valo Dadvani’s complex	Civil-defensive	state	Middle Ages					
4	4	Changaz Dadvani’s tower	defensive	state	Middle Ages					
5	5	Changaz Dadvani’s chamber-Machubi	civil	local	Late Middle Ages					
6	6	Otar Gabliani’s complex	Civil-defensive	state	Middle Ages					
7	7	Boris Margiani’s chamber-Machubi	civil	local	Late Middle Ages					
8	8	Archil Gabliani’s chamber-Machubi	civil	local	Middle Ages					
9	9	Zurab Margiani’s chamber-Machubi	civil	local	Late Middle Ages					
10	10	Baju Gabliani’s chamber-Machubi	civil	local	Middle Ages					
11	11	Village Zardlashi	Town-planning		Middle Ages					

District	Historical zone	**Village Murshkeli**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURES	NEW REGISTRATION CARD	REMARK
12	1	Sasti Kurdiani’s chamber-Machubi	civil	local	Developed Middle Ages					
13	2	Giorgi Kurdiani’s tower	defensive	state	Middle Ages					
14	3	Bulu Kurdiani’s tower	defensive	state	Middle Ages					
15	4	Valeri Kurdiani’s tower	defensive	state	Middle Ages					
16	5	Davit Kurdiani’s tower	defensive	state	Middle Ages					
17	6	Kako Kurdiani’s tower	defensive	state	Middle Ages					
18	7	Church “St. George”	cult	local	Late Middle Ages					
19	8	Church “St. Georgi” - Jgrag	cult	local	XIX-XX c.c.					
20	9	Village Murshkeli	Town-planning		Middle Ages					

District	Historical zone	**Village Ghvebra**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION	MEASURES	NEW REGISTRA	REMARK
21	1	Church “St. George”	cult	local	1982					
22	2	Bato Margiani’s complex	Civil-defensive	state	Middle Ages					
23	3	German Tsifiani’s tower	defensive	state	Middle Ages					
24	4	Village Ghvebra	Town-planning		Middle Ages					

District	Historical zone	**Village Lakhiri**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURES	NEW REGISTRATI	REMARK
25	1	Edison Zurabiani’s tower	defensive	state	Middle Ages					
26	2	Pasiko Zurabiani’s complex	Civil-defensive	state	Middle Ages					
27	3	Ivane Margiani’s tower	defensive	state	Middle Ages					
28	4	Orshang Margiani’s tower	defensive	state	Middle Ages					
29	5	Gobrom Margiani’s chamber-Machubi	civil	local	Middle Ages					
30	6	Church “John the Annunciator”	cult	state	Developed Middle Ages					
31	7	Church “Archangel”	cult	local	Middle Ages					
32	8	Church “Matskovari”	cult	state	Late Middle Ages					
33	9	Butuli Ioseliani’s tower	defensive	local	Middle Ages					
34	10	Church “Archangel Gabriel”	cult	state	Middle Ages					
35	11	Emzar Gvidiani’s chamber-Machubi	civil	local	Middle Ages					
36	12	Mashiko Ioseliani’s chamber-Machubi	civil	local	Late Middle Ages					
37	13	Grisha Ioseliani’s complex	Civil-defensive	state	Middle Ages					
38	14	Gela Zurabiani’s complex	Civil-defensive	state	Middle Ages					
39	15	Jano Ioseliani’s tower	defensive	state	Middle Ages					
40	16	Lazare Gvidani’s tower	defensive	state	Middle Ages					
41	17	Amiran Gvidani’s complex	Civil-defensive	state	Middle Ages					
42	18	Serjhik Jhorjholiani’s I complex	Civil-defensive	state	Middle Ages					
43	19	Serjhik Jhorjholiani’s II complex	Civil-defensive	state	Middle Ages					
44	20	Agtion Ioseliani’s tower	defensive	local	Middle Ages					
45	21	Kemlat Ioseliani’s tower	defensive	state	Middle Ages					
46	22	Emzar Gvidani’s tower	defensive	state	Middle Ages					
47	23	Alexandre Gvidani’s tower	defensive	state	Middle Ages					
48	24	Levan Ioseliani’s chamber-Machubi	civil	local	Late Middle Ages					

49	25	Aresti Gvidani's chamber-Machubi	civil	local	Middle Ages					
50	26	Zaur Margiani's comlpex	Civil-defensive	state	Middle Ages					
51	27	Village Lakhiri	Town-planning		Middle Ages					
52	28	Church "St. John the Divine"	cult	local	1894					
53	29	Church "St. Barbare"	cult		Middle Ages					

District	Historical zone	**Village Cholashi**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURES	NEW REGISTRATI	REMARK
54	1	Kviti Devdariani's complex	Civil-defensive	state	Middle Ages					
55	2	Shamshe Dadvani's chamber-Machubi	civil	local	XX c.					
56	3	Onisime Gujejiani's chamber-Machubi	civil	local	Late Middle Ages					
57	4	Ramzi Devdariani's chamber-Machubi	civil	local	Middle Ages					
58	5	Gelakhsan Devdariani's chamber-Machubi	Civil-defensive	state	Middle Ages					
59	6	Tatash Jachvliani's complex	Civil-defensive	state	Middle Ages					
60	7	Tsiok's and Sozar's tower	defensive	state	Middle Ages					
61	8	Gela Jhorjholiani's complex	Civil-defensive	state	Middle Ages					
62	9	Givi Gujejiani's complex	Civil-defensive	state	Middle Ages					
63	10	Vasha Shervashidze's tower	defensive	state	Middle Ages					
64	11	Murman Kochkiani's tower	defensive	state	Middle Ages					
65	12	Misdon Gujejiani's complex	Civil-defensive	state	Middle Ages					
66	13	Jaja Kochkiani's complex	Civil-defensive	state	Middle Ages					
67	14	Vati Gujejiani's tower	defensive	state	Middle Ages					
68	15	Giorgi Kochkiani's complex	Civil-defensive	state	Middle Ages					
69	16	Dato Gujejiani's chamber-Machubi	civil	state	Middle Ages					
70	17	Rafiel Gujejiani's chamber-Machubi	civil	local	Late Middle Ages					
71	18	Tariel Gujejiani's chamber-Machubi	civil	local	Late Middle Ages					
72	19	Lavrenti Jachvliani's chamber-Machubi	civil	local	Middle Ages					
73	20	Church "St. George"	cult	local	XIX-XXc.c.					
74	21	Church "Jgrag" – "St. George"	cult	local	Late Middle Ages					
75	22	Church "Barbal" – "St. Barbare"	cult	local	Middle Ages					
76	23	Village Cholashi	Town-planning		Middle Ages					
77	24	Pravdi Jachvliani's Machubi	civil		Middle Ages					

District	Historical zone	**Village Jhamushi**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURES	NEW REGISTRATI	REMARK
78	1	Giorgi Naveriani's chamber-Machubi	civil	local	Middle Ages					
79	2	Shaliko Naveriani's tower	defensive	state	Middle Ages					
80	3	Valeri Naveriani's chamber-Machubi	civil	local	Middle Ages					
81	4	Khvantqar Naveriani's chamber-Machubi	civil	local	Middle Ages					
82	5	Kotsia Naveriani's chamber-Machubi	civil	local	Middle Ages					
83	6	Lado Naveriani's chamber-Machubi	civil	local	Middle Ages					
84	7	Giorgi Naveriani's tower	defensive	state	Middle Ages					
85	8	Platon Naveriani's complex	Civil-defensive	state	Middle Ages					
86	9	Lado Naveriani's tower	defensive	state	Middle Ages					
87	10	Ardevan Naveriani's complex	Civil-defensive	state	Middle Ages					
88	11	Biqtor Kaldani's complex	Civil-defensive	state	Middle Ages					
89	12	Rajhden Kaldani's complex	Civil-defensive	state	Middle Ages					
90	13	Church "Saviour" ("Matskhovari")	cult	state	XI c.					
91	14	Church "St. George" – "Jgrag"	cult	state	Late Middle Ages					
92	15	Remnants of Machubi	civil	local	Middle Ages					
93	16	Village Jhamushi	Town-planning		Middle Ages					

District	Historical zone	**Village Artskheli**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURES	NEW REGISTRATI	REMARK
94	1	Kote Jhorjholiani's complex	Civil-defensive	state	Middle Ages					
95	2	Church "St. George"	cult	local	Late Middle Ages					
96	3	Goji Jhorjholiani's tower	defensive	state	Middle Ages					
97	4	Village Artskheli	Town-planning		Middle Ages					

District	Historical zone	**Village Majvdieri**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURES	NEW REGISTRATION CARD	REMARK
98	1	Tito Shervashidze's chamber-Machubi	civil	state	Late Middle Ages					
99	2	Zurab Shervashidze's Machubi	civil	local	Late Middle Ages					
100	3	Mushni Shervashidze's Machubi	civil	state	Late Middle Ages					
101	4	Vardo Shervashidze's chamber-Machubi	civil	state	Late Middle Ages					

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District	Historical zone	Village **Chvabiani**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURES	NEW REGISTRATION CARD	REMARK
102	1	Church "Saviour"	cult	state	X c.					
103	2	Omar Margiani's complex	Civil-defensive	state	Middle Ages					
104	3	Baju Chekhani's complex	Civil-defensive	state	Middle Ages					
105	4	Levter Gujejiani's chamber-Machubi	civil	local	Late Middle Ages					
106	5	Guriel Gulbani's chamber-Machubi	civil	local	Late Middle Ages					
107	6	Rezo Chekhanis's chamber-Machubi	civil	local	Late Middle Ages					
108	7	Amiran Kaldani's chamber-Machubi	civil	local	Late Middle Ages					
109	8	Mushni Gulbani's complex	Civil-defensive	local	Middle Ages					
110	9	Shaliko Gigani's complex	Civil-defensive	state	Middle Ages					
111	10	Bukhuti Gigani's complex	Civil-defensive	state	Middle Ages					
112	11	Elguja Margiani's chamber-Machubi	civil	local	Late Middle Ages					
113	12	Avto Gigani's complex	Civil-defensive	state	Middle Ages					
114	13	Jokola Gujejiani's complex	Civil-defensive	state	Middle Ages					
115	14	Datiko Gujejiani's complex	Civil-defensive	state	Middle Ages					
116	15	Church "St. George"	cult	local	Late Middle Ages					
117	16	Church "Archangel Michael" – Gugani family	cult	state	XI c.					

118	17	Village Chvabiani	Town-planning		Middle Ages					
119	18	Irodi Gigani's complex	Civil-defensive		Middle Ages					
120	19	Sevasti Gigani's Machubi	civil		Middle Ages					
121	20	Gigani tower	defensive		Middle Ages					
122	21	Semlar Gigani's complex	Civil-defensive		Middle Ages					
123	22	Gia Margiani's chamber-Machubi	civil		Middle Ages					
124	23	Valeri Gigani's complex	Civil-defensive		Middle Ages					
125	24	Murman Margiani's Machubi	civil		Middle Ages					
126	25	Masho Gigani's complex	Civil-defensive		Middle Ages					
127	26	Lalo Gigani's complex	Civil-defensive		Middle Ages					
128	27	Temur Gigani's complex	Civil-defensive		Middle Ages					

District	Historical zone	**VillageTsaldashi**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURES	NEW REGISTRATION CARD	REMARK
129	1	Givi Zurabiani's complex	Civil-defensive	state	Middle Ages					
130	2	Gogi Naveriani's Complex	Civil-defensive	state	Middle Ages					
131	3	Suleiman Zurabiani's chamber-Machubi	civil	local	Late Middle Ages					
132	4	Seve Naveriani's chamber-Machubi	civil	local	Late Middle Ages					
133	5	Fridon Zurabiani's chamber-Machubi	civil	state	Middle Ages					
134	6	Kolia Zurabiani's chamber-Machubi	civil	local	Late Middle Ages					
135	7	Church "St. George"	cult	state	Developed Middle Ages					
136	8	Church "Saviour" – "Christ's"	cult	state	XII s.					
137	9	Village Tsaldashi	Town-planning		Middle Ages					
138	10	Fortress-house	Civil-defensive	state	X-XI c.c.					
139	11	Tower at river	defensive	state	Middle Ages					

District	Historical zone	**Village Jhabeshi**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURES	NEW REGISTRATION CARD	REMARK
140	1	Church "Saviour"	cult	state	X-XI c.c.					
141	2	Church Lamaria	cult	state	Developed Middle Ages					
142	3	Sofrom Gujejiani's complex	Civil-defensive	state	Middle Ages					
143	4	Tengiz Gujejiani's tower	defensive	state	Middle Ages					

144	5	Davit Gujejiani's chamber-Machubi	civil	local	Middle Ages					
145	6	Rafiel Naveriani's tower	defensive	state	Middle Ages					
146	7	Jumber Kakhiani's complex	Civil-defensive	state	Middle Ages					
147	8	Ambre Kakhiani's chamber-Machubi	civil	local	Middle Ages					
148	9	Nodar Kakhiani's chamber-Machubi	civil	local	Middle Ages					
149	10	Estate Kakhiani's chamber-Machubi	civil	local	Late Middle Ages					
150	11	Avtandil Kichkani's complex	Civil-defensive	state	Middle Ages					
151	12	Radion Naveriani's complex	Civil-defensive	state	Middle Ages					
152	13	Alexandre Jafaridze's tower	defensive	state	Middle Ages					
153	14	abo Abo Zurebiani's tower	defensive	state	Middle Ages					
154	15	Bondo Zurebiani's chamber-Machubi	civil	local	Late Middle Ages					
155	16	Avghan Naveriani's chamber-Machubi	civil	local	Late Middle Ages					
156	17	Jhora Kakhiani's chamber-Machubi	civil	local	Late Middle Ages					
157	18	Mushni Kakhiani's chamber-Machubi	civil	local	Late Middle Ages					
158	19	Church "Archangel"	cult	state	Developed Middle Ages					
159	20	Village Jhabeshi	Town-planning		Middle Ages					
160	21	Ratiani Guarding Tower	defensive							

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District	Historical zone	**Village Nashtkoli**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURES	NEW REGISTRATION CARD	REMARK
161	1	Dadeshkeliani fortress-chamber, "Namurkvam"	Civil-defensive	state	Middle Ages					
162	2	Kola (Aslamaz) Tsindeliani's two towers	defensive	state	Middle Ages					
163	3	Kola (Aslamaz) Tsindeliani's complex	Civil-defensive	state	Middle Ages					
164	4	Chunka Ivechiani's chamber-Machubi	civil	local	Middle Ages					
165	5	Kishvardi Tserediani's tower	defensive	state	Middle Ages					
166	6	Church Lamaria	cult	local	Middle Ages					
167	7	Vaso Tsindeliani's complex	Civil-defensive	state	Middle Ages					
168	8	Village Nashtkoli	Town-planning		Middle Ages					

District	Historical zone	V**illage Ushkhvanari**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURES	NEW REGISTRATION CARD	REMARK
169	1	Remnants of church "Tsifi"	cult	adgilobrivi	Middle Ages					
170	2	Vakhtang Shamfriani's chamber-Machubi	civil	state	Middle Ages					
171	3	Church Lamaria	cult	local	XIX c.					
172	4	Church "Nanktsaril"	cult	local	Middle Ages					
173	5	Ivane Kvitsiani's chamber-Machubi	civil	state	Middle Ages					
174	6	Grigol Kvitsiani's tower	defensive	state	Middle Ages					

District	Historical zone	Village **Tchokhuldi**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURES	NEW REGISTRATION CARD	REMARK
175	1	Church "Matskhvar" – "Saviour"	cult	state	X-XI c.c.					
176	2	Kvitsiani tower	defensive	state	Middle Ages					
177	3	Remnants of tower	defensive	local	Middle Ages					

District	Historical zone	Remnants of village **Zeda (Upper) Guli**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURES	NEW REGISTRATION CARD	REMARK
178	1	Church “St. Gabriel”	cult	state	Developed Middle Ages					

District	Historical zone	**Village Bagvdanari** (Ghvibrasheni)	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURES	NEW REGISTRATION CARD	REMARK
179	1	Church “Svifi”	cult	state	Middle Ages					
180	2	Church “Jgrag” – “St. George”	cult	state	Middle Ages – XIX c.					
181	3	Remnants of tower	defensive	local	Middle Ages					

District	Historical zone	**Village Mazeri**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURES	NEW REGISTRATION CARD	REMARK
182	1	Roland Chargeliani’s chamber-Machubi	civil	state	Middle Ages					
183	2	Dadeshkeliani I tower	defensive	state	Middle Ages					
184	3	Dadeshkeliani II tower	defensive	state	Middle Ages					
185	4	Dadeshkeliani III tower	defensive	state	Middle Ages					
186	5	Church “Shikhra Jgrag”	cult	state	Developed Middle Ages					
187	6	Elguja Jandeliani’s chamber-Machubi	civil	local	Middle Ages					
188	7	Church “Jgrag” – “St.	cult	local	1970					

		George”								
189	8	Church “Fusd” (“Lord”)	cult	state	Developed Middle Ages					

District	Historical zone	**Village Doli**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURES	NEW REGISTRATION CARD	REMARK
190	1	I remnants of Kvitsiani tower	defensive	local	Middle Ages					
191	2	II remnants of Kvitsiani tower	defensive	local	Middle Ages					
192	3	Church “Jgrag” – “St. George”	cult	local	Developed Middle Ages					
193	4	Remnants of tower	defensive	local	Middle Ages					
194	5	Church “Fusd-Doli” – “Fusdali”	cult	state	Developed Middle Ages					
195	6	tower	defensive	state	Middle Ages					

District	Historical zone	Village **Tvebishi**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURES	NEW REGISTRATION CARD	REMARK
196	1	Remnants of tower	defensive	local	Middle Ages					
197	2	Church “Jgranash”	cult	local	Middle Ages					
198	3	Church “Mashlar”	cult	local	Middle Ages					

District	Historical zone	Village **Tchkidianari**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURES	NEW REGISTRATION CARD	REMARK
199	1	Jemal Khorgvani's chamber-Machubi	civil	local	Middle Ages					
200	2	Church Lamaria	cult	local	Middle Ages					
201	3	Church "Jgrag"	cult	local	Late Middle Ages					

District	Historical zone	Village **Kartvani**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURES	NEW REGISTRATION CARD	REMARK
202	1	Church "St. Michael"	cult	local	Middle Ages					

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District	Historical zone	**Village Iskari**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURES	NEW REGISTRATION CARD	REMARK
222	1	Batalbi Gerliani's chamber-Machubi	civil	state	Middle Ages					
223	2	Lado Gerliani's chamber-Machubi	civil	state	Middle Ages					
224	3	Ivane Gerliani's tower	defensive	local	Middle Ages					
225	4	Remnants of Gerliani tower	defensive	local	Middle Ages					
226	5	Remnants of tower I	defensive	local	Middle Ages					
227	6	Remnants of tower II	defensive	local	Middle Ages					
228	7	Remnants of tower III	defensive	local	Middle Ages					
229	8	Church "Barbal"	cult	local	Middle Ages					
230	9	Guram Filfani's tower	defensive	state	Middle Ages					

№		village **Barshi**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURES	NEW REGISTRATION CARD	REMARK
231	1	Remnants of tower	defensive	local	Middle Ages					
232	2	Dadeshkeliani chamber-fortress	Civil-defensive	state	Middle Ages					
233	3	Ilamaz Gurchiani's Char-Svaniri	civil	state	Middle Ages					
234	4	Remnants of church Lamaria	cult	local	Early Middle Ages					

235	1	village **Lashkhreri** Church “Jvar Jgrag”	cult	local	Middle Ages					
236	2	Indiko Arghvliani’s tower	defensive	state	Middle Ages					

237	1	village **Hebudi** Remnants of tower	defensive	local	Middle Ages					
238	2	Church “Matskhvar”	cult	state	Late Middle Ages					
239	3	church	cult	local	Middle Ages					

240	1	village **Kalashi** Church “Matskhvar” (“Saviour”)	cult	state	X c.					

№		village **Fkhotreti**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURES	NEW REGISTRATION CARD	REMARK
241	1	Church “Targlezer” – “Archangel”	cult	state	X c.					

242	1	village **Lanteli** Church “Sashgari”	cult	local	Late Middle Ages					

№		village **Kurashi**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURES	NEW REGISTRATION CARD	REMARK
243	1	Church “Jgrag”	cult	state	XI c.					
244	2	Remnants of tower	defensive	local	Middle Ages					
245	3	Church “Lakhvash-Targlezer”	cult	local	Middle Ages					
246	4	Architectural complex	Civil-defensive	state	Middle Ages					

247	1	**Village Ughvali** Church “Jgrag” – “St. George”	cult	state	XV c.					
248	2	Church “Archangel”	cult	state	Middle Ages					

249	1	**Village Tselanari** Church “Jgrag Chani”	cult	state	Developed Middle Ages					

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District	Historical zone	**Village Ieli**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURES	NEW REGISTRATION CARD	REMARK
250	1	Village Ieli, district Atsa	Town-planning		Middle Ages					
251	2	Jobe Khorgvani's complex	Civil-defensive	state	Middle Ages					
252	3	Pimen Khvibliani's chamber-Machubi	civil	local	Middle Ages					
253	4	Pimen Khvibliani's tower	defensive	state	Middle Ages					
254	5	Manu Kvebliani's tower	defensive	state	Middle Ages					
255	6	Semlar Khvibliani's tower	defensive	state	Middle Ages					
256	7	Church "Taringzel"	cult	state	X c.					
257	8	Virgin Mary's church – "Lamaria"	cult	state	X c.					
258	9	Village Ieli, middle district - Nesgaubani	Town-planning		Middle Ages					
259	10	Miron Khvibliani's chamber-Machubi	civil	state	Middle Ages					
260	11	Guse Fangani's chamber-Machubi	civil	local	Middle Ages					
261	12	Rejeb Khvibliani's chamber-Machubi	civil	local	Middle Ages					
262	13	Semlar Khvibliani's chamber-Machubi	civil	local	Middle Ages					
263	14	Ivliane Khvibliani's chamber-Machubi	civil	local	Middle Ages					
264	15	Chofe Khvibliani's chamber-Machubi	civil	local	Middle Ages					
265	16	Mamed Khvibliani's chamber-Machubi	civil	local	Middle Ages					
266	17	Avtandil Khvibliani's tower	defensive	state	Middle Ages					
267	18	Grigol Khvibliani's chamber-Machubi	civil	local	Middle Ages					

268	19	Grigol Khvibliani's complex	Civil-defensive	state	Middle Ages					
269	20	Soso Fangani's complex	Civil-defensive	state	Middle Ages					
270	21	Church "Jgravani"	cult	local	XI c.					
271	22	Village Ieli, district Askardi	Town-planning		Middle Ages					
272	23	Teimuraz Samsiani's chamber-Machubi	civil	local	Middle Ages					
273	24	Tamar Ioseliani's chamber-Machubi	civil	local	Middle Ages					
274	25	Mose Samsiani's complex	Civil-defensive	state	Middle Ages					
275	26	Akaki Samsiani's chamber-Machubi	civil	state	Middle Ages					
276	27	Iano Samsiani's tower	defensive	state	Middle Ages					
277	28	Tsoik Samsiani's chamber-Machubi	civil	local	Middle Ages					
278	29	Church "Matskhvar" ("Saviour")	cult	state	X c.					
279	30	Church "John the Announciator")	cult	state	X-XI c.c.					
280	31	Church "Lamaria" – Virgin Mary	cult	local	Middle Ages					
281	32	Church "Jgrag" – St. George	cult	state	Developed Middle Ages					
282	33	St. Kvirike's church - Legurka	cult	state	X c.					

283	1	village F**echi** Church Lamaria (Virgin Mary)	cult	state	1881					

№		village **Bogreshi**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURES	NEW REGISTRATION CARD	REMARK
284	1	Church Lamarai (Virgin Mary)	cult	local	Middle Ages					
285	2	tower	defensive	local	Middle Ages					
286	3	Ivane Kordzaia's complex	Civil-defensive	state	Middle Ages					
287	4	Solomon Gulbani's tower	defensive	state	Middle Ages					
288	5	Romanoz Gulbani's chamber-Machubi	civil	local	Middle Ages					

289	6	Ivane Gulbani's chamber-Machubi	civil	local	Middle Ages					
290	7	Tengiz Kurdiani's chamber-Machubi	civil	local i	Middle Ages					
291	8	Tengiz Kurdiani's complex	Civil-defensive	state	Middle Ages					
292	9	Boris Gulbani's chamber-Machubi	civil	state	Middle Ages					
293	10	Village Bogreshi	Town-planning		Middle Ages					
294	11	Bukhula Khvistani's chamber-Machubi	civil		Middle Ages					

№		Village **Tsvirmi**	TYPE	status	date	passport	Registration card	measure	New registration card	note
295	1	Remnants of church "Sgaldi Taringzel"	cult	local	Middle Ages					
296	2	Remnants of church "Ughviris Taringzel"	cult	local	Middle Ages					
297	3	St. John the Baptist's church	cult	local	XIX c.					
298	4	Village Tsvirmi, district Lamuldi	Town-planning		Middle Ages					
299	5	St. Barbale's church	cult	state	Developed Middle Ages					
300	6	Anzor Firtskheliani's tower	defensive	state	Middle Ages					
301	7	Rafiel Giglemiani's complex	Civil-defensive	state	Middle Ages					
302	8	Mate Giglemiani's chamber-Machubi	civil	local	Middle Ages					
303	9	Village Tsvirmi, district Zagari	Town-planning		Middle Ages					
304	10	Church "Taringzel"	cult	local	XII c.					
305	11	Gogi Kifiani's complex	Civil-defensive	state	Middle Ages					
306	12	Kotsia Korzaia's chamber-Machubi	civil	local	Middle Ages					
307	13	Jhiulen Korzaia's I chamber-Machubi	civil	local	Middle Ages					
308	14	Jhulien Korzaia's II chamber-Machubi	civil	local	Middle Ages					
309	15	Jhorjhi Korzaia's chamber-Machubi	civil	local	Middle Ages					
310	16	Mushni Korzaia's chamber-Machubi	civil	local	Middle Ages					
311	17	Fafalan Kifiani's chamber-Machubi	civil	local	Middle Ages					

312	18	Aron Gulbani's chamber-Machubi	civil	local	Middle Ages					
313	19	Village Tsvirmi, district Svifi	Town-planning		Middle Ages					
314	20	Valodia Korzaia's chamber-Machubi	civil	state	Middle Ages					
315	21	Ismail Kifiani's complex	Civil-defensive	state	Middle Ages					
316	22	Bachvi Fangani's chamber-Machubi	civil	local	Middle Ages					
317	23	Murman Fangani's chamber-Machubi	civil	local	Middle Ages					
318	24	Fridon Fangani's chamber-Machubi	civil	local	Middle Ages					
319	25	Archil Fangani's chamber-Machubi	civil	local	Middle Ages					
320	26	Avtandil Shukvani's chamber-Machubi	civil	state	Middle Ages					
321	27	Village Tsvirmi – middle district Nesgaubani	Town-planning		Middle Ages					
322	28	Vaso Giglemiani's chamber-Machubi	civil	local	Middle Ages					
323	29	Kosta Firtskheliani's chamber-Machubi	civil	local	Middle Ages					
324	30	Zakar Firtskheliani's chamber-Machubi	civil	local	Middle Ages					
325	31	Davit Firtskheliani's chamber-Machubi	civil	local	Middle Ages					
326	32	Salaref Firtskheliani's chamber-Machubi	civil	local	Middle Ages					
327	33	Tedo Bediani's chamber-Machubi	civil	local	Middle Ages					
328	34	Sharden Firtskheliani's chamber-Machubi	civil	local	Middle Ages					
329	35	Village Tsvirmi, district Upper Chobani	Town-planning		Middle Ages					
330	36	Vajha Firtskheliani's chamber-Machubi	civil	local	Middle Ages					
331	37	Datiko Firtskheliani's chamber-Machubi	civil	local	Middle Ages					
332	38	Biktor Firtskheliani's chamber-Machubi	civil	local	Middle Ages					
333	39	Grigol Firtskheliani's chamber-	civil	state	Middle Ages					

		Machubi								
334	40	Chichiko Tamliani's tower	defensive	state	Middle Ages					
335	41	Ioseb Tamliani's chamber-Machubi	civil	local	Middle Ages					
336	42	Church "Jgrag" – "St. George"	cult	state	X-XI c.c.					
337	43	Village Tsvirmi, district Upper Chobani	Town-planning		Middle Ages					
338	44	Church "Naka Taringzel"	cult	state	Developed Middle Ages					
339	45	Amiran Tamliani's complex	Civil-defensive	state	Middle Ages					
340	46	Arsen Tamliani's chamber-Machubi	civil	state	Middle Ages					
341	47	Jhenia Tamliani's chamber-Machubi	civil	local	Middle Ages					
342	48	Kudion Tamliani's chamber-Machubi	civil	local	Middle Ages					
343	49	Fati Tamliani's chamber-Machubi	civil	local	Middle Ages					
344	50	Tamliani family tower	defensive	state	Middle Ages					
345	51	Village Tsvirmi, district Tuberi	Town-planning		Middle Ages					
346	52	Vladimer Fangani's complex	Civil-defensive	state	Middle Ages					
347	53	Filaret Fangani's chamber-Machubi	civil	local	Middle Ages					
348	54	Valiko Fangani's chamber-Machubi	civil	state	Middle Ages					
349	55	Ambrosi Fangani's chamber-Machubi	civil	local	Middle Ages					
350	56	Remnants of tower "Ogami" – "Namurkvamla"	defensive	local	Middle Ages					
351	57	Church "Saviour"	cult	state	XI c.					

№		Village **Hadishi**		status	date	passport	Registration card	measure	New registration card	note
352	1	Church "Taringzel" ("Archangel")	cult	state	XI c.					
353	2	Church "Archangel"	cult	local	Middle Ages					
354	3	Church "Matskhvar" ("Saviour")	cult	state	X c.					
355	4	Church "Kristesi"	cult	local	Middle Ages					
356	5	Bavchi Kaldani's complex	Civil-defensive	state	Middle Ages					

357	6	Baju Kaldani's tower	defensive	state	Middle Ages					
358	7	Geronti Avaliani's Machubi	civil	local	Middle Ages					
359	8	Iliko Avaliani's chamber-Machubi	civil	local	Middle Ages					
360	9	Chichiko Avaliani's chamber-Machubi	civil	local	Middle Ages					
361	10	Nodar Avaliani's chamber-Machubi	civil	local	Middle Ages					
362	11	Givi Avaliani's chamber-Machubi	civil	local	Middle Ages					
363	12	Afrasion Avaliani's I chamber-Machubi	civil	local	Middle Ages					
364	13	Afrasion Avaliani's II chamber-Machubi	civil	local	Middle Ages					
365	14	Gerasime Avaliani's chamber-Machubi	civil	local	Middle Ages					
366	15	Rezo Avaliani's chamber-Machubi	civil	local	Middle Ages					
367	16	Pimen Avaliani's chamber-Machubi	civil	local	Middle Ages					
368	17	Sergo Avaliani's I chamber-Machubi	civil	local	Middle Ages					
369	18	Sergo Avaliani's II chamber-Machubi	civil	local	Middle Ages					
370	19	Mushni Avaliani's chamber-Machubi	civil	local	Middle Ages					
371	20	Mushni Avaliani's tower	defensive	state	Middle Ages					
372	21	Amiran Avaliani's tower	defensive	state	Middle Ages					
373	22	Sergo Avaliani's tower	defensive	state	Middle Ages					
374	23	Baju Avaliani's complex	Civil-defensive	state	Middle Ages					
375	24	Agrafine Avaliani's complex	Civil-defensive	state	Middle Ages					
376	25	Aster Avaliani's tower	TavdacviTi	state	Middle Ages					
377	26	Gunter Avaliani's complex	Civil-defensive	state	Middle Ages					
378	27	Ramzia Avaliani's complex	Civil-defensive	state	Middle Ages					
379	28	Afrasion Avaliani's complex	Civil-defensive	state	Middle Ages					
380	29	Amiran Avaliani's complex	Civil-defensive	state	Middle Ages					
381	30	Church "Jgrag" – "St. George"	cult	state	X-XI c.c.					
382	31	Bondo Kaldani's complex	Civil-defensive	state	Middle Ages					
383	32	Baju Kaldani's chamber-Machubi	civil	local	Middle Ages					
384	33	Giorgi Kaldani's chamber-Machubi	civil	local	Middle Ages					
385	34	Joto Kaldani's chamber-Machubi	civil	local	Middle Ages					
386	35	Nanu Kaldani's chamber-Machubi	civil	local	Middle Ages					

387	36	Jemal Kaldani's chamber-Machubi	civil	local	Middle Ages					
388	37	Village Hadishi	Town-planning		Middle Ages					
389	38	Church "Jgrag" ("Lower St. George Lichanishi")	cult	state	XI c.					
390	39	King Alexandre's chamber-fortress	Civil-defensive		Middle Ages					

№		Village **Nakifari**	TYPE	status	date	passport	Registration card	measure	New registration card	note
391	1	Safo Pirveli's complex	Civil-defensive	state	Middle Ages					
392	2	Pirveli family complex – property of the museum	Civil-defensive	state	Middle Ages					
393	3	Avxenti Pirveli's complex	Civil-defensive	state	Middle Ages					
394	4	Vaso Pirveli's complex	Civil-defensive	state	Middle Ages					
395	5	Kvito Pirveli's chamber-Machubi	civil	local	Middle Ages					
396	6	Bidzina Pirveli's chamber-Machubi	civil	state	Middle Ages					
397	7	Shalva Pirveli's chamber-Machubi	civil	local	Middle Ages					
398	8	Guram Pirveli's chamber-Machubi	civil	local	Middle Ages					
399	9	Shamil Pirveli's chamber-Machubi	civil	local	Middle Ages					
400	10	Soso Pirveli's chamber-Machubi	civil	local	Middle Ages					
401	11	Mizdon Pirveli's chamber-Machubi	civil	local	Middle Ages					
402	12	Rezo Pirveli's chamber-Machubi	civil	local	Middle Ages					
403	13	Vano Pirveli's chamber-Machubi	civil	local	Middle Ages					
404	14	Vladimer Pirveli's chamber-Machubi	civil	local	Middle Ages					
405	15	Nikoloz Pirveli's chamber-Machubi	civil	local	Middle Ages					
406	16	Merab Pirveli's complex	Civil-defensive	state	Middle Ages					
407	17	Church "Jgrag" – "St. George"	cult	**All-union**	X c.					
408	18	Serapion (Sapo) Pirveli's chamber-Machubi	civil	state	Middle Ages					
409	19	Valodia Gulbani's complex	Civil-defensive	state	Middle Ages					
410	20	Misha Gulbani's chamber-	civil	local	Middle Ages					

		Machubi								
411	21	Kapiton Gulbani's chamber-Machubi	civil	local	Middle Ages					
412	22	Mirza Gulbani's chamber-Machubi	civil	local	Middle Ages					
413	23	Rajhden Kachvani's chamber-Machubi	civil	local	Middle Ages					
414	24	Tezo Khicvhani's chamber-Machubi	civil	local	Middle Ages					
415	25	Village Nakifari	Town-planning		Middle Ages					
416	26	Husar Pirveli's Machubi	civil		Middle Ages					

№		Village **Zegani**	TYPE	status	date	passport	Registration card	measure	New registration card	note
417	1	Village Zegani, district Lejhaubani	Town-planning		Middle Ages					
418	2	Ekvti Khvistani's Machubi	civil		Middle Ages					
419	3	Gela Khvistani's Machubi	civil		Middle Ages					
420	4	Misha Khvistani's Machubi	civil		Middle Ages					
421	5	Kakutsa Khvistani's Machubi	civil		Middle Ages					
422	6	Tariel Khvistani's Machubi	civil		Middle Ages					
423	7	Alexandre Gulbani's Machubi	civil		Middle Ages					
424	8	Andria Gulbani's complex	Civil-defensive		Middle Ages					
425	9	Besia Gulbani's Machubi	civil		Middle Ages					
426	10	Tsiala Gulbani's Machubi	civil		Middle Ages					
427	11	Village Zegani, districts Krshi and Lesulani	Civil-defensive		Middle Ages					
428	12	Shalva Pirveli's tower	defensive		Middle Ages					
429	13	Shalva Pirveli's Machubi	civil		Middle Ages					
430	14	Murman Gulbani's I Machubi	civil		Middle Ages					
431	15	Murman Gulbani's II Machubi	civil		Middle Ages					
432	16	Omar Pirveli's Machubi	civil		Middle Ages					
433	17	Nugzar Gulbani's complex	Civil-defensive		Middle Ages					
434	18	Gela Pirveli's Machub	civil		Middle Ages					
435	19	Village Zegani, district Lekvaubani	Town-planning		Middle Ages					
436	20	Church Lamaria	cult		Developed Middle Ages					
437	21	Remnants of church "Jgrag Bachiad"	cult		Developed Middle Ages					

438	22	Church “Mtavarangeloza” (Archangels’)	cult		Developed Middle Ages					
439	23	Ramzi Gulbani’s tower	defensive		Middle Ages					
440	24	Grigol Khvistani’s Machubi	civil		Middle Ages					
441	25	Gogia Khvistani’s Machubi	civil		Middle Ages					
442	26	Savo Khvistani’s Machubi	civil		Middle Ages					
443	27	Ambako Khvistani’s Machubi	civil		Middle Ages					
444	28	Levan Khvistani’s Machubi	civil		Middle Ages					
445	29	Ilo Khvistani’s Machubi	civil		Middle Ages					
446	30	Emzar Khvistani’s complex	Civil-defensive		Middle Ages					
447	31	Michael Khvistani’s complex	Civil-defensive		Middle Ages					
448	32	Murtaz Khvistani’s Machubi	civil		Middle Ages					
449	33	Rostom Khvistani’s Machubi	civil		Middle Ages					
450	34	Kondrat Khvistani’s Machubi	civil		Middle Ages					
451	35	Indiko Khvistani’s Machubi	civil		Middle Ages					
452	36	Rifsime Khvistani’s Machubi	civil		Middle Ages					
453	37	Givi Khvistani’s Machubi	civil		Middle Ages					
454	38	Soni Khvistani’s Machubi	civil		Middle Ages					

G. Mestia Tskhumari Temi

№		Village **Tuberi**	TYPE	status	date	passport	Registration card	measure	New registration card	note
455	1	Church "Jgrag-Lakhvmi"	cult	state	Developed Middle Ages					
456	2	Daniel Kaldani's chamber-Machubi	civil	local	Middle Ages					
457	3	Matsgi Kaldani's chamber-Machubi	defensive	local	Middle Ages					
458	4	Iagor and Misha Kaldani's chamber-Machubi	civil	local	Middle Ages					
459	5	Boris and Spiridon Kaldani's chamber-Machubi	civil	local	Middle Ages					

№		Village **Magardeli**	TYPE	status	date	passport	Registration card	measure	New registration card	note
460	1	Church "Matskhvar"	cult	local	Middle Ages					
461	2	Sasha Arghvliani's complex	Civil-defensive	state	Middle Ages					
462	3	Bidzina Arghvliani's I chamber-Machubi	civil	local	Middle Ages					
463	4	Bidzina Arghvliani's I I chamber-Machubi	civil	local	Middle Ages					
464	5	Biu Mildiani's complex	Civil-defensive	state	Middle Ages					
465	6	Mushni Mildiani's complex	Civil-defensive	local	Middle Ages					
466	7	Kosta Subeliani's complex	Civil-defensive	local	Middle Ages					
467	8	Remnants of tower Sortmanshen	defensive	state	Middle Ages					

468	1	**Labskaldi** village Church Targlezer – Archangel	cult	state	X-XI c.c.					

469	1	**Lezgara** Church "Tekhish Jgrag"	cult	local	XX c.					
470	2	tower	defensive	state	Middle Ages					
471	3	Remnants of tower	defensive	local	Middle Ages					
472	4	Remnants of tower	defensive	local	Middle Ages					

№		name **Svifi**	TYPE	status	date	passport	Registration card	measure	New registration card	note
473	1	Archangel's church	cult	local	Middle Ages					
474	2	Church "Matskhvar"	cult	local	XX c.					
475	3	Datiko Arghvliani's tower	defensive	state	Middle Ages					
476	4	Grisha Arghvliani's complex	Civil-defensive	state	Middle Ages					
477	5	Nodar Shamfriani's chamber-Machubi	civil	local	Middle Ages					
478	6	Soso Jachvliani's complex	Civil-defensive	state	Middle Ages					
479	7	Roza Arghvliani's complex	Civil-defensive	state	Middle Ages					
480	8	Margo Jachvliani's chamber-Machubi	civil	local	Middle Ages					
481	9	Church "Jgrag"	cult	local	Middle Ages					
482	10	Remnants of church, area Fala	cult		Middle Ages					

№		name **Ghvebaldi**	TYPE	status	date	passport	Registration card	measure	New registration card	note
483	1	Church "Jgrag"	cult	local	Middle Ages					
484	2	Meti Gerliani's tower	defensive	state	Middle Ages					
485	3	Rozan Gerliani's tower	defensive	state	Middle Ages					
486	4	Church Jesus Christ	cult	local	Middle Ages					
487	5	Remnants of church "Jgrag" – area Suif-Zagar	cult	local	Middle Ages					

H. Mestia Mestia Temi

№		**Village Lanchvali**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURE	NEW REGISTRATION CARD	NOTE
615	1	Aelxandre Ratiani's tower	defensive	state	Middle Ages					
616	2	Bicho Ratiani's complex	Civil-defensive	state	Middle Ages					
617	3	Gogile Ratiani's complex	defensive	state	Middle Ages					
618	4	Shalva Ratiani's chamber-Machubi	Civil-defensive	local	Middle Ages					
619	5	Svido Ratiani's tower	defensive	state	Middle Ages					
620	6	Bedashe Margiani's tower	defensive	state	Middle Ages					
621	7	Margiani complex	Civil-defensive	state	Middle Ages					
622	8	Iliko Margiani's complex	Civil-defensive	local	Middle Ages					
623	9	Bukhula Margiani's chamber-Machubi	civil	local	Middle Ages					
624	10	Silibistro Margiani's chamber-Machubi	civil	local	Middle Ages					
625	11	Indigo Goshteliani's tower	defensive	state	Middle Ages					
626	12	Shermadin Goshteliani's complex	Civil-defensive	state	Middle Ages					
627	13	Dadai Faliani complex – property of the museum	Civil-defensive	state	Middle Ages					
628	14	Falian Faliani's complex	Civil-defensive	state	Middle Ages					
629	15	Faliani family tower	defensive	state	Middle Ages					
630	16	Nestor Faliani's chamber-Machubi	civil	state	Middle Ages					
631	17	Ardevan Nakani's complex	Civil-defensive	state	Middle Ages					
632	18	Davit Nakani's chamber-Machubi	civil	local	Middle Ages					
633	19	Zaur Nakani's chamber-Machubi	civil	local	Middle Ages					
634	20	Elizbar Nakani's chamber-Machubi	civil	local	Middle Ages					
635	21	Robinzon Nakani's chamber-Machubi	civil	local	Middle Ages					
636	22	Bidzina Kakhabeirdze's chamber-Machubi	civil	local	Middle Ages					
637	23	Archangel's church	cult	local	Middle Ages					
638	24	Sozar Niguriani's complex	Civil-defensive	state	Middle Ages					
639	25	Kelichbi Niguriani's complex	Civil-defensive	state	Middle Ages					
640	26	Shota Niguriani's complex	Civil-defensive	state	Middle Ages					
641	27	Giorgi Khergiani's complex	Civil-defensive	state	Middle Ages					
642	28	Dimitri Khergiani's tower	defensive	state	Middle Ages					
643	29	Varlam Khergiani's chamber-Machubi	civil	local	Middle Ages					
644	30	Vakhtang Khergiani's tower	defensive	state	Middle Ages					
645	31	Ioseb Khergiani's tower	defensive	state	Middle Ages					
646	32	Otar Khergiani's chamber-Machubi	civil	local	Middle Ages					

647	33	Khergiani complex	Civil-defensive	state	Middle Ages					
648	34	Archangel's church – "Margianal Taringzel" (Margiani family)	cult	state	Middle Ages					
649	35	Tatash Khergiani's chamber-Machubi	civil	local	Middle Ages					
650	36	Saviour's church	cult		Middle Ages					

№		**VillageSeti**	TYPE	status	date	passport	Registration card	measure	New registration card	note
651	1	Abi Devdariani's tower	defensive	state	Middle Ages					
652	2	Gogi Mushkudiani's tower	defensive	state	Middle Ages					
653	3	Baju Nakani's tower	defensive	state	Middle Ages					
654	4	Nugzar Nakani's complex	Civil-defensive	state	Middle Ages					
655	5	Iason Niguriani's tower	defensive	state	Middle Ages					
656	6	Levan Niguriani's tower	defensive	state	Middle Ages					
657	7	Valerian Faliani's tower	defensive	state	Middle Ages					
658	8	Alexi Jafaridze's tower	defensive	state	Middle Ages					
659	9	St. George's church (monastery)	cult		XVIII c.					
660	10	Church Legurka	cult		Middle Ages					
661	11	R. Jafaridze's tower	defensive		Middle Ages					
662	12	Tower on the museum territory	defensive		Middle Ages					

№		**Village Lekhtagi**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURE	NEW REGISTRATION CARD	NOTE
663	1	Ardevan Chartolani's complex	Civil-defensive	state	Middle Ages					
664	2	Gabriel Chartolani's complex	civil	state	Middle Ages					
665	3	Kako Chartolani's chamber-Machubi	civil	state	Middle Ages					
666	4	Chichiko Chartolani's chamber-Machubi	civil	local	Middle Ages					
667	5	Grisha Margiani's chamber-Machubi	civil	local	Middle Ages					
668	6	Virgin Mary's church	cult	local	Middle Ages					
669	7	Khergiani complex	Civil-defensive	state	Middle Ages					
670	8	I Machubi of Bidzina Khergiani's complex	Civil-defensive	state	Middle Ages					

№		**Village Mestia**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURE	NEW REGISTRATION CARD	NOTE
671	1	Niguriani and Mchedliani tower	defensive	state	Middle Ages					
672	2	Merab Jafaridze's Machubi	civil	local	Middle Ages					

673	3	Jafaridze I tower	defensive	state	Middle Ages					
674	4	Jafaridze II tower at the tourist base	defensive	state	Middle Ages					
675	5	Church “Molis Jgrag”	cult	local	XX c.					
676	6	Church “Jgrag” (Niguriani and Mchedliani family)	cult	local	XIX c.					
677	7	Church “Fusd” (Kakhaberidze family church)	cult	state	XI-XII c.c.					

№		**VillageLaghami**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURE	NEW REGISTRATION CARD	NOTE
678	1	Bidzina Barliani’s chamber-Machubi	civil	local	Middle Ages					
679	2	Baju Barliani’s chamber-Machubi	civil	local	Middle Ages					
680	3	Jobe Barliani’s chamber-Machubi	civil	local	Middle Ages					
681	4	Maghedan Barliani’s chamber-Machubi	civil	local	Middle Ages					
682	5	Barliani tower	defensive	state	Middle Ages					
683	6	Konstantine Barliani’s complex	Civil-defensive	state	Middle Ages					
684	7	Ioseliani tower	defensive	state	Middle Ages					
685	8	Mikheil Khergiani’s complex, house-museum	Civil-defensive	state	Middle Ages					
686	9	Afrasion Ratiani’s chamber-Machubi	civil	local	Middle Ages					
687	10	Khoje Khojelani’s complex	Civil-defensive	state	Middle Ages					
688	11	Germane Khojelani’s Gubandi-Gvemi	civil	local	Middle Ages					
689	12	Germane Khojelani’s tower	defensive	state	Middle Ages					
690	13	Germane Khojelani’s chamber-Machubi	civil	local	Middle Ages					
691	14	Sharden Faliani’s chamber-Machubi	civil	local	Middle Ages					
692	15	Jua Faliani’s complex	Civil-defensive	state	Middle Ages					
693	16	Jarakhmat Faliani’s complex	Civil-defensive	state	Middle Ages					
694	17	Akaki Gvarliani’s chamber-Machubi	civil	local	Middle Ages					
695	18	Valodi Gvarliani’s chamber-Machubi	civil	local	Middle Ages					
696	19	Jeneri Gvarliani’s chamber-Machubi	civil	local	Middle Ages					
697	20	Silosi Gvarliani’s chamber-Machubi	civil	local	Middle Ages					
698	21	Nodar Gvarliani’s tower	defensive	state	Middle Ages					
699	22	Irodi Gvarliani’s complex	Civil-defensive	state	Middle Ages					
700	23	Village Laghami	Town-planning		Middle Ages					
701	24	Saviour’s church	cult	state	X-XIV c.c.					
702	25	Khergiani family tower	defensive		Middle Ages					

I. Mestia Fari Temi.

№		Village **Upper Luha**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURE	NEW REGISTRATION CARD	NOTE
703	1	Remnants of church “Lamurkvam”	cult	local	Middle Ages					
704	2	Church “Svajar Targlezer”	cult	local	Middle Ages					
705	3	Valodia Tsalani’s tower	defensive	local	Middle Ages					
706	4	Ruzgen Tsalani’s tower	defensive	state	Middle Ages					
707	5	Mose Tsalani’s tower	defensive	state	Middle Ages					
708	6	Valo Tsulkiani’s tower	defensive	state	Middle Ages					
709	7	Jhora Tsulkiani’s tower	defensive	state	Middle Ages					

710	1	V**illage Lower Luha** Dadeshkeliani tower	defensive	state	Middle Ages					
711	2	Church “Jgrag Lakai”	cult	state	XI-XII c.c.					

712	1	**Village Khosvrari** Remnants of church “Jgrag Mosashish”	cult	local	Middle Ages					
713	2	Remnants of church “Vahdi Jgrag”	cult	local	Middle Ages					
714	3	Jachvliani family complex	Civil-defensive	state	Middle Ages					
715	4	Church “Jgrag”, area Vahdi	cult		Middle Ages					

716	1	**Village Fari** Remnants of Christ’s church	cult	local	Middle Ages					
717	2	Church “Matskhvar”	cult		Middle Ages					
718	3	Remnants Khabiz Rezesidze’s tower	defensive	local	Middle Ages					

719	1	**village Faledi** Chkhvimiani family complex	Civil-defensive	state	Middle Ages					

№		name **Gheshderi**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURE	NEW REGISTRATION CARD	NOTE
720	1	Meshkri Archangel’s church “Meshkhu Targlezer”	cult	local	Middle Ages					
721	2	Petre Chkhvimiani’s house with Svaniri	Civil-defensive	state	Middle Ages					
722	3	Remnants of church at farm	cult	local	Middle Ages					
723	4	Remnants of church “Targlezer”	cult	state	Developed Middle Ages					
724	5	Church “Kaishi Targlezer”	cult		Developed					

					Middle Ages					

725	1	**Village Zagari** Remnants of church “Jgrag Zagari”	cult	local	Middle Ages					
726	2	Remnants of church “Jgrag”	cult	local	Middle Ages					
727	3	Remnants of St. Barbale’s church – “Barbal”	cult	local	Middle Ages					

№		**Village Svifi**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURE	NEW REGISTRATION CARD	NOTE
728	1	Church “Svifi Jgrag”	cult	state	X c.					

J. Mestia: Kala Temi.

№		**Village Khalde**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURE	NEW REGISTRATION CARD	NOTE
729	1	Saviour's Church "Matskhvar"	cult	state	XIX c.					
730	2	Chofliani family chamber-Machubi	civil	local	Middle Ages					
731	3	Zurab Jokhadze's I chamber-Machubi	civil	local	Middle Ages					
732	4	Gerasime Jokhadze's I chamber-Machubi	civil	local	Middle Ages					
733	5	Gerasime Jokhadze's II chamber-Machubi	civil	local	Middle Ages					
734	6	Nariman Jokhadze's chamber-Machubi	civil	local	Middle Ages					
735	7	Jhora Jokhadze's chamber-Machubi	civil	local	Middle Ages					
736	8	Grigol Jokhadze's chamber-Machubi	civil	local	Middle Ages					
737	9	chamber-Machubi	civil	local	Middle Ages					
738	10	Galaktion Cheganiani's chamber-Machubi	civil	state	Middle Ages					
739	11	Guram Chegiani's chamber-Machubi	civil	local	Middle Ages					
740	12	Ahmed Chegiani's chamber-Machubi	civil	local	Middle Ages					
741	13	Keleshbi Gasviani's I chamber-Machubi	civil	state	Middle Ages					
742	14	Keleshbi Gasviani's II chamber-Machubi	civil	local	Middle Ages					
743	15	Efrem Gasviani's chamber-Machubi	civil	local	Middle Ages					
744	16	Platon Gasviani's chamber-Machubi	civil	local	Middle Ages					
745	17	Onisime Gasviani's chamber-Machubi	civil	local	Middle Ages					
746	18	Seve Gasviani's chamber-Machubi	civil	local	Middle Ages					
747	19	Shota Gasviani's chamber-Machubi	civil	local	Middle Ages					
748	20	Village Khalde	Town-planning		Middle Ages					
749	21	Baju Jokhadze's chamber-Machubi	civil		Middle Ages					
750	22	St. George's church "Jgrag"	cult							
751	23	Zurab Jokhadze's II chamber-Machubi	civil		Middle Ages					

№	**Village Davberi**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURE	NEW REGISTRATION	NOTE

									CARD	
752	1	St. George's church "Jgrag"	cult	state	Developed Middle Ages					
753	2	Sandro Margvelani's chamber-Machubi	civil	local	Middle Ages					
754	3	Vakhtang Margvelani's chamber-Machubi	civil	local	Middle Ages					
755	4	Mushni Margvelani's chamber-Machubi	civil	local	Middle Ages					
756	5	Galaktion Margvelani's chamber-Machubi	civil	local	Middle Ages					
757	6	Chichiko Margvelani's chamber-Machubi	civil	local	Middle Ages					
758	7	Savo Margvelani's chamber-Machubi	civil	local	Middle Ages					
759	8	Isidore Margvelani's chamber-Machubi	civil	local	Middle Ages					
760	9	Iaroslav Margvelani's chamber-Machubi	civil	local	Middle Ages					
761	10	Keidar Margvelani's chamber-Machubi	civil	local	Middle Ages					
762	11	Daji Margvelani's chamber-Machubi	civil	local	Middle Ages					
763	12	Margvelani family I tower	defensive	state	Middle Ages					
764	13	Margvelani famili II tower	defensive	state	Middle Ages					
765	14	Mushni Margvelani's tower	defensive	state	Middle Ages					
766	15	Shalva (Shamil) Dadvani's complex	Civil-defensive	state	Middle Ages					
767	16	Shalva Dadvani's chamber-Machubi	civil	local	Middle Ages					
768	17	Village Davberi	Town-planning		Middle Ages					
769	18	St. Kvirike's and St. Ivlita's church "Legurka"	cult	**All-union**	XI-XII c.c.					

№		**VillageLalkhori**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURE	NEW REGISTRATION CARD	NOTE
770	1	Zaur Gamkrelidze's chamber-Machubi	civil	local	Middle Ages					
771	2	Nugzar Gamkrelidze's chamber-Machubi	civil	local	Middle Ages					
772	3	Vardo Kakriashvili's chamber-Machubi	civil	local	Middle Ages					
773	4	Gelovani family complex	Civil-defensive	state	Middle Ages					

774	5	Dali Margvelani's chamber-Machubi	civil	local	Middle Ages					
775	6	Village Lalkhori	Town-planning		Middle Ages					
776	7	St. Kvirike's church "Legurka"	cult	state	XI c.					

№		**Village Khe**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURE	NEW REGISTRATION CARD	NOTE
777	1	Levan Gulbani's chamber-Machubi	civil	local	Middle Ages					
778	2	Ilia Gulbani's I chamber-Machubi	civil	local	Middle Ages					
779	3	Ilia Gulbani's II chamber-Machubi	civil	state	Middle Ages					
780	4	Ilia Gulbani's tower	defensive	state	Middle Ages					
781	5	Teodore Fangani's chamber-Machubi	civil	local	Middle Ages					
782	6	St. Barbale's church "Barbal"	cult	state	Developed Middle Ages					
783	7	Village Khe	Town-planning		Middle Ages					

№		**Village Vichnashi (Vichnazi)**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURE	NEW REGISTRATION CARD	NOTE
784	1	Vati Kharziani's chamber-Machubi	civil	local	Middle Ages					
785	2	Guram Kharziani's chamber-Machubi	civil	local	Middle Ages					
786	3	Abram Kharziani's chamber-Machubi	civil	local	Middle Ages					
787	4	Mariam Kharziani's chamber-Machubi	civil	local	Middle Ages					
788	5	Murza Kharziani's complex	Civil-defensive	state	Middle Ages					
789	6	Irodi Kharziani's chamber-Machubi	civil	local	Middle Ages					
790	7	Robinzon Kharziani's chamber-Machubi	civil	local	Middle Ages					
791	8	Vano Kharziani's chamber-Machubi	civil	local	Middle Ages					
792	9	Leonti Kharziani's chamber-Machubi	civil	local	Middle Ages					
793	10	Amberki Kharziani's chamber-Machubi	civil	local	Middle Ages					
794	11	Bartlome Kharziani's chamber-Machubi	civil	local	Middle Ages					
795	12	Kirile Kharziani's chamber-Machubi	civil	state	Middle Ages					
796	13	Church "Lamaria" and tower	Cult-defensive	local	Middle Ages - XX c.					

797	1	**Village Agrai** :Architectural complex	Civil-defensive	state	Middle Ages					
798	2	Sergo Kharziani's complex	Civil-defensive		Middle Ages					
799	3	Luka Kharziani's Machubi	civil		Middle Ages					

№		**Village Ifrari**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURE	NEW REGISTRATION CARD	NOTE
800	1	Village Ifrari	Town-planning		Middle Ages					
801	2	Archangel's Church "Taringzel"	cult	**All-union**	XI c.					
802	3	Arsen Margviani's (Gasviani's ?) chamber-Machubi	civil	local	Middle Ages					
803	4	Sharden Gasviani's chamber-Machubi	civil	local	Middle Ages					
804	5	Rajhden Dadvani's chamber-Machubi	civil	local	Middle Ages					
805	6	Sozar Pirveli's chamber-Machubi	civil	local	Middle Ages					
806	7	Archil Margvelani's chamber-Machubi	civil	local	Middle Ages					
807	8	Daniel Dadvani's chamber-Machubi	civil	local	Middle Ages					
808	9	Margvelani family tower "Basilusha"	defensive	state	Middle Ages					

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№		**VillageLemsia**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURE	NEW REGISTRATION CARD	NOTE
809	1	Village Lemsia	Town-planning		Middle Ages					
810	2	St. George's church	cult	local	Late Middle Ages					
811	3	Saviour's Church "Mepiur Matskhvar"	cult	local	Middle Ages					
812	4	Remnants of Bakai Shukvani's tower	defensive	local	Middle Ages					
813	5	Nodar Shukvani's complex	Civil-defensive	local	Middle Ages					
814	6	Mizdon Shukvani's tower	defensive	state	Middle Ages					
815	7	Bata Shukvani's chamber-Machubi	civil	local	Middle Ages					
816	8	Soso Shukvani's tower	defensive	state	Middle Ages					
817	9	Sosiko Barliani's tower	defensive	state	Middle Ages					
818	10	Roman Naveriani's chamber-Machubi	civil	local	Middle Ages					
819	11	Rostom Naveriani's chamber-Machubi	civil	local	Middle Ages					

№		**Village Nesguni**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURE	NEW REGISTRATION CARD	NOTE
820	1	Village Nesguni	Town-planning		Middle Ages					
821	2	St. George's church "Jgrag"	cult	state	Middle Ages					
822	3	Church "Ieli" - St. Elia the Prophet	cult	state	Developed Middle Ages					
823	4	Church "Fusd-Zagari" – "Jihari"	cult	local	Developed Middle Ages					
824	5	Saviour's Church "Matskhvar"	cult	state	X c.					
825	6	Church "Matskhvar"	cult	state	Developed Middle Ages					
826	7	Datiko Guledani's chamber-Machubi	civil	local	Middle Ages					
827	8	Minada Guledani's brotherhood tower	defensive	state	Middle Ages					
828	9	Gigo Maghedani's tower	defensive	state	Middle Ages					
829	10	Anzor Guledani's tower	defensive	state	Middle Ages					

830	11	Shura Guledani's Machubi	civil	local	Middle Ages					
831	12	Remnants of Vibliani family fortress-house	Civil-defensive	local	Middle Ages					
832	13	Grisha Guledani's Machubi	civil	state	Middle Ages					
833	14	Chichiko Guledani's tower	defensive	state	Middle Ages					
834	15	Valo Guledani's Machubi	civil	state	Middle Ages					
835	16	Nugzar Guledani's Machubi	civil	state	Middle Ages					
836	17	Zurab Guledani's tower	defensive	state	Middle Ages					
837	18	Jivler Guledani's tower	defensive	state	Middle Ages					

№		**Village Lashtkhveri**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURE	NEW REGISTRATION CARD	NOTE
838	1	Village Lashtkhveri	Town-planning		Middle Ages					
839	2	John the Announciator's Church	cult	state	Developed Middle Ages					
840	3	Archangel's church	cult	state	XI c.					
841	4	Ilarion Guledani's complex	Civil-defensive	state	Middle Ages					
842	5	Gramiton Jachvani's complex	Civil-defensive	state	Middle Ages					
843	6	Valiko Jachvanis's tower	defensive	state	Middle Ages					
844	7	Guram Jachvani's tower	defensive	local	Middle Ages					
845	8	Church "Jgrag Skhvachiereshi"	cult	local	Middle Ages					
846	9	Piribe Jachvani's tower	defensive	state	Middle Ages					
847	10	Mushni Udesiani's tower	defensive	state	Middle Ages					
848	11	Amiran Udesiani's tower	defensive	state	Middle Ages					
849	12	Baju Udesiani's Gubandi	civil	state	Middle Ages					
850	13	Nugzar Ildani's tower	defensive	state	Middle Ages					
851	14	Udesiani family chamber-Machubi	civil		Middle Ages					

852	1	**Village Soli**	Town-planning		Middle Ages					
853	2	St. George's church	cult		Late Middle Ages					
854	3	Church "Fusd" – "Lord" ("Saviour")	cult	state	Late Middle Ages					
855	4	John the Baptist's (Archangel's ?) church	cult	state	Late Middle Ages					
856	5	Tevdore Shukvani's tower	defensive	state	Middle Ages					
857	6	Mikheil Shukvani's Machubi	civil	local	Middle Ages					

858	7	Saliko Khaftani's tower	defensive	state	Middle Ages					
859	8	Mushni Khaftani's Machubi	civil	local	Middle Ages					
860	9	Mushni Khaftani's tower	defensive	state	Middle Ages					
861	10	Boris Khaftani's tower	defensive	state	Middle Ages					
862	11	Baka Khorguani's tower	civil	state	Middle Ages					
863	12	Beka Khorguani's tower	defensive	state	Middle Ages					
864	13	Valeri Guledani's tower	defensive	state	Middle Ages					
865	14	Tori tower	defensive	state	Middle Ages					
866	15	Miron Udesiani's tower	defensive	state	Middle Ages					

№		**Village Kashveti**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURE	NEW REGISTRATION CARD	NOTE
867	1	Village Kashveti	Town-planning		Middle Ages					
868	2	St. George's church	cult	state	Developed Middle Ages					
869	3	Mikheil Filfani's tower	defensive	state	Middle Ages					
870	4	Babu Filfani's and Salareb Tsifiani's tower	defensive	state	Middle Ages					
871	5	Vaso Filfani's tower with Svaniri	defensive	state	Middle Ages					
872	6	Remnants of church "Muzanak"	cult	local	Middle Ages					

873	1	**Village Kaeri**	Town-planning		Middle Ages					
874	2	Virgin Mary's church Lamaria	cult	local	XIX c.					
875	3	Vladimer Barliani's tower	defensive	state	Middle Ages					

№		**Village Mkheri**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURE	NEW REGISTRATION CARD	NOTE
876	1	Mkheri's Annunciator's church – "St. Michael Arcahngel"	cult	state	Middle Ages					

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№		**Village Leshukvi**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURE	NEW REGISTRATION CARD	NOTE
892	1	Village Leshukvi	Town-planning		Middle Ages					
893	2	Virgin Mary's church Lamaria	cult		Early Middle Ages					
894	3	St. George's church "Jgrag"	cult		Late Middle Ages					
895	4	Murad Ivechiani's complex	Civil-defensive	state	Middle Ages					
896	5	Shalva Ivechiani's I chamber-Machubi	civil	local	Middle Ages					
897	6	Shalva Ivechiani's II chamber-Machubi	civil	local	Middle Ages					
898	7	Ivechiani family tower	defensive	state	Middle Ages					

№		**Village Lakhushdi**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURE	NEW REGISTRATION CARD	NOTE
899	1	Village Lakhushdi	Town-planning		Middle Ages					
900	2	Pass Archangel's Church "Tanghil Taringzel"	cult	state	Middle Ages					
901	3	The vicinity of Church "Khati-Tskhoveli"	cult	state	Middle Ages					
902	4	Church "Matskhvar"	cult	state	XIX c.					
903	5	Church "Harashi Jgrag"	cult	local	Developed Middle Ages					
904	6	Giorgi Fitskhelani's chamber-Machubi	civil	local	Middle Ages					
905	7	Zaur Firtskhelani's chamber-Machubi	civil	local	Middle Ages					
906	8	Giorgi Chamgeliani's tower	defensive	state	Middle Ages					
907	9	Fridon Kvanchiani's tower	defensive	local	Middle Ages					
908	10	Igor Firtskhelani's chamber-Machubi	civil	local	Middle Ages					
909	11	Taisav Chamgeliani's tower	defensive		Middle Ages					
910	12	Davit Asumbiani's tower	defensive	state	Middle Ages					
911	13	Givi Firtskhelani's tower	defensive	state	Middle Ages					
912	14	Givi Kvanchiani's chamber-Machubi	civil	local	Middle Ages					
913	15	D. Kvanchiani's chamber-Machubi	civil	local	Middle Ages					
914	16	Zaur Firtskhelani's tower	defensive	state	Middle Ages					

№		**Village Kashveti**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURE	NEW REGISTRATION CARD	NOTE
915	1	village Sidianari	Town-planning		Middle Ages					
916	2	Church “Taringzel”	cult		Middle Ages					
917	3	Remnants of church	cult		Middle Ages					
918	4	Church “Gulhi Taringzel”	cult		Late Middle Ages					
919	5	Church “Zagar Matskhvar”	cult		Early Middle Ages					
920	6	Ilo Abdeliani’s I chamber-Machubi	civil	local	Late Middle Ages					
921	7	Jobe Sildiani’s tower	defensive	state	Middle Ages					
922	8	Ahmad Sidiani’s chamber-Machubi	civil	local	Late Middle Ages					
923	9	Ilo Abdeliani’s II chamber-Machubi	civil	local	Middle Ages					
924	10	Jobe Sidiani’s Machubi	civil	local	Late Middle Ages					
925	11	Vitini “Jgrag Tebdiashish”	cult	local	Late Middle Ages					

№		**Village Ifkhi**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURE	NEW REGISTRATION CARD	NOTE
926	1	Village Ifkhi	Town-planning		Middle Ages					
927	2	St. George’s church “Jgrag”	cult	state	X c.					
928	3	Church “Tsifeli Jgrag”	cult	state	Middle Ages					
929	4	Church “Dal-Zeda Taringzel”	cult		Middle Ages					
930	5	Valo Nansikani’s chamber-Machubi	civil	local	Middle Ages					
931	6	Gramiton Nansikani’s chamber-Machubi	civil	local	Middle Ages					
932	7	Bito Gvichiani’s complex	Civil-defensive	state	Middle Ages					
933	8	Bidzina Gvichiani’s complex	Civil-defensive	local	Middle Ages					
934	9	Ilamaz Nansikani’s chamber-Machubi	civil	local	Middle Ages					
935	10	Ambros Nansikani’s complex	Civil-defensive	state	Middle Ages					
936	11	Varden Nansikani’s complex	Civil-defensive	state	Middle Ages					
937	12	Remnants of church “Lamaria”	cult	local	Middle Ages					
938	13	Togo Gvichiani’s complex	Civil-defensive	state	Middle Ages					
939	14	Bidzina Gvichiani’s Machubi	civil		Middle Ages					

№		**VillageKvanchiani**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURE	NEW REGISTRATION CARD	NOTE
940	1	Remnants of village “Sgubur” – remnants of 2 churches and 3	cult-defensive	local	Middle Ages					

		towers								
941	2	Church “Gulis Taringzel” Remnants of village “Sgubur”	cult	local	Middle Ages					
942	3	Church “Chushkhumi Taringzel”	cult	local	1983					
943	4	Church “Chareld Lamaria”	cult		Middle Ages					
944	5	Church “Matskhvar”, remnants of village “Sgubar”	cult	local	Developed Middle Ages					
945	6	Charkviani family tower	defensive	state	Middle Ages					
946	7	Church “Khatistskhoveli”	cult	state	Middle Ages					

№		**Village Lahili**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURE	NEW REGISTRATION CARD	NOTE
947	1	St. George’s church	cult	state	Developed Middle Ages					
948	2	Mkheri St. George’s church	cult	state	Developed Middle Ages					
949	3	Church “Jgrag”	cult	local	XIX c.					
950	4	Saviour’s church “Matskhvar”	cult	state	Developed Middle Ages					
951	5	Virign Mary’s church “Lamaria”	cult	local	Middle Ages					
952	6	St. Elia’s church “Ieli”	cult	state	Developed Middle Ages					
953	7	Church “Lamaria”	cult	state	Developed Middle Ages					
954	8	Stone Cross “Chariald”	cult	local	Middle Ages					
955	9	Archangel’s church, remnants of village “Muheri” (“Mkheri”)	cult		Developed Middle Ages					

№		**Village Lelbaki**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURE	NEW REGISTRATION CARD	NOTE
956	1	Saviour’s church	cult		Early Middle Ages					

№		**VillageLami**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURE	NEW REGISTRATION CARD	NOTE
957	1	John the Baptist’s church	cult	local	Middle Ages					
958	2	Remnants of Gogi Khvinteliani’s	defensive	local	Middle Ages					

		tower								
959	3	Remnants of Tsitsino Khvinteliani's tower	defensive	local	Middle Ages					
960	4	Piribe and Amiroz Khvinteliani's tower	defensive	local	Middle Ages					
961	5	Remants of Davit Khvinteliani's tower	defensive	local	Middle Ages					
962	6	Remnants of Charkviani's tower	defensive	local	Middle Ages					

№		**VillageMatskhvarishi**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURE	NEW REGISTRATION CARD	NOTE
963	1	Saviour's church "Matskhvarishi"	cult	state	X-XI c.c.					
964	2	Church "Taringzel"	cult	state	Developed Middle Ages					
965	3	Naziko Tamliani's Machubi	civil	local	Middle Ages					
966	4	Marlen Tamliani's Machubi	civil	local	Middle Ages					
967	5	Tamzi Tamliani's Machubi	civil	local	Middle Ages					
968	6	Nestor Girgvliani's complex	Civil-defensive	state	Middle Ages					
969	7	Tariel Girgvliani's Machubi	civil	local	Middle Ages					
970	8	Korneli Girgvliani's Machubi	civil	local	Middle Ages					

№		**VillageShkaleri**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURE	NEW REGISTRATION CARD	NOTE
971	1	Church "Shkali Jgrag"	cult	state	Middle Ages					
972	2	Church "Taringzel"	cult		Developed Middle Ages.					
973	3	Remnants of Archangel's church "Taringzel"	cult	local	Middle Ages					

№		**Village Leshgvani**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURE	NEW REGISTRATION CARD	NOTE
974	1	Farjiani family tower, area "Roto-Rotvaleshi"	defensive	local	Middle Ages					
975	2	Beka Farjiani's tower	defensive	local	Middle Ages					
976	3	Baru Farjiani's tower	defensive	state	Middle Ages					

№	**Village Ienashi**	TYPE	STATUS	DATE	PASSPORT	REGISTRATION CARD	MEASURE	NEW REGISTRATION	NOTE

									CARD	
977	1	Ninia Tserediani's tower	defensive	local	Middle Ages					
978	2	Tserediani family tower	defensive	state	Middle Ages					
979	3	Datiko Farjiani's chamber-Machubi	civil	local	Middle Ages					
980	4	Anton Gvichiani's tower	defensive	state	Middle Ages					
981	5	Boris Farjiani's tower	defensive	state	Middle Ages					
982	6	Avxenti Farjiani's chamber-Machubi	civil	local	Middle Ages					
983	7	Beka Tserediani's tower	defensive	local	Middle Ages					
984	8	Givi Farjiani's tower	defensive	local	Middle Ages					
985	9	Misdon Farjiani's tower	defensive	local	Middle Ages					
986	10	Shalva Farjiani's chamber-Machubi	civil	local	Middle Ages					
987	11	Iona the Prophet's church	cult	state	XIV c.					
988	12	Saviour's church	cult		Middle Ages					

M. Svaneti Archeological Monuments

Ushguli	burial mound, Middle Ages
	cult object, antique age
Chajhashi	remnants of settlement, antique age
	mountain-metallurgical object, Middle Ages
	accidentally discovered bore hole, Bronze – Early Iron Age
Kala	remnants of cult building, antique age
Ifrari	remnants of cult building, antique age
	bore hole, Bronze – Early Iron Age
Agrai	mountain-metallurgical object, Bronze – Early Iron Age
	remnants of settlement, Middle Ages
Vichnashi	ceramic water pipeline, Middle Ages
Adishi	ceramic workshop, antique age
	burial mound, Middle Ages
	mountain-metallurgical object, Bronze – Early Iron Age
	ceramic water pipeline, Middle Ages
Zegani	burial mound, Bronze – Early Iron Age
Jhabeshi	ceramic water pipeline, Middle Ages
	Cave, tunnel, Middle Ages
Mestia	burial mound, Middle Ages
Upper Tsvrimindi	burial mound, Middle Ages
Lower Tsvrimindi	remnants of settlement, antique age
	burial mound, Middle Ages
	remnants of settlement, Bronze – Early Iron Age
Khaishi	accidentally discovered bore hole, Bronze – Early Iron Age
	mountain-metallurgical object, Middle Ages
	cave, tunnel, Middle Ages
Idliani	burial mound, Middle Ages
Barjashi	burial mounda, Middle Ages
Lukhi	mountain-metallurgical object, Bronze – Early Iron Age
Tskhumari	burial mound, antique age
	remnants of settlement, antique age
	accidentally discovered bore hole, Middle Ages
Lenjeri	remnants of settlement, Neolithe
Lemsia	remnants of settlement, Neolithe
Ushkhvanari	remnants of settlement, Middle Ages
Mazeri	remnants of settlement, Middle Ages
Becho	accidentally discovered bore hole, Bronze – Early Iron Age
Nakra	ceramic water pipeline, Middle Ages
Dizi	burial mound, antique age
	accidentally discovered bore hole, antique age
	remnants of settlement, antique age
	mountain-metallurgical object, antique age
	burial mound, Bronze – Early Iron Age
	mountain-metallurgical object, Bronze – Early Iron Age
	remnants of settlement, Bronze – Early Iron Age

Nashtkoli	burial mound, Bronze – Early Iron Age
	burial mound, Middle Ages
Tvibishi	cult object, antique age
	remnants of settlement, Middle Ages
Svifi	burial mound, Middle Ages
	remnants of settlement, antique age
	burial mound, Middle Ages
Barshi	ceramic workshop, Middle Ages
	burial mound, Bronze – Early Iron Age
	burial mound, Middle Ages
Upper Margi	mountain-metallurgical object, Bronze – Early Iron Age
	remnants of settlement, antique age
	mountain-metallurgical object, antique age
Lower Margi	burial mound, Middle Ages
	burial mound, Bronze – Early Iron Age
	burial mound, antique age
	mountain-metallurgical object, Bronze – Early Iron Age
Jorkvali	accidentally discovered bore hole, antique age
	accidentally discovered bore hole, Bronze – Early Iron Age
	burial mound, Bronze – Early Iron Age
	remnants of settlement, antique age
Lakhami	mountain-metallurgical object, Bronze – Early Iron Age
Lower Ifari	mountain-metallurgical object, antique age
	mountain-metallurgical object, Middle Ages
	burial mound, Bronze – Early Iron Age
	burial mound, Middle Ages.

Note: Data collected by ICOMOS from literature and field surveys.

ANNEX 6. Socio-economic aspects.

Table 1.Socio-economic characteristics of the villages around the USNP.

#N	District/ Sakrebulo/ Village	Distance from the National Park border(km)	Population(man)	household (total)	Agricultural land used by farming (ha)	of which				Livestock (had)	of which	Goat and sheep (head)
						Arable (ha)	perennials (ha)	Pastures (ha)	other (ha)		Caws and buffalo caws (head)	
	Mestia district											
	Becho sakrebulo											
17	Chokhuldi	2.1	77	24	34	6	_	27	1	115	58	8
18	Mazeri	1.3	195	61	85	24	_	60	1	326	213	47
19	Tvebishi	1.7	49	14	23	4	_	19	_	79	44	_
20	Ushkhvanari	2.2	326	37	42	9	_	33	_	240	137	50
21	Bagvdnari	1.6	168	20	47	8	_	39	_	163	102	12
	Nakra sakrebulo											
22	s. nakra	1.0	384	89	172	19	4	148	1	728	378	45
23	s. kiCxuldi	2.2	12	4	12	1	_	11	_	55	21	_
	Wuberis sakrebulo											
24	Zemom marli	2.4	114	23	13	3	_	10	_	116	59	_
25	Qvemo marli	3.7	183	22	34	6	_	28	_	112	63	_
26	Larilari	3.3	84	15	13	3	_	10	_	59	46	_
27	Sgurishi	3.1	208	43	32	7	_	25	_	219	137	_
28	Tita	1.0	7	3	3	1	_	2	_	13	10	_
	Khaisha sakrebulo											
29	Idliani	1.3	321	78	34	12	_	22	_	270	147	_
30	Leburtskhila	2.1	71	12	4	1	_	3	_	62	32	4
31	Qbemo vedi	2.3	82	27	8	4	_	4	_	70	39	_
32	Zeda vedi	1.3	27	2	1	_	_	1	_	7	3	_
33	Khaishi	5.5	554	170	53	15	_	37	1	593	296	61
	Ushguli sakrebulo											
34	Chajashi	1.0	34	7	23	_	_	23	_	64	33	35
35	Murkmeli	0.8	32	8	24	3	_	21	_	109	56	55
36	Jibiani	1.2	164	26	42	4	_	38	_	298	146	249
37	Cvibiani	1.2	58	10	22	_	_	22	_	160	79	122
	Total		**3150**	**695**	**721**	**130**	**4**	**583**	**4**	**3858**	**2099**	**688**

Note: Data obtained from National census 2002.

Table 2.: Characteristics of households.

#N	District/ Sakrebulo/Village	Size of household (persons)	Agricultural land total (ha)	Arable (ha)	Perenial ha)	Pasturies (ha)	Livestock (head)	Cow and buffalo cow (head)	Goat and sheep (head)
	Mestia district								
	Becho sakrebulo								
17	Chokhuldi	3,21	1,42	0,25	0,00	1,13	4,79	2,75	0,33
18	Mazeri	3,20	1,39	0,39	0,00	0,98	5,34	4,26	0,77
19	Tvebishi	3,50	1,64	0,29	0,00	1,36	5,64	3,14	
20	Ushkhvanari	8,81	1,14	0,24	0,00	0,89	6,49	5,05	1,35
21	Bagvdnari	8,40	2,35	0,40	0,00	1,95	8,15	5,70	0,60
	Nakra sakrebulo								
22	s. nakra	4,31	1,93	0,21	0,04	1,66	8,18	4,75	0,51
23	s. kiCxuldi	3,00	3,00	0,25	0,00	2,75	13,75	5,25	
	Wuberis sakrebulo								
24	Zemom marli	4,96	0,57	0,13	0,00	0,43	5,04	2,57	
25	Qvemo marli	8,32	1,55	0,27	0,00	1,27	5,09	2,86	
26	Larilari	5,60	0,87	0,20	0,00	0,67	3,93	3,07	
27	Sgurishi	4,84	0,74	0,16	0,00	0,58	5,09	3,19	
28	Tita	2,33	1,00	0,33	0,00	0,67	4,33	3,33	
	Khaisha sakrebulo								
29	Idliani	4,12	0,44	0,15	0,00	0,28	3,46	1,88	
30	Leburtskhila	5,92	0,33	0,08	0,00	0,25	5,17	3,00	0,33
31	Qbemo vedi	3,04	0,30	0,15	0,00	0,15	2,59	1,44	
32	Zeda vedi	13,50	0,50	0,00	0,00	0,50	3,50	1,50	
33	Khaishi	3,26	0,31	0,09	0,00	0,22	3,49	2,10	0,36
	Ushguli sakrebulo								
34	Chajashi	4,86	3,29	0,00	0,00	3,29	9,14	4,70	5,00
35	Murkmeli	4,00	3,00	0,38	0,00	2,63	13,63	7,00	6,88
36	Jibiani	6,31	1,62	0,15	0,00	1,46	11,46	5,60	9,58
37	Cvibiani	5,80	2,20	0,00	0,00	2,20	16,00	7,90	12,20
	Total avarage	**5,30**	**1,41**	**0,20**	**0,00**	**1,21**	**6,87**	**3,86**	**3,45**

Note: Data obtained from national census 2002 and agricultural census 2004.

Table 3. Average income from agriculture.

DISTRICT	PER CAPITA MONTHLY INCOME FROM AGRICULTURAL PRODUCTION (IN GEL)	CASH EARNED FROM SELLING PRODUCTS (in % of total income).
Mestia	40 - 60	5- 15

Note: Data from interviews.

Table 4: Size of agricultural plots per household.

N	District/ Sakrebulo/ Village	Farming without land	Farming with land (total)	less than 0.06 ha	0.06-0.09 ha	0.1-0.19 ha	0.2 -0.49 ha	0.5- 0.99 ha	1 - 1.99 ha	2-2.99 ha	3-3.99 ha	4-4.99 ha	5-9.99ha
	Mestia district												
	Becho sakrebulo												
17	Chokhuldi		24			1	4	4	10	1	3	1	
18	Mazeri		61			1	4	14	33	6	2	1	
19	Tvebishi		14					3	7	4			
20	Ushkhvanari		37			1	1	12	19	3	1		
21	Bagvdnari		20				1	2	4	6	7		
	Nakra sakrebulo												
22	s. nakra		89				12	9	28	19	20	1	
23	s. kiCxuldi		4						2	1			1
	Wuberis sakrebulo												
24	Zemom marli		23				10	9	4				
25	Qvemo marli		22					6	9	7			
26	Larilari		15					6	9				
27	Sgurishi		43				9	22	12				
28	Tita		3				1		2				
	Khaisha sakrebulo												
29	Idliani		78	2		3	39	34					
30	Leburtskhila		12			3	6	3					
31	Qbemo vedi		27	4		4	15	4					
32	Zeda vedi		2				1	1					
33	Khaishi	1	169	54	7	23	34	39	11	1			
	Ushguli sakrebulo												
34	Chajashi		7						1	1	4		1

35	Murkmeli		8				1	1	1	2	1	1	1
36	Jibiani		26			1		3	15	6	1		
37	Cvibiani		10				1	1	3	3	1		1
	Total	1	694	60	7	37	139	173	170	60	40	4	4
	Percent		100	8.65	1.01	5.33	20.03	24.93	24.50	8.65	5.76	0.58	0.58

Note: Data obtained from agricultural census 2004.

Table 5.: Grazing pressure.

District	Pastures all*)	of which			Livestock(x1000)	of which cows and buffalo cows (x 1000)	Sheep and goat (x 1000)	Total head of livestock.(x 1000)	pressure on pastures :(head of livestock/ha)
		Pastures within the farms**)	Pastrures within the National Park***)	Pastures adjacent to the villages **)					
Mestia	99.3	0.503	41.267	57.53	12.596	7586	2154	13,135	0.13

**) data from 2003 of department of cadastre, in thousand ha*
***) data from agricultural census of 2004, in thousand ha*
****) data from present management plan, in thousand ha.*

T*able 6. Number of resident inhabitants in USPL.*

#N	district/ sakrebulo/ village	Resident		
		Total	Men	Women
	Mestia district	**11451**	**5520**	**5931**
1	**Mestia**	**2582**	**1234**	**1348**
	Becho sakrebulo	**1292**	**616**	**676**
2	Dolasvifi	174	76	98
3	Bagvdanari	168	85	83
4	Doli	162	79	83
5	Mazeri	198	92	106
6	Lankhvri	29	17	12
7	Nashtqoli	43	17	26
8	Tvebishi	49	20	29
9	Ushkhvanari	228	109	119
10	Qartvani	88	47	41
11	Chkidanari	76	37	39
12	Chokhuldi	77	37	40
	Etseri sakrebulo	**925**	**444**	**481**
13	Iskari	148	71	77
14	Barshi	125	55	70
15	Gvalderi	12	4	8
16	Kalashi	77	35	42
17	Ladreri	80	39	41
18	Lanteli	52	21	31
19	Lashkhreri	31	20	11
20	Usgviri*)	15	8	7
21	Ugvali	16	7	9
22	Pkhutreri	58	31	27
23	Kurashi	17	9	8
24	tsalanari	48	22	26
25	Cheliri	120	62	58
26	Hebudi	126	60	66
	Ipari sakrebulo	**390**	**192**	**198**
27	Borgeshi	128	60	68
28	Adishi	60	33	27
29	Zegani	117	59	58
30	Nakipari	85	40	45
	Kala sakrebulo	**172**	**77**	**95**
31	Lalkhori	54	22	32
32	Davberi	44	20	24
33	Vichnashi	30	15	15
34	Iprari	41	18	23
35	Xe	3	2	1
	Latali sakrebulo	**1472**	**708**	**764**
36	Ienashi	604	279	325
37	Ipkhi	135	75	60
38	Kvanchianari	174	85	89
39	Lakhudshi	61	35	26
40	Lahili	24	9	15
41	Lelbagi	26	15	11
42	Leshukvi	31	13	18
43	Matskhvarishi	320	150	170
44	Nankvam-Zagrali	50	23	27
45	Sidianari	9	4	5
46	Shkaleri	38	20	18
	Lakhumula sakrebulo	**181**	**88**	**93**
47	Lakhumula	118	63	55
48	Nodashi	16	8	8

49	Shdikhiri	14	6	8
50	Hamashi-Totoleshi	33	11	22
	Lenjeri sakrebulo	**1178**	**550**	**628**
51	Lemsia	261	128	133
52	Kaeri	46	16	30
53	Lashtkhveri	194	88	106
54	Nesguni	318	145	173
55	Soli	162	81	81
56	Kashveti	111	52	59
57	Heshkili	86	40	46
	Mulakhi sakrebulo	**1011**	**511**	**500**
58	Cholashi	183	87	96
59	Artskheli	84	41	43
60	Zardlashi	7	4	3
61	Lakhiri	165	85	80
62	Majvdieri	26	15	11
63	Murshkeli	47	21	26
64	Jabeshi	152	81	71
65	Jamushi	35	18	17
66	Gvebra	49	20	29
67	Chvabiani	194	107	87
68	Tsaldashi	69	32	37
	Nakra sakrebulo	**396**	**207**	**189**
69	Nakra	384	200	184
70	Kitskhuldashi	12	7	5
	Ushguli sakrebulo	**289**	**137**	**152**
71	Chajashi	33	17	16
72	Murkmeli	33	18	15
73	Jibiani	164	76	88
74	Chvibiani	59	26	33
	Pari sakrebulo	**364**	**169**	**195**
75	Pari	83	42	41
76	Zagari	15	8	7
77	ZedaLuha	61	28	33
78	Katskhi	42	18	24
79	Lamkheri	19	9	10
80	Svipi	11	3	8
81	Kveda Luha	86	40	46
82	Geshderi	35	16	19
83	Khosrari	12	5	7
	Tskhumari sakrebulo	**603**	**286**	**317**
84	Svipi	118	46	72
85	Labskaldi	58	29	29
86	Lezgara	72	34	38
87	Magardeli	160	82	78
88	Tviberi	106	52	54
89	Gvebaldi	89	43	46
	Tsvirmi sakrebulo	**596**	**301**	**295**
90	Tsvirmi	410	210	200
91	Ieli	186	91	95

*Data from **census** 2002.*

Table 7. Social-economic characteristics of the villages within the USPL.

#N	district/ sakrebulo/ village	Population(man)	household (total)	Agricultural land used by farming (ha)	of which				Livestock (had)	of which	Goat and sheep (head)
					Arable (ha)	perennials (ha)	Pastures (ha)	other (ha)		Caws and buffalo caws (head)	
	Mestia district	**11438**	**2475**	**4862**	**634**	**12**	**4202**	**14**	**12872**	**7285**	**1962**
1	**Mestia**	**2575**	**557**	**935**	**87**	**3**	**845**		**1347**	**856**	**7**
	Becho sakrebulo	**1287**	**262**	**372**	**80**		**290**	**3**	**1557**	**918**	**192**
2	Dolasvifi	174	28	37	6		31		166	101	
3	Bagvdanari	168	20	47	8		39		163	102	12
4	Doli	162	42	44	11		32	1	279	163	52
5	Mazeri	195	61	85	24		60	1	326	213	47
6	Lankhvri	29	5	13	2		11		36	18	6
7	Nashtqoli	43	8	20	4		16		40	16	9
8	Tvebishi	49	14	23	4		19		79	44	
9	Ushkhvanari	226	37	42	9		33		240	137	50
10	Qartvani	88	19	21	4		17		75	43	8
11	Chkidanari	76	4	6	2		5		38	23	
12	Chokhuldi	77	24	34	6		27	1	115	58	8
	Etseri sakrebulo	**925**	**210**	**669**	**74**	**0**	**591**	**4**	**994**	**705**	**138**
13	Iskari	148	33	84	10		73	1	129	98	11
14	Barshi	125	27	70	10		59	1	113	81	21
15	Gvalderi	12	3	15	1		14		15	11	
16	Kalashi	77	15	72	7		65		72	52	
17	Ladreri	80	21	90	6		84		108	69	
18	Lanteli	52	10	36	3		33		50	34	
19	Lashkhreri	31	8	29	3		26		32	26	
20	Usgviri*)	15									
21	Ugvali	16	1	3			2	1	4	3	
22	Pkhutreri	58	18	56	4		51	1	109	64	12
23	Kurashi	17	4	12	2		10		20	16	3
24	tsalanari	48	9	40	3		37		80	48	4
25	Cheliri	120	28	73	14		59		115	93	87
26	Hebudi	126	33	89	11		78		147	110	
	Ipari sakrebulo	**387**	**126**	**520**	**44**	**0**	**475**	**1**	**700**	**330**	**47**
27	Borgeshi	128	43	159	14		145		214	89	13
28	Adishi	60	15	89	5		83	1	144	52	22
29	Zegani	117	30	133	13		120		214	116	12
30	Nakipari	82	38	139	12		127		128	73	
	Kala sakrebulo	**172**	**27**	**148**	**15**	**0**	**133**	**0**	**269**	**128**	**74**
31	Lalkhori	54	6	32	4		28		50	24	16
32	Davberi	44	9	47	5		42		86	41	40
33	Vichnashi	30	4	23	2		21		42	19	7
34	Iprari	41	6	39	3		36		79	38	2
35	Xe	3	2	7	1		6		12	6	9
	Latali sakrebulo	**1478**	**292**	**173**	**47**	**1**	**123**	**1**	**1534**	**800**	**105**
36	Ienashi	605	95	43	14		29		498	235	14

37	Ipkhi	135	18	8	4		4		126	60	22
38	Kvanchianari	174	40	26	6		20		224	113	2
39	Lakhudshi	61	34	24	5		18		221	136	25
40	Lahili	24	3	1			1		9	4	
41	Lelbagi	26	2	2			1	1	16	9	7
42	Leshukvi	31	6	4	1		3		33	17	2
43	Matskhvarishi	320	53	43	11		32		235	127	19
44	Nankvam-Zagrali	55	11	10	1		9		23	5	
45	Sidianari	9	2	1			1		4	3	
46	Shkaleri	38	28	11	5	1	5		145	91	14
	Lakhumula sakrebulo	**181**	**52**	**73**	**6**	**0**	**67**	**0**	**439**	**241**	**21**
47	Lakhumula	118	34	44	4		40		208	94	9
48	Nodashi	16	5	3			3		34	17	
49	Shdikhiri	14	7	5	1		4		136	99	
50	Hamashi-Totoleshi	33	6	21	1		20		61	31	12
	Lenjeri sakrebulo	**1179**	**215**	**358**	**66**	**0**	**292**	**0**	**885**	**461**	**4**
51	Lemsia	261	43	53	16		37		184	97	4
52	Kaeri	47	10	23	2		21		31	17	
53	Lashtkhveri	194	32	28	9		19		140	71	
54	Nesguni	318	60	45	14		31		236	118	
55	Soli	161	28	69	9		60		111	58	
56	Kashveti	111	41	136	16		120		153	85	
57	Heshkili	87	1	4			4		30	15	
	Mulakhi sakrebulo	**1007**	**202**	**514**	**84**	**4**	**423**	**3**	**1740**	**1107**	**755**
58	Cholashi	179	36	78	13	2	63		354	243	110
59	Artskheli	84	20	39	5		34		99	50	37
60	Zardlashi	7	2	6	1		5		7	5	4
61	Lakhiri	165	28	92	21		71		318	140	206
62	Majvdieri	26	5	12	2		10		33	21	2
63	Murshkeli	47	9	40	4		36		93	39	84
64	Jabeshi	152	35	74	12	2	60		296	261	168
65	Jamushi	35	7	31	5		26		59	27	30
66	Gvebra	49	9	25	3		22		64	37	18
67	Chvabiani	194	41	99	15		82	2	367	252	77
68	Tsaldashi	69	10	18	3		14	1	50	32	19
	Nakra sakrebulo	**396**	**93**	**184**	**20**	**4**	**159**	**1**	**783**	**399**	**45**
69	Nakra	384	89	172	19	4	148	1	728	378	45
70	Kitskhuldashi	12	4	12	1		11		55	21	_
	Ushguli sakrebulo	**288**	**51**	**111**	**7**	**0**	**104**	**0**	**631**	**314**	**461**
71	Chajashi	34	7	23			23		64	33	35
72	Murkmeli	32	8	24	3		21		109	56	55
73	Jibiani	164	26	42	4		38		298	146	249
74	Chvibiani	58	10	22			22		160	79	122
	Pari sakrebulo	**364**	**85**	**217**	**20**	**0**	**196**	**1**	**470**	**271**	**52**
75	Pari	83	20	42	4		38		109	66	8
76	Zagari	15	1	5	1		4		10	5	
77	ZedaLuha	61	12	29	2		27		64	35	12
78	Katskhi	42	19	39	4		35		89	48	4
79	Lamkheri	19	9	30	3		27		59	30	16
80	Svipi	11	1	4			3	1	10	16	
81	Kveda Luha	86	13	27	3		24		56	29	0
82	Geshderi	35	7	29	2		27		52	29	9
83	Khosrari	12	3	12	1		11		21	13	3

	Tskhumari sakrebulo	**603**	**204**	**265**	**39**	**0**	**226**	**0**	**741**	**436**	**0**
84	Svipi	118	68	45	13		32		283	161	
85	Labskaldi	58	17	12	2		10		33	20	
86	Lezgara	72	28	130	7		123		102	61	
87	Magardeli	160	30	19	5		14		64	37	
88	Tviberi	106	35	32	7		25		141	83	
89	Gvebaldi	89	26	27	5		22		118	74	
	Tsvirmi sakrebulo	**596**	**99**	**323**	**45**	**0**	**278**	**0**	**782**	**319**	**61**
90	Tsvirmi	410	73	183	29		154		549	224	9
91	Ieli	186	26	140	16		124		233	95	52
	Avarage per one houshold	**4.6**	**1**	**2.07**	**0.26**	**0**	**1.8**	**0**	**5.2**	**2.9**	**0.8**

Note: Data obtained from national census 2002 and agricultural census 2004.

**) there is no cadastral data about agricultural areas.*

ANNEX 7. Principles of environmental management.

The IUCN approach.

The IUCN, The International Union for Nature Conservation, developed initiatives to protect the ecological value of landscapes. To that end a classification was developed as shown in BOX 1:
This classification is now commonly accepted as a basis for legislation in many countries throughout the world. Leading criteria for selection are the natural and cultural values of the area and its social and economic importance for the local inhabitants. See IUCN (1994).

BOX 1: IUCN Classification of protected areas.

> ***I^a Strict Nature Reserve and I^b Wilderness Area:*** Protected area managed mainly for science and for wilderness protection.
> ***II National Park:*** Protected area managed mainly for ecosystem protection and recreation.
> ***III Natural Monument:*** Protected area managed mainly for conservation of specific natural features.
> ***IV Habitat/Species Management Area:*** Protected area managed mainly for conservation through management intervene tion.
> ***V Protected Landscape/Seascape:*** Protected area managed mainly for landscape/seascape conservation and recreation.
> ***VI Managed Resource Protected Area:*** Protected area managed mainly for the sustainable use of natural ecosystems

The Georgian legislation for protected areas fully complies with the above classification and the protection status of the protected areas was selected according to this classification.
The IUCN also developed qualitative criteria for the assessment of the ecological value of protected areas. These criteria include the area sufficiency, biodiversity, the rarity and typicalness of the territory and the potential for rehabilitation in case of loss of naturalness. In recent year this evaluation method has been expanded to a more quantitative environmental assessment method based upon the Total Economic Value approach. In this approach the various functions of nature are valued in monetary terms

The WHC approach.

The World Heritage Committee, the body responsible for the implementation of the World Heritage Convention, developed guidelines for the selection of World heritage Sites. Initially attention was focused on cultural aspects using the selection criteria shown in the BOX 2.

BOX 2: Selection criteria WHC , cultural aspects.

(i) represent a masterpiece of human creative genius;
(ii) exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design;
(iii) bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;
(iv) be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;
(v) be an outstanding example of a traditional human settlement, land-use, or sea-use which is representative of a culture (or cultures), or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change;
(vi)be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance (The Committee considers that this criterion should preferably be used in conjunction with other criteria) ;

ICOMOS, the International Council on Monuments and Sites and ICCROM, the International Centre for the Study of the Preservation and Restoration of Cultural Property developed the scientific base for the evaluation of potential sites. Obviously the emphasis in this approach was on the cultural aspects of the sites.

In 1992 the WHC agreed that cultural landscapes could meet criteria to become a World heritage Monument and the WHC defined a TYPE for cultural landscapes and developed related selection criteria (See Box 2).

BOX 3: Selection criteria WHC, ecological aspects

(vii) contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance;
(viii) be outstanding examples representing major stages of earth's history, including the record of life, significant on-going geological processes in the development of landforms, or significant geomorphic or physiographic features;
(ix) be outstanding examples representing significant ongoing ecological and biological processes in the evolution and development of terrestrial, fresh water coastal and marine ecosystems and communities of plants and animals;
(x) contain the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation.

The MAB approach.

Many areas suffer from biodiversity loss due to inexpert use of land and natural resources. In 1970 the Man and biosphere programme was launched by the UNESCO. The Man and the Biosphere Programme (MAB), proposes an interdisciplinary research agenda and capacity building aiming to improve the relationship of people with their environment globally. It notably targets the ecological, social and economic dimensions of biodiversity loss and the reduction of this loss. It uses its World Network of Biosphere Reserves as vehicles for knowledge-sharing, research and monitoring, education and training, and participatory decision-making.
One of the objectives of the Man and Biosphere program (MAB) is to improve land use planning and management in rural areas. MAB publication 24 focuses on land use changes in rural areas in Europe and the related impact of these changes on the environment and gives recommendations on how to address these problems. See MAB publication No. 24 and Kronert, R et al (1999)
The paper emphasizes that there is no generally accepted approach for land use planning, given the complexity of the problem and the variety in local conditions. Still it can be concluded that a general planning framework can be helpful to analyse the driving forces between land use changes in the past and to predict the effect of land use planning in future.
Such a framework should include the following most important components:

- The natural environment (the relief, subsoil, climate , hydrology and vegetation)
- The socio economic and political conditions at various planning levels (individual, community, regional and national).
- Traditions and culture
- Knowledge, skills and technology.

As stated in the synthesis report the economic conditions and the political system of the country in the previous century has been largely responsible for the poor economic situation in the region. This in its turn had a negative effect on the number of inhabitants, the level of education and agricultural skills and lack of technological means. This aggravated the situation at the local level even further and has driven many individuals into poverty. Natural resources and land were used in a non sustainable way in order to survive, despite the fact that local traditions and culture was based upon a harmonious coexistence of man and nature.

The integrated approach.

In the beginning of this century initiatives have been developed to integrate the IUCN and WHC approach and to develop general guidelines to evaluate and classify the three dimensions of mixed types of landscape: the natural value, the cultural value and its socio economic importance. To that end ICOMOS and IUCN submitted in 2006 a discussion paper to the plenary meeting of the WHC for approval.

The paper elaborates the criteria for selection of landscapes that were formulated in the Guidelines of WHC (criteria vii to x) and gives recommendations for a further refinement: These refinements should be used to define the criteria for selection of landscapes as a world heritage monument: a monument of outstanding and universal value.
The paper clearly emphasizes that the number of such monuments is limited but that other monuments that do not meet these criteria could still be included in national or regional protection schemes. This is shown schematically in the Figure below.

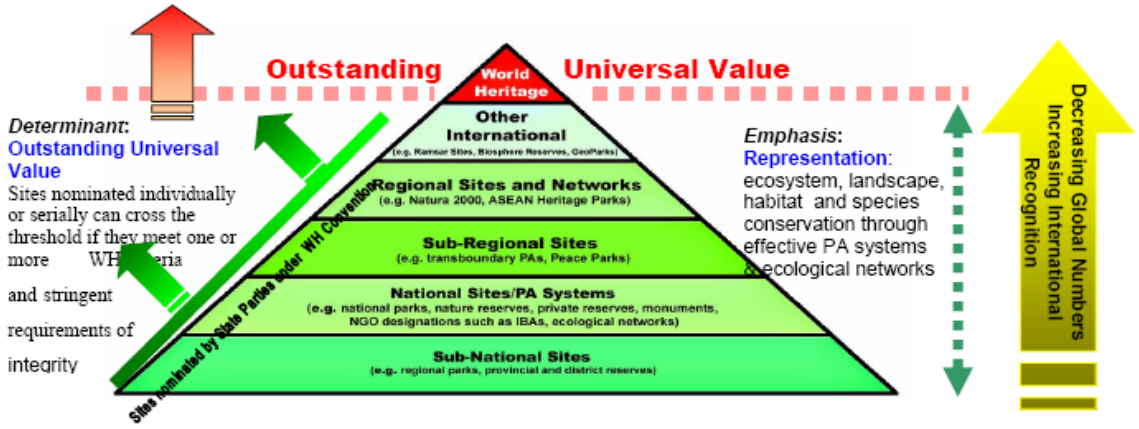

Figure 1 **Schematic representation of the relationship of World Heritage sites to other types of protected areas in terms of *outstanding universal value* and representation of natural heritage (Source: UNEP-WCMC, 2004)**

The protected landscapes in the Central Caucasus planning area are of National to Sub regional (Caucasian) importance . It may move up to a higher level once a proper Protected area Management network is in place and may ultimately reach the status of World heritage Monument. For that reason the planning and management arrangements should comply with these guidelines.
The document refines the following criteria:

Vii: Natural phenomena and natural beauty.
This criterion includes superlative natural phenomena, that can be quantified objectively, and exceptional natural beauty that is a more subjective criterion. The paper recommends that more objective measures be developed on a worldwide basis.

Viii: Geological processes.
This criterion includes four different elements:

- The earth's history
- The record of life
- Ongoing geological processes
- Geomorphic or physiographic features.

Each of these elements is described below

(a) Earth history.
This subset of geological, as opposed to geomorphologic, features is represented by phenomena that record important events in the past development of the planet such as:
the record of crustal dynamics and tectonics, linking the genesis and development of mountains, volcanoes, plate movements, continental movement and rift valley development;
records of meteorite impacts; and
records of glaciations in the geological past.
Properties in this category are considered to be of outstanding universal value in exhibiting elements of earth history through rock sequences or associations rather than fossil assemblages.

(b) Record of life.
This subset includes palaeontological (fossil) properties. An IUCN thematic study (Wells, 1996) considers the role of such properties in the World Heritage List and provides a framework for their assessment.

(c) Significant on-going geological processes in the development of landforms.
This element is the first of two aspects related to geomorphology and ongoing geological processes, such as volcanic eruptions. It relates to active processes that are shaping or have shaped the Earth's surface. Properties recognised under this element include those that are of outstanding universal value as examples of:

- arid and semi-arid desert processes;
- glaciation;
- volcanism;
- mass movement (terrestrial and submarine);
- fluvial (river) and deltaic process processes; and
- coastal and marine processes.
-

(d) Significant geomorphic or physiographic features.

This second primarily geomorphologic element represents the landscape products of active or past processes, which can be identified as significant physical landscape features. Criterion (viii) recognizes these features in relation to their scientific value: however, frequently they may also be of aesthetic value. Properties recognised within this part of the criterion may include those of outstanding universal value as:

- desert landforms;
- glaciers and ice caps;
- volcanoes and volcanic systems, including those that are extinct;
- mountains;
- fluvial landforms and river valleys;
- coasts and coastal features;
- reefs, atolls and oceanic islands;
- glacial and periglacial landforms, including relict landscapes; and
- caves and karst.

ix and x: Ecological and Biological Processes and Biological diversity.

These are covered by the IUCN criteria.

ANNEX 8. Infrastructure for visitors.

The general and brief characteristics of the tourist infrastructure are given below:

Trail 1 from Ushguli Temi to the catchment basin of r. Rioni.

Route: Ushguli Temi - r. Shavtskhala – Kvishara (left tributary of r. Enguri) gorge – Zagaro pass (2623 m) – r. Koruldashi gorge to the mouth of r. Zeskho – r. Zeskho gorge – crest of Zeskho ridge (2430 m) – r. Tskhenistskhali creek – Vatsitsveri pass (2910 m) on Lechkhumi ridge – catchment basin of r. Rioni (Upper Racha).

This trail connects Upper Svaneti (r. Enguri creek, Ushguli Temi) with Lower Svaneti (Lentekhi district, gorge of the right tributary of r. Tskhenistskhali – Koruldashi) and Upper Racha (Oni district, r. Rioni creek). An autoroad (length – approximately 25 km) is constructed from the mouth of r. Zeskho and Koruldashi to Ushguli Temi but the road cannot be used in winter and needs to be repared annually. If the road is repaired it can be used from June till end of October. The trail can be used by both hikers and riders. The route takes four days by foot and two days on horseback.
Accommodations for the first night, for hikers from Ushguli Temi should be arranged at the bottom of the gorge of r. Koruldashi where r. Zeskho flows into it. It is proposed to locate accommodation for the second night in the upper reaches of the gorge of r. Tskhenistskhali where it is joined by r. Lafuri near the ruins of an old farm house. Accommodation for the third night will be arranged in the gorge of r. Rioni, where it is joined by Sasvanostskhali.
The route could be extended to the gorge of r. Koruldashi, where mineral springs and the ruins of an old farm can be found. In this case the route takes two more days and the accommodation for the night shall be provided near the ruins of the old farm-house. After spending the night the tourists can return to Ushguli Temi.

The route crosses beautiful sub-alpine, alpine, sub-nival and nival landscapes. In clear weather the peaks of Shkhara (5201 m), Namkvami (4233 m), Ailama (4547 m) and Tsurungali (4250 m) of the main watershed of Caucasus and connected glaciers can be seen; the masses of permanent snow and ice colored in various shades of silver and white are especially impressive.

Trail 2 from the Kala Temi (villages Davberi, Ifari, Khalde, etc) to gorge of R. Tskhenistskhali (Lower Svaneti, Lentekhi district).

Route: R. Enguri gorge (Upper Svaneti) – r. Khaldechala creek – Kala – Latfari (2830 m) and Gorovashi (2899 m) passes – R. Tskhenistskhali gorge.

The trail connects Upper and Lower Svaneti, that are separated from each other by the tall and steep Svaneti ridge. The route is for hikers, but can be accessed on horseback too. Hikers are recommended to spend the night at Latfari pass. The approximate length of the route is 15-16 km. An auto road goes from Ifari Temi (Upper Svaneti) to the large village Mestia. From the village Luji (Lower Svaneti) the large village Lentekhi can be reached by car. The route leaves the village Luji and follows the southern slope of Svaneti ridge, covered with beech-birch forests, and the sub-alpine and alpine meadows of the western slope of m. Gorvashi and finishes at the Latfari pass.
In clear weather a spectacular scenery opens up to the tourist; the peaks of Ushba, Shkheldi, Tetnuldi, Jangha, Shkhara, Ailama, located on the crown of the main watershed of Caucasus, and Dikhtau (5204 m) located on the northern branch of Caucasus ridge and the tallest peak of Caucasus – Ialbuzi (5633 m) can be seen. These peaks are especially impressive at dawn when the early morning silver color changes into gold during sunrise. In order to witness this the tourists should spend a night in the vicinity of the old farm at the southern beginning of Latfari pass and should rise at 5-6 a.m.

Trail 3 from Lentekhi - Lueri pass

Route: r. Lasili (right tributary of r. Enguri) gorge – Ifari Temi (villages Bogreshi, Tsvirimi, Nakifari, Zegani, Ieli, etc) – Lueri pass (3128 m) – Lentekhi (Lower Svaneti).

This route is the shortest connection between the administrative center of Lower Svaneti – Lentekhi and the administrative center of Upper Svaneti – Mestia. An automobile road leads from Ifari Temi to Mestia. It is proposed to arrange an overnight camp near the old farm on the northern slope of m. Goldashi (2869 m).

In clear weather the trail offers a fairly picturesque scenery on the giant peaks of Caucasus covered with snow and ice. During the crossing of the Lueri pass the tourists can see a glacier between p. Lasili 92494 m) and Nekfashi (3559 m). The last part of the route crosses slopes covered with beech-birch forestson the southern slope of the Svaneti ridge and beech-fir forests on the northern slope of the Svaneti ridge and passes at higher the alpine meadows.

Trail 4 from the creek R. Kheledura (a right tributary of r. Tskhenistskhali) to the village Iprari (bottom of r. Enguri).

Route: village Iprari (bottom of r. Enguri) - upper part of r. Leshkuri (left tributary of r. Khumfreri) gorge – r. Khelra gorge – Leshkuri pass (3060 m) – village Bavari - Creek R. Kheledura (a right tributary of r. Tskhenistskhali).

This trail connects Lower and Upper Svaneti near p. Leshkuri (3271 m) a pass over the crest of the Svaneti ridge. The route is suitable for hikers, however, horseback riding is recommended. It is recommended to spend a night in the summer hut of the Usgviri shepherds in the gorge of r. Leshkuri. The larger part of the route crosses sub-alpine and alpine meadows; only the last northern part (r. Khelda gorge) goes through fir forests that suffered from tree felling. As from other passes of Svaneti ridge, the Lashkuri pass also offers a good view on the beautiful sites of the Caucasus (north), Egrisi (south-west) and Lechkhumi (south-east) ridges.

Trail 5 from R. Kheledula (a right tributary of r. Tskhenistskhali, Lower Svaneti) to village Khaishi (Upper Svaneti).

Route: R. Kheledula - village Bavari – Khelerdi pass (2565 m) – gorge of r. Khaishura – village Khaishi (Upper Svaneti). –

This trail connects the westernmost part of Lower Svaneti with the westernmost part of Upper Svaneti (mouth r. Nenskra). The first and last parts (r. Kheledula creek and middle and lower parts of Kasleti gorge) are covered with beech-fir and fir forests while its highest part (at the altitude higher than 2000 m above the sea level) – with alpine meadows. The route takes two days. Night accommodation shall be arranged near the summer hut of shepherds located in the area of the r. Urashi - right branch of the upper reaches of r. Khaishura – creek. The route crosses beautiful high mountain forests, sub-alpine, alpine landscapes. In clear weather the main watershed of Caucasus and connected glaciers can be seen.

Trail 6 from the village Lakhami at the bottom of the gorge of r. Nenskra to the gorge of r. Sakeni

Route : Village Lakhami – gorge of r. Lakhami– Lakhami (Chviberi) pass (2741 m) on Kodori ridge – r. Sakeni gorge.

The larger part of the route follows the gorge of r. Lakhami, which is mainly covered with beech, beech-oak and beech-spruce forests that have been parly cut. The upper part of the route passes sub-alpine and alpine meadows and meadow-shrubbery of the Kodori ridge. The route takes two days. Night accommodations shall be arranged in the upper reaches of r. Lakhami, at the summer huts of shepherds on the border of forests and alpine meadows. The trail is meant for hiking but the trip can be made on horseback too.

On the Lakhami pass the tourist has a spectacular view of the Caucasus, Egrisi, Svaneti ridges from al directions.

Trail 7 from the village Naki to Donghuzoruni pass (3203 m).

Route: Village Naki – r. Nakra gorge – Donghuzoruni pass (3203 m).

The trail connects Upper Svaneti (the catchment of r. Enguri) with North Caucasus (the catchment of r. Baxani, Kabardo-Balkaria) through the r. Nakra gorge and Donghuzoruni pass. The first 10 km of the route follows the bottom of r. Nakra gorge covered with fir-birch forests. From an altitude of 2000 m above MSL the route enters sub-alpine, alpine and sub-nival belts and ascends up to the pass. The route takes two days. Accommodation for overnight stay shall be arranged near the summer hut of shepherds located in the area where the trail leaves the forests and enters the alpine meadows. The trail is accessible for hikers, but it is recommended to make the trip on horseback.

The upper part of the route passes between Shtavleri and Tsalgmili branch-ridges; their crowns are covered with permanent snow and glaciers. From this part of the route the rocky peaks of the Caucasus, most of which are covered with permanent snow and glaciers , can be seen to the north.

Trail 8 from the village Dolrasvifi to the Becho pass (3375 m).

Route: Village Dolrasvifi – village Mazeri – upper reaches of r. Dolra gorge – Becho pass (3375 m).

This trail is more easily accessed in comparison with other trails as it follows the passes of the main watershed of the Caucasus. The route connects Upper Svaneti (through the Dolra gorge) with North Caucasus (through the r. Baxani gorge). The route takes two days. Accommodation for overnight stay can be arranged at the above mentioned Southern Shelter.

The first part of the trail offers a good view on the splendid snowy-icy amphitheatre of the southern slope of Caucasus: the Ushba, Shkhelda, Tsalgmili and Donghuzoruni rocky peaks covered with ice and snow that form the very picturesque décor of the amphitheatre.

Trail 9 from the Large village Mestia to the Mestia pass (3750 m).

Route: Mestia - – gorge r. Mestiachala– Lasili glacier – Mestia pass (3750 m).

The first part of the route follows the gorge of r. Mestiachala, covered with forests, that is relatively easy for hikers. However, the upper part of the route is hard and requires alpinist experience as it follows the ragged surface of the Laisi glacier for about 10 km. The route takes two days. Accommodation for overnight stay should be arranged in the upper reaches of r. Mestiachala, where the forest belt ends and the alpine meadows start. A small cave is located in this area, which could be used by tourists.

The Ushba, Tetnuldi, Shkhara and other magnificent peaks can be seen from the upper part of the trail.

Trail 10 from the village Jhabeshi (the highest villages of r. Lukhura gorge) to the Tviberi pass (3607 m).

Route: Village Jhabeshi – gorge of r. Tviberi (a right tributary of r. Mulkhura) – Tviberi glacier – Tviberi pass (3607 m).

The first 5 km of the route follows the r. Tviberi gorge covered with forests. At an altitude higher than 2400 m above MSL the trail crosses the Tviberi glacier for approximately 11 km. This part of the route is difficult and requires experience in mountain tourism.

Like other routes that pass the main watershed of Caucasus, this trail crosses also a landscape that is typical for alpine ridges and is, therefore, a very interesting object for tourists.

Trail 11 from the village Jhabeshi to the Semi (Tsaneri) pass.

Route: Village Jhabeshi – gorge of r. Tsaneri (upper reaches of r. Mulkhura) – Tsaneri glacier – Semi (Tsaneri) pass.

After the village Jhabeshi the route follows the gorge, covered with forests, for 5 km, then joins the Tsaneri glacier for 8 km and climbs to the Semi pass. e. The route takes two days. Accommodation for overnight stay will be arranged at the tongue of the Tsaneri glacier.

This trail is the hardest of all trails and requires special alpinist experienc.

Trail 12 from the Village Adishi to the tongue of the Adishi glacier.

Route: The trail heads to the east from village Adishi; it follows the bottom of the gorge of r. Adishi (right tributary of r. Enguri) and reaches the Adishi glacier. After spending the night tourists can continue the trip on the left bank of r. Adishischala, climb towards the Chunderi pass (2720 m) on the Lagilda-Zagari ridge and proceed to the gorge of r. Khaldechala (a right tributary of r. Enguri); from this point they shall travel to the large village Mestia.

Absolutely unique “Icy Waterfall” of Adishi glacier can be observed on this trail.

Resting places.

The following resting places are planned along the nature trails**.**

Trail 1: On the Zagaro pass near the mineral spring in the former residential area of Koruldash, in the gorge of r. Zeskho where the former alpine camp of Zeskho was located;

Trail 2: 5 km from the village Luji and 2.5 km north of the Latfari pass at the border of the forests and the sub-alpine belt, on the western slope of m. Goruvashi (2793 m);

on the northern slope of Svaneti ridge at the border of sub-alpine and forest belts;
Trail 3: On m. Goldashi (2869 m) near the bridge in the middle reaches of the gorge of r. Lasili (a right tributary of r. Enguri) ;
Trail 4: At the Leshkhuri pass;
at the summer hut of shepherds at r. Khelra (left tributary of r. Enguri) creek;
Trail 5: Near the summer hut of shepherds in the sub-alpine belt of r. Khelerdi creek;
Khelerdi pass; at the summer hut of shepherds near the mouth of r. Tkheishi and Urashi (branches of r. Khaishura creek);
Trail 6: At Lakhami summer farm 6 km from the village Lakhami;
Trail 7: At the former Nauka tourist camp located in the gorge of r. Naki;
Trail 8: About 5 km north of the village Mazeri, at the former tourist camp on the left side of r. Dolra;
Trail 9: About 8 km north of the large village Mestia at the summer hut of shepherds located at the right bank of the gorge of r. Mestiachala;
Trail10: Near village Jhabeshi along r. Tviberi (a right tributary of r. Mulkhra) near the mouth of a stream flowing down from p. Tviberi (3541 m)
Trail 11: Along the right edge of the Tsaneri glacier at an altitude of 2700 m above MSL;
Trail 12: On Chkhunderi pass (2720 m);

Camp sites for overnight stay.
The following camp sites are planned along the trail:

Leshkuri – crown of Svaneti ridge, Leshkuri (3061 m) pass area, northern slope of Svaneti ridge, at the summer hut of shepherds on the alpine meadow in the upper reaches of the gorge of r. Leshkuri (a left tributary of r. Khumfreri);
Urashi – on the northern slope of the Egrisi (Samegrelo) ridge, west of the Khelerdi pass (2565 m), in the upper reaches of the catchment basin of r. Urashi (a right tributary of r. Khaishura), at the summer huts of shepherds on the right side of the gorge;
Lakhami – the upper reaches of r. Lakhami (a right tributary of r. Nenskra), at the summer hut of shepherds located in the sub-alpine belt of the eastern slope of Kodori ridge;
Nakra – upper reaches of r. Nakra (right tributary of r. Enguri) gorge, at the summer hut of shepherds on the sub-alpine meadow at the foot of the eastern slope of Basa pass (3030 m);
Southern Shelter – upper reaches of the gorge of r. Dolra (a right tributary of r. Enguri), near the mouth of the streams flowing from Dolra and Kvishi glaciers;
Cave – upper reaches of r. Mestiachala (right tributary of r. Enguri), 2.5 km south of the Lekhsiri glacier, in the sub-alpine belt near a small cave;
Tviberi – the upper reaches of r. Tviberi (right tributary of r. Mulkhura), in the area where the Tviberi and Kvitlodi glaciers join.
Tsaneri – upper reaches of r. Tsaneri (a branch of r. Mulkhura creek), 1.2 km south of the Tsaneri glacier tongue;
Adishi –0.5 km south-west of the Adishi glacier tongue located in the upper reaches of r. Adishi (a right tributary of r. Enguri).

Bird Watching Places.
Bird watching places are planned in the following locations:

- On the eastern slope of the Lakhami pass, in the sub-alpine belt;
- In the forest belt in the gorge of the r. Nakra at the eastern slope of the Shtavleri ridge near the former tourist camp Nauka;
- On the north-western slope of m. Guli (2925 m) on the left side of the gorge of the r. Dolra in the sub-alpine belt;
- In the gorge of the r. Mestiachala, on the western slope of p. Banguriani (3837 m) near the border between the high mountain forests and the sub-alpine meadows;

Annex 9 Equipment.

9 A: Equipment for site office

№	Description	Unit	Price per Unit (GEL)	Number of units	Subtotal	Total cost	Remarks
1	2	3	4	5	6	7	8
1	Landrover with two bridges	piece	12000	1	12000		probably, UAZ type
2	horse	piece	1500	2	3000		Kabardian horses are recommended (they are adapted to mountain conditions)
3	trailer	piece	1000	1	1000		should be selected according to car specifications
4	water cistern (3 t)	piece	900	1	900		probably plastic
5	photo camera	piece	1500	1	1500		
6	mobile phone	piece	200	1	200		a device with sensitive receiver and requiring less charging should be selected
7	binoculars	piece	200	2	400		
8	revolver or rocket shooter	piece	500	1	500		could be second hand, removed from the armory of the Georgian army, in good working conditions
9	ranger's collection	piece	200	1	200		
10	horse equipment	piece	1250	2	2500		for mountain riding
11	dog	piece	700	1	700		Caucasian sheep dog
12	tent	piece	300	1	300		for two persons
13	sleeping bag	piece	300	2	600		for -20 º C
14	rucksack	piece	250	2	500		
15	light	piece	150	1	150		with charging accumulator
16	rescue rope	set	200	1	200		mountain
17	knife	piece	150	2	300		
18	field teapot	piece	200	1	200		
19	food container	metre	240	1	240		
20	GPS	piece	900	1	900		
21	bed for one person	piece	400	2	800		

22	wardrobe	piece	180	1	180		
23	wall mirror	piece	150	1	150		
24	low table	piece	250	1	250		
25	kitchen dresser-table	piece	600	1	600		
26	wall dresser	piece	800	1	800		
27	fire safety device	piece	250	1	250		
28	vacuum flask	piece	120	1	120		
29	compass	piece	50	1	50		
30	map holder	piece	100	1	100		
31	first aid set	piece	180	1	180		
32	paralon	piece	37,5	2	75		
33	water reservoir (20 l)	piece	50	1	50		
34	fuel reservoir (20 l)	piece	50	1	50		
35	set of forks and knifes	set	15	1	15		
36	set of cups (6 cups)	set	20	1	20		
37	juice bottle	piece	3	1	3		
38	enameled bucket	piece	20	1	20		
39	tea pot	piece	15	1	15		
40	pot set (3 pots)	set	70	1	70		
41	dish set (6 dishes)	set	15	1	15		
42	bowl set (3 type)	set	6	3	18		
43	watch	piece	8	1	8		
44	camp-bed	piece	60	2	120		
45	mattress	piece	30	2	60		
46	blanket	piece	30	2	60		
47	table	piece	200	1	200		
48	gas oven	piece	40	1	40		
49	pillow	piece	7,5	2	15		

50	hammer	piece	8	1	8		
51	pliers	piece	6	1	6		
52	broom	piece	4	2	8		
53	horse tying rope	metre	2	50	100		
54	bed cover	piece	20	2	40		
55	lock	piece	7	1	7		
56	gas balloon with reducer	piece	50	2	100		
57	axe	piece	30	1	30		
58	shovel	piece	8	1	8		
59	spade	piece	6	1	6		
60	lantern	piece	5	1	5		
61	axe blade	piece	15	1	15		
62	trolley	piece	90	1	90		
63	wood oven	piece	50	1	50		
64	hook special	piece	10	1	10		
65	photo camera charger element	piece	9,5	16	152		
66	charger of photo camera element	piece	40	3	120		
67	short sleeve shirt	piece	20	2	40		
68	long sleeve shirt	piece	25	2	50		
69	pants	piece	25	2	50		
70	warm pants	piece	30	2	60		
71	jacket	piece	60	2	120		
72	low shoes	piece	35	2	70		
73	high shoes	piece	45	2	90		
74	vest	piece	30	2	60		
75	warm vest	piece	40	2	80		
76	warm jacket	piece	80	2	160		
77	raincoat	piece	50	2	100		

78	rain pants	piece	20	2	40		
79	hat	piece	10	2	20		
80	warm hat	piece	15	2	30		
81	rain jacket	piece	20	2	40		
82	foot bedding	piece	40	1	40		
83	dustpan	piece	12	2	24		
	Total cost per site office					**32453**	**US$ 15,000.**

9 B: Equipmentfor the Administrative Centers in Ambrolauri and Lentekhi

№	Description	Unit	Price per Unit (GEL)	Number of units	Subtotal	Total cost	Remarks
1	2	3	4	5	6	7	8
A.	**Transport.**						
1	Land rover with two bridges	Piece	50000	1	50000		High class
2	Land rover with two bridges	Piece	35000	2	70000		Medium class
B	**Office equipment**						
3	Laptop	Piece	4000	1	4000		High class
4	Desktop computer	Piece	2000	4	8000		Medium class
5	Desktop computer	Piece	4000	1	4000		High class
6	Photo camera	Piece	2000	1	2000		Medium class
7	Mobile phone	Piece	600	1	600		High class
8	Mobile phone	Piece	400	2	800		Medium class
9	Black and white laser printer	Piece	250	2	500		Medium class
10	Copier	Piece	1600	1	1600		High class
11	Digital camera	Piece	4000	1	4000		High class
12	Video camera case	Piece	200	1	200		
13	Tripod	Piece	700	1	700		

76	Photo camera chargin element	Piece	10	4	40		
77	Charger of photo camera element	Piece	40	1	40		
14	Beamer	Piece	7500	1	7500		Medium class
C	**Other equipment**						
15	Binoculars	Piece	500	3	1500		Medium class
16	Fire arms	Piece	500	3	1500		Second hand possible
17	Set of mechanical tools	Piece	500	1	500		
18	Set of screwdrivers	Piece	300	1	300		
19	Carpenter set	Piece	2000	1	2000		
20	Ranger set	Piece	200	4	800		
21	Hand drill	Piece	250	1	250		
22	Drill sets	Piece	150	1	150		
23	Tent	Piece	300	5	1500		
24	Sleeping bag	Piece	500	10	5000		
25	Back pack	Piece	250	10	2500		
26	Torch	Piece	150	10	1500		
27	Knife	Piece	300	5	1500		
28	Food container	Meter	240	2	480		
29	GPS	Piece	900	5	4500		
30	Teller machine.	Piece	350	1	350		
D	**Furniture**						
31	Table	Piece	900	1	900		High class individual
32	Wardrobe or cupboard	Piece	800	1	800		High class
33	Armchair	Piece	300	1	300		High class
34	Working table	Piece	300	5	1500		Medium class
35	Meeting table	Piece	300	1	300		Medium class
36	Camp sofa-armchair	Piece	300	2	600		
37	Chest of drawers for maps .	Piece	300	1	300		

38	Iron fire resistant safe	Piece	250	3	750		
39	UPS	Piece	650	1	650		High voltage
40	UPS	Piece	350	4	1400		Medium voltage
41	Plotter	Piece	10000	1	10000		
42	Scanner	Piece	900	1	900		
43	Kitchen table	Piece	700	1	700		
44	Office chair	Piece	50	20	1000		
45	Fire fighting equipment	Set	600	1	600		
46	Vacuum flask thermos can	Piece	30	4	120		
47	Compass	Piece	12,5	4	50		
48	Map holder	Piece	50	2	100		
49	First aid kid	Piece	36	4	144		
50	Camping matrass	Piece	37,5	4	150		
51	Water container(20 l)	Piece	50	3	150		
52	Fuel container (20 l)	Piece	50	3	150		
E	**Cutlery**						
53	Set of forks and knifes	Set	15	2	30		
54	Set of cups (6 cups)	Set	20	2	40		
55	Juice bottle	Piece	5	2	10		
56	Enameled bucket	Piece	20	2	40		
57	Tea pot	Piece	15	1	15		
58	Set of pots (3 pots)	Set	70	1	70		
59	Dish set (6 dishes)	Set	15	2	30		
60	Bowel set (3 types)	Set	6	2	12		
F	**Outdoor equipment.**						
61	Watch	Piece	8	2	16		
62	Mattress	Piece	30	1	30		
63	Blanket	Piece	30	1	30		

64	Gas oven	Piece	40	1	40		
65	Pillow	Piece	7,5	1	7,5		
66	Hammer	Piece	8	1	8		
67	Pliers	Piece	6	1	6		
68	Broom	Piece	4	2	8		
69	Bed cover	Piece	20	1	20		
70	Gas bottle with reducer	Piece	50	2	100		
71	Axe	Piece	30	1	30		
72	Showel	Piece	8	2	16		
73	Spade	Piece	6	2	12		
74	Lantern	Piece	5	2	10		
75	Trolley	Piece	90	1	90		
G.	**Clothing and uniforms**						
78	Short sleeve shirt	Piece	20	4	80		
79	Long sleeve shirt	Piece	25	4	100		
80	Pants	Piece	25	4	100		
81	Warm pants	Piece	30	4	120		
82	Jacket	Piece	60	4	240		
83	Low shoes	Piece	35	4	140		
84	High shoes	Piece	45	4	180		
85	Vest	Piece	30	4	120		
86	Warm vest	Piece	40	4	160		
87	Warm jacket	Piece	80	4	320		
88	Raincoat	Piece	50	4	200		
89	Rain pants	Piece	20	4	80		
90	Hat	Piece	10	4	40		
91	Warm hat	Piece	15	4	60		
92	Rain jacket	Piece	20	4	80		

93	Foot bedding	Piece	40	1	40		
94	Dustpan and broom.	Piece	12	2	24		
	Total per administrative center					**202628,5**	**US$ 100,000**

ANNEX10. Thematic maps

10.1. Teritorial-Functional Planning and infrastructure for USNP.

10.2. Teritorial-Functional Planning and infrastructure for USPL.