

Flag

COUNTRY

Ministry of Environment Protection and Natural Resources (MEPNR)

Agency for Protected Areas (APA)

Ecoregional Programme III (Georgia), Kazbegi Project

Cooperation Partner

Logo

Draft Report

**Feasibility Study for the Ecoregional Programme III
(Georgia), Kazbegi Project**

Project Report Nr. 000

20th of December 2009

Logo

Consulting X



DFS

Deutsche Forstservice GmbH

Logo

Consulting Y

EXECUTIVE SUMMARY

1. Introduction

During the intergovernmental consultation in May 2008 it was agreed to assist Georgia in the development of a biosphere reserve with a grant of up to € 4 millions under German Financial Cooperation. This feasibility study is conducted in support of the proposed project to be developed under this agreement. The Project Executing Agency (PEA) is the Ministry of Environment Protection and Natural Resources of Georgia (MEPNR). The Ministry has assigned the Agency for Protected Areas (APA) as project implementation agency (PIA). The consulting services of the Consortium “Deutsche Forst Service GmbH (DFS)” and “AGEG Consultants AG” were retained for the implementation of the Feasibility Study to be finalized between the 2nd of October and the 15th of December 2009.

1.1 Goal and Objectives of the Proposed Project

The overall Goal of the bilateral aid agreement and the proposed project is the consolidation of sustainable economic development and biodiversity conservation in the Kazbegi District. Key objective of the feasibility study is to identify the most suitable option for reaching the overall goal. In accordance with the terms of reference emphasis in the feasibility study is to be placed on the investigation of the biosphere reserve concept as a preferred option by KfW.

1.2 Constraints and Limitations to the Feasibility Study

The most serious constraint to the potential establishment of a biosphere reserve in the Kazbegi region proved to be the strong opposition by local people and any Government interference with local land use issues. Grandfathered traditional land rights and communal land use are fiercely defended with little tolerance to any outside interference. This also is seen as one reason for the low interest shown by local families in obtaining land titles as proof of land ownership, promoted through Georgia’s land reforms from 1998 and 2007.

The past and continuing top-down approach to the planning, establishment and management of protected areas in the Kazbegi Region is considered one of the key root causes for the local opposition and anger. Against this background any attempt for the establishment of a biosphere reserve would meet strong local resistance.

The trust-building measures elaborated and implemented as part of the feasibility study proved to be a serious time constraint to the team consuming too much time to better be spent on the project preparation.

1.3 Methods and Approach

The feasibility study commenced with a comprehensive stakeholder analysis, followed by the definition of the planning area, and a review of the concept of a biosphere reserve compared to a national park and support zone as two potential options meeting the overall goals and objectives of the proposed project. Local stakeholder participation, information exchange and awareness raising were mainstreamed into all components and activities of the following feasibility study. Field work focused on the elaboration of village profiles and the participatory mapping of actual land use providing the basis for the design of proposed quick-start measures and interventions with focus on livelihood stabilization, community enhancement and regional development. In parallel, background information was collected on high biodiversity areas guiding the tentative zoning plan

for the target area and the definition of the proposed conservation areas and best governance structure. Preliminary results of the feasibility study and the consultant Votum were presented to APA and local authorities on the 27th of November 2008 in Tblissi.

2. Situation Analysis

The situation analysis focused on an assessment and description of the (a) biophysical-, (b) socio-cultural-economic-, (c) legal- and policy-, and (c) administrative framework related to the defined planning area. The assessment of existing framework conditions was used for the identification of data gaps and as background for the design of the project components. Key findings are summarized as follows.

2.1 Biophysical Framework

The target area covers the entire water catchment area of the Tergi River with its two main tributaries Baidara and Snostskali. The Tergi River floodplain and rather narrow side valleys are flanked by steep slopes which are prone to geological erosion, land slides and frequent avalanches in winter causing extra hardship to already isolated communities characterized by frequent road closures and power outages.

The flora is typified by high mountain grassland communities of the High Caucasus, interspersed with highly fragmented birch-ash forests patches along lower slopes, sidehills and micro-watersheds and a juniper-rhododendron belt forming the treeline above 2000 m elevation. Prominent fauna of the region includes Caucasian goat, chamoix, brown bear and wolf. The avifauna is richly represented with several species endemic to the area. Numerous plant and animal species reported from the region are listed in Georgia's Red Data Book.

2.3 Socio-cultural Economic Framework

The total population of the target area is 2962 persons (1366 permanent and 114 seasonal families). Of the 2962 registered residents living in the 25 target area 1096 persons are older than 60 years. The population has decreased by more than 50% since 2005 as a result of lack of job- and economic opportunities with poor prospects of improvement. Subsistence agriculture and livestock (mostly dairy cows) have become the main stay of the local economy after the breakdown of the thriving sheep industry and the lucrative produce production using commercial greenhouse operations following Georgia's independence in 1991.

With the majority of younger people abandoning the predominantly rural lifestyle of the target area, the aging population will soon lack the work force needed to expand the rural market economy although the framework conditions for substantially improving the dairy industry are excellent. The potential for the development of the tourism industry in the target area is considered high, pending improved and high quality infrastructure and services and a thorough environmental clean. The mostly nature-based tourism as prime attraction, however, is expected to remain a seasonal activity confined to the summer months.

2.4 Policy and Legal Framework

The legal framework related to the country's protected area system is currently under review. Georgia has adopted IUCN's protected area system including six protected area categories of decreasing protection status. The current interest in the establishment of biosphere reserves in Georgia lacks legal backing, commitment by key stakeholders and sound information on potentially added values of an untested instrument which attempts to harmonize people and their economic

development with nature conservation, compared to the well established system of a national park and support zone providing the same economic and development opportunities.

2.5 Stakeholder Analysis

The national stakeholder analysis focused on APA, the Ministry of Environment Protection and Natural Resources, other Ministries and State Institutions. It also covered national and international NGOs, donors, implementing organizations, academic institutions and the private sector. Low interest in biosphere reserves and indifference to the Kazbegi biosphere proposal proved to be common to all 50 stakeholders interviewed, although all stakeholders were supportive of the proposed biodiversity conservation initiative and the sustainable economic regional development in the target area. None of the stakeholders has on-going or planned projects in the Kazbegi District, except for the Asian Development Bank expressing specific interest in assistance to organized sewage disposal in the Kazbegi Region in tandem with the proposed KfW interventions.

2.6 Problem Analysis

The most visible environmental problems related to the target area are uncontrolled waste disposal and the sheet- and channel erosion marking the steep slopes lining the Tergi River watershed and feeder-streams, caused by excessive livestock activity in the past.

The Kazbegi National Park, originally established to protect the remaining forest fragments scattered throughout the lower Tergi River watershed and side valleys, is in urgent need of re-definition and effective management. Frequent landslides and avalanches in the target area pose a permanent threat to communities, especially in the Sno Valley.

Recognized economic problems relate to the lack of job opportunities and economic alternatives in the target area, and most significantly to a rapidly dwindling and aging population with young people leaving their communities in search for a better life elsewhere.

Grandfathered land use rights, traditional land tenure pattern, and the pronounced anti-authoritarian and anti-government sentiments of the local population are recognized barriers to the establishment of protected areas in state ownership.

3. Proposed Project

3.1 Options for Meeting Overall Goals and Objectives

i) Option Biosphere Reserve. The concept of a biosphere reserve fosters biodiversity conservation to be mainstreamed into the sustainable economic development of rural areas with a high dependency on natural resources. Such areas are generally characterized by unsustainable and poorly controlled land and resource use threatening the ecological integrity of existing core areas of biodiversity conservation and the environment at large. The biosphere reserve concept focuses on people and their needs to be embedded in a sustainable environment.

The feasibility assessment of the biosphere reserve concept to be applied to the Kazbegi Planning Region revealed a very low overall suitability of the target area for the establishment of a biosphere reserve for the following reasons:

- Dwindling population in the Kazbegi target area (since 2005 the population has decreased from 6000 to less than 2900 by 2009 of whom 700 are seasonal residents);
- Unfavourable age class distribution (35% of total population older than 60)
- Rapidly decreasing work force with major impacts on the rural economy;
- Problems in stabilizing the local population and finding the labour market for any economic development, in particular with respect to the rural sector (unattractive lifestyle to young persons) are some of the greatest challenges;
- Insignificant threats to the ecologically most valuable areas of the region (i.e., high mountain grassland ecosystems) not requiring special protection through the establishment of a buffer zone as stipulated by the biosphere statutes;
- No reason for the establishment of a “buffer zone”;
- No reason to impose restrictions on areas not being used as implicit in the term “Buffer zone”;
- Narrow valleys flanked by extremely steep slopes and a continuum of use in a vertical transition not suited for any zoning as mandatory for a biosphere reserve.
- Open hostility of local people to the concept of a biosphere reserve compounding resentment against the existing National Park which needs to be enhanced to make it ecologically viable with or without a biosphere reserve;
- No added value of a biosphere reserve for sustainable biodiversity conservation and economic development of the region compared to well established models (National Park and Support Zone);
- Very poor commitment by local authorities to the concept;
- No clear legal authority for the management of a biosphere reserve in Georgia and insufficient legal framework complicating the issue of establishing a biosphere reserve in contrast to the existing structure of a National Park (and support zone);
- Perceived difficulties in a meaningful and functioning governance model requiring multi-agency cooperation.

ii) Option National Park and Support Zone. This option entails strengthening and substantially expanding the existing Kazbegi National Park to be converted into an ecologically viable conservation area protecting rare high mountain forests and shrublands. Strengthening the existing park is of cardinal importance with or without the establishment of a biosphere reserve. New to the proposed second option (national park and support zone) is the designation, establishment and well targeted economic development of the park’s support zone. The establishment of a national park support zone is a legal requirement specified by Georgia’s Law on Protected Areas.

All 25 communities located in the Tergi River catchment area would form part of the NP support zone. Major advantages of a NP and support zone over the biosphere reserve concept include:

- Existing and sufficient legal framework of a national park and support zone in Georgia with no need of legal amendmends/modifications;
- A national park constitutes a well recognized and widely accepted protected area category allowing for an uncomplicated definition and designation of a support zone;
- The concept of a national park and support zone is easier understood and more acceptable by local people than an unknown biosphere reserve
- The stipulated participatory planning of a support zone allows local stakeholders to formulate land- and resource use policies adapted to their lifestyle and local conditions fostering development of ownership;

- The Kazbegi local people are used to the existence of a national park which is expected to be more acceptable under the right framework conditions (co-management and sustainable economic development of the support zone to be felt at the household level) than an untested, unknown and rather complex biosphere reserve;
- According to Georgia's Law on Protected Areas it is mandatory to elaborate a management plan for the national park and its support zone which covers most of the planning area subject to the feasibility study; in contrast there are no guidelines for the elaboration of a consolidated management plan for a biosphere reserve.
- For the Kazbegi NP to be locally recognized and supported empowerment of local communities through a co-management structure is needed. Co-management would be much less complex and cover both, the NP and support zone (compared to a structure for a biosphere reserve as proposed by the TJS Report involving many more stakeholders, jurisdictions and line ministries) A structure as required for a biosphere reserve makes little sense in an area of low economic development potential, a rapidly dwindling and aging population and an area with few threats to the ecological integrity of the hinterland.

3.2 Comparison of Options and Consultant Votum

The advantages of the option "national park and support zone" compared to the option "biosphere reserve" are apparent. There appears to be no added value of any kind to be offered through a biosphere reserve concept except for its international registration with UNESCO (no monetary nor other tangible benefits are offered by UNESCO for biosphere reserves). The UNESCO label for a biosphere reserve is of questionable value in a country where UNESCO's profile is very low. On a local level, the UNESCO label would be of no consequence.

It is argued that one of the key obstacles for the successful establishment of a biosphere reserve would be its mandatory zoning concept which simply would not be acceptable to local people. Another recognized shortcoming for the successful application of a meaningful economic development as stipulated by the biosphere reserve concept is the lack of people living in a very sparsely settled area. A decreasing and rapidly aging population is simply not conducive to the biosphere concept that intends to connect people with conservation through well guided economic development.

On the other hand, communities appear more open-minded, although still sceptical, regarding the participatory planning of a support zone as part of a national park. The option national park and support zone therefore appears the more suitable alternative also fully meeting the overall goals and objectives of German bilateral aid for the region: "harmonizing biodiversity conservation and sustainable regional economic development for the benefit of the local people".

The Consultant Votum is therefore in favour of Option 2: A strengthened and expanded national park with a well planned and developed support zone involving all stakeholders for the benefit of the local population.

3.3 Project Components

3.3.1 Definition of Planning Area

The definition of the planning area was guided by the following ecological and other criteria: (a) inclusion of the entire water catchment area of the upper Tergi River watershed and tributaries (the proposed boundaries also happen to coincide with the District boundary of Stepantsminda including all of the five Sakrebulo Goristsikhe, Kobi-Gudauri, Sioni, Sno and Stepantsminda).

The question whether to include Gudauri or not appeared to be redundant considering the large and scattered land distribution of the Kobi-Gudauri Sakrebulo covering all of the Truso Valley and the major part of the upper Tergi River water catchment area, all located in the heart of the Tergi River watershed that is considered one single contiguous ecological entity to be included entirely in the planning area. Another key reason for including Gudauri is in view of its major contribution to the Stepantsminda municipal budget (without the Gudauri revenue the municipality could not function).

The **primary ecological reason** for the definition of the planning area (including the Kobi-Gudauri Sakrebulo) has been the main distribution of selected trigger species (flora and fauna) in this eco-regional unit.

3.3.2 Preliminary Planning of the Target Area

The feasibility study presents an opportunity to re-delineate and zone the planning area, based on a rational integrated spatial land planning methodology that takes into account conservation values, land tenure and actual land use. Following approach was chosen for the proposed re-delineation and zoning process: (a) mapping of Key Biodiversity Areas (KBA), using a GIS-based international best practice methodology; (b) assessment of land tenure; and (c) participatory mapping of actual land use as part of the elaboration of village profiles by the feasibility study team.

i) Setting Site-based Conservation Priorities. The overall conservation value of the ecosystems of the Kazbegi Planning Area are underlined by the wide range of threatened species and critical plant ecological units that occur in the Kazbegi District, a fact that is widely acknowledged by leading national and international conservation ecologists.

This recognition clearly justifies the existence and further development of conservation areas of outstanding biodiversity value in the target area not systematically addressed in previous zoning attempts by APA. This led to the elaboration of an ecological gap analysis implemented as part of the feasibility study in order to identify Key Biodiversity Areas (KBA) by employing standard IUCN methodology using “trigger species” and critical plant ecological entities for computerized species distribution- and habitat assessment models (level of endemism and red-listed species), complemented through scoring of a species threat analysis. Based on this analysis species conservation priority scores are calculated. The sum of the priority scores for all selected trigger species is GIS-processed resulting in a consolidated map indicating areas of high ecological importance. The combination of the “Flora and Fauna Map” produced for this feasibility study and the “Global Conservation Value” Map results in the “**Proposed Conservation Area**” Map.

ii) Minimum Critical Size of a Viable Kazbegi National Park. The expansion of Kazbegi National Park to a total of at least 25,000 ha, composed of an eastern and western section

encompassing samples of all ecosystems found in the study area is expected to meet the minimum critical size requirements of a typical mixed High Caucasus Grassland-Shrubland-Forest ecosystem. This is based on the assumption that an area this size is expected to provide viability to the majority of animal species, with animal population densities of 1 individual per 10 ha (or denser), which is enough for most larger herbivores as well as the medium-size predatory mammals (fox size). This should be sufficient in size for the survival of most animal/plant species and plant associations typifying the target area assuming that the proposed Kazbegi National Park is used as a building block of an interlinked protected area system, in which only the combined composition maximises both species diversity and survival durability of all species, including the ones that require larger territories.

3.3.3 Proposed Zoning of Target Area

Based on the identification of Key Biodiversity Areas and the calculation of minimum critical size requirements for a National Park in the target area the following conservation areas are proposed.

i) Proposed Conservation Areas. It is evident that the existing Kazbegi National Park does not meet minimum critical size requirements for the targeted ecosystems to be protected by a national park. It only partially covers important ecosystems currently under-represented by Georgia's protected area system. The proposed Park expansion will result in two park sections, each covering some of the highest biodiversity areas identified for the Kazbegi Region. The eastern section will be one single consolidated area excluding some of the forest fragments currently loosely linked to the park without physical connection between them. The western section –twice the size of the eastern section- encompasses highly diverse habitats extending from the valley bottom to the Kazbegi Glacier. It is hoped that the western section will eventually be consolidated with a protected area to be created on the other side of the international border, jointly forming a contiguous conservation area of formidable size protecting one single ecological (glacially influenced) entity.

Based on the ecological gap analysis four other key areas of high biodiversity importance have been identified. Two of the areas are located in the floodplain of the Tergi River to the north and south of Stepantsminda (Sea-buckthorn communities providing vital winter range for the Greater Caucasus satellite populations of **Great Rosefinch** (*Carpodacus rubicilla*) and **Güldenstädt's Redstart** (*Phoenicurus erythrogaster*). The combined total size of both areas is less than 250 ha.

Another area identified as critical nesting habitat of colony-breeding vultures are the Mt. Kaberjini Cliffs located to the south of the Tergi River between the Truso and Sno Valley. The total area to be protected should be approximately 500 ha.

The Ghudo Gorge has been flagged as an area of key biodiversity importance mainly because of its highly diverse ecosystems harbouring a large species diversity in habitats formed by unique micro-climates in a very differentiated landscape.

ii) Proposed Community-based Hunting Cooperative. The Kazbegi Planning Area offers a unique opportunity for the establishment of a hunting concession, an option discussed with the Ministry's Biodiversity Protection Division as the responsible agency for hunting concessions in Georgia. Hunting concessions in Georgia's past have been mostly affiliated with one single concessionaire, a model not suitable for the Kazbegi planning area where hunting has been a highly traditional and well respected pastime embedded in the local culture. Against this

background it is suggested to establish a community-based hunting cooperative which would allow a continuation of a tradition deeply embedded in local culture, permit recovery of depleted populations of game species, and reduce poaching by outsiders. The highly positive local response to this innovative model for a co-managed hunting block suggests advancing the idea for the benefit of local hunters and wildlife.

3.3.4 Actual Land Use. Actual land use in the target area was assessed through participatory mapping done jointly with community members for each of the 25 communities located in the planning area as part of the village profiling process. The information provided by the communities refers to areas (polygons) used by each village for livestock grazing and hay making only. The obvious low level of actual land use for livestock and hay-making comes as a surprise, possibly reflecting the decreasing human population of the target area and the currently low number of livestock.

3.3.5 Land Tenure. The majority of the rural families in the target area, in particular families living below or at poverty level, are unable to afford the costs associated with the land registration process. This leaves them exposed to land speculators and depriving them of opportunities in accessing bank loans (unregistered land is not accepted as collateral) and/or to sell their land at fair market value. Although the majority of families without a land title in the target area appear to be unable to register their land for financial reasons (can't afford the survey and registration costs), others refuse to engage in legalization of their lands distrusting Government motives, being afraid that the Government will use legal land titles as leverage to impose land taxes. The third group refusing land titles are traditional socialists strongly believing in communal property which historically has been a community affair.

3.3.6 Potential Conflict Areas.

Superimposing the map layers "Actual Land Use" and "Proposed Conservation Units" provides the information needed on potential conflict areas. Identified potential conflict areas can either be eliminated through boundary adjustment or by including such areas in the traditional use zone of the national park. Boundaries of the national park and other designated conservation areas will be subject to negotiations with affected communities/land users as part of the participatory national park and support zone planning process.

The results clearly indicate that there are no visible land use conflicts between actual land use, land tenure and conservation in the proposed Eastern Section of the Kazbegi National Park and the proposed Mt. Kaberjini conservation area.

The only real conflict areas are the two Sea-buckthorn conservation units located in the Tergi River floodplain. Cooperation by local people is therefore essential for the sustainable protection of the two areas.

3.3.7 Trust-building Measures. Ten trust-building measures were selected by workshop participants of the open stakeholder workshop held in Stepantsminda in early November. All ten rather successful measures that were supervised by the Trust-building Measure Committee (five Committee members elected by the workshop participants), have been completed within the timeline of the feasibility study.

3.4 Proposed Interventions

The proposed interventions of the project are aimed at (a) livelihood stabilization and enhancement, (b) community enhancement and development and (c) regional development initiatives. The approach taken for the participatory selection of the proposed interventions of the project has taken the overall project goal into consideration (**harmonization of sustainable regional economic development to benefit local people and biodiversity conservation**), fully addressing the need for profound information on the project and its overall goals, the need to mainstream capacity development into all proposed measures, the need to integrate gender and specific age groups into the project design, and the need to strengthen the presence of APA in the region.

It is realized that the decreasing and aging human population of the target area limits any economic development potential which has been factored into the proposed project.

i) **Quick-start Measures** -to be selected and profiled as requested by the ToR of the feasibility study- include: (a) Brucellosis campaign; (b) Hydro-electric power plant Djuta; (c) Waste management campaign; and (d) Tourism development initiatives (capacity development);

ii) **Priority Measures** -to be selected and profiled as requested by the ToR of the feasibility study- include: (a) Environmental information campaign (use of support groups); (b) Participatory elaboration of the Kazbegi NP Management Plan, Business Plan and Support Zone Development Plan including associated proposed conservation areas, and (c) Integrated Spatial Land Use Planning (ISLUP).

iii) **Other Interventions** selected address: (a) Supporting and expanding dairy industry; (b) Kazbegi (niche) product promotion and marketing involving interest groups and small cooperatives, (c) Supporting wool industry and handicraft production; (d) Promoting regenerative energy (d) Supporting women's cooperative Ashra; (e) Establishing community ranger service.

4. Institutional and Legal Set-UP

4.1. Biosphere Reserve Model

4.2 Kazbegi National Park and Support Zone

Using the IUCN method recommended to assess the most suitable option for the governance of a national park according to IUCN standards and criteria, the results of this very comprehensive analysis of framework parameters clearly favours a governance model based on co-management of the protected area and support zone. Co-governance implies empowerment of local stakeholders (community representatives) through assuming a key role in the decision-making process of the Kazbegi Park management. The study results indicate that without empowerment of local communities protected areas in the target area will not find the necessary community support needed for sustainable protection.

5. Project Organisation and Implementation

5.1 Grant Recipient: Ministry of Finance

5.2 Project Structure

Based on the findings of the feasibility study and under given framework conditions the most suitable project structure for the proposed project appears to be the engagement of an external consultant with proven experience in the implementation of complex and large-scale donor-funded projects such as proposed for the sustainable development of the Kazbegi Region. Impartiality, responsibility, proven capacity, capability, transparency, accountability and working experience with KfW are qualifying parameters characterizing an external consultant elected on the basis of a rigorous public tender. To find the same assets within an NGO or local Government agency would not be possible. An external consultant would perfectly fit the role of an impartial mediator between APA and the local communities, at the same time assisting APA in strengthening its local profile and developing much needed capabilities in public relations, participatory planning, community involvement and co-management structures of protected areas and support zones.

5.3 Project Approach

The proposed project approach is based on three main project management principles inducing and assuring ownership of the project by the local population: (a) Participation and communication, (b) Transparency, and (c) Empowerment (participation in planning and decision making process (co-management of the park and support zone). Participation, transparency and empowerment are universally accepted and proven project management principles. The situation in Kazbegi - including politically fragile conditions with the closeness to the Russian border – requires a careful and sensitive approach on behalf of the implementing agency and Consultant. More listening to the Kazbegi people and less (or better no) dictating will defuse any imminent tensions creating an atmosphere within which the region will flourish economically while simultaneously conserve the nature, unique in the world. For the reasons mentioned the project headquarters must be based in Kazbegi. It would also be highly advisable if the implementing agency increased its visibility in the region considerably.

5.4 Project Executing Agency

The Project Executing Agency would be the Agency of Protected Areas

6. Target groups and beneficiaries

The target groups and beneficiaries of the project would be the local population and all 25 communities of the planning area, the Ministry of Environment and the local and regional authorities.

7. Project Budget

The project budget would be composed of costs related to the establishment and management of the designated proposed conservation areas (approximately 25% of the project funds) and the sustainable development of the support zone of the Kazbegi National Park.

8. Risk assessment and mitigation opportunities

The greatest risk is linked to achieving local ownership and acceptance of the project and its goals and objectives, especially acceptance of the need for nature conservation. This risk may be mitigated through demonstrating that tangible and intangible benefits to be felt on the household level in the target area can be achieved through the project.

9. Sustainable financing and exit strategy

The proposed exit strategy is to achieve sustainable financing for all proposed interventions and local acceptance and ownership in the proposed co-management arrangement for the conservation areas and support zone.

10. Consultant Votum

The Consultant has come to the conclusion that the optimum approach to reaching the overarching goals and objectives of the proposed project (sustainable development of the Kazbegi Region to be harmonized with the needs for nature protection) requires the expansion and strengthening of the existing Kazbegi National Park, the protection of other identified key conservation areas, and the designation and sustainable development of a national park support zone which includes all 25 communities located in the target area. Furthermore that a critical prerequisite to success and the development of local ownership will be the creation of a multi-stakeholder Kazbegi National Park Management Board with equal representation of local communities.

TABLE OF CONTENT

Table of content	i
Abbreviations and Acronyms	vi
Addresses.....	vi
1. Introduction	1
1.1 Background.....	1
1.2 Constraints and Limitations to the Feasibility Study	4
1.3 Methodological Approach.....	5
2. Situation Analysis and Description of Project	6
2.1 General Remarks.....	6
2.2 Biophysical Framework of the Kazbegi District.....	6
2.2.1 Climate	6
2.2.2 Geology, Soils, Geomorphology, Mineral Deposits, andLandscape.....	7
2.2.3 Flora and Vegetation	9
2.2.4 Fauna.....	13
2.2.5 Threatened Species and Ecosystem Conservation Value.....	16
2.2.6 Water Regime	16
2.3 Socio-cultural Economic Framework.....	17
2.3.1 Village Profiles.....	17
2.3.1.1 Demography	18
2.3.1.2 Household Income and Employment.....	19
2.3.1.3 Livestock 19	
2.3.1.4 Agriculture.....	20
2.3.1.5 Tourism in the Region.....	22
2.3.1.6 Actual Land Use	23
2.3.2 History of Range Use	25
2.3.3 Land Tenure	26
2.3.4 Zemo Larsi Border Crossing.....	26
2.4 Policy and Legal Framework Related to Nature Conservation in Georgia.....	28
2.4.1 Georgia’s Protected Area System.....	28
2.4.2 Biosphere Reserve	30
2.5 Stakeholder Analysis	32

2.6	Projects Related to the Project or Study Area	1
2.7	Problem Analysis	2
3.	Proposed Project	3
3.1	Overall Goal and Objectives	3
3.2	Options for Meeting Goals and Objectives	4
3.2.1	Option 1: Biosphere Reserve.....	4
3.2.1.1	Biosphere Reserve Concept	4
3.2.1.2	Added Value and Feasibility.....	5
3.2.1.3	SWOT Analysis.....	11
3.2.2	Option 2: Strengthening Existing National Park and Establishing Support Zone.....	13
3.2.2.1	Description of National Park and Support Zone	13
3.2.2.2	SWOT Analysis.....	15
3.2.2.3	Added Value and Feasibility of a National Park- Support Zone	16
3.2.3	Comparison of Options and Consultant Votum	17
3.2.4	World Heritage Site: an added Value?.....	20
3.3	Project Components	21
3.3.1	Definition of Target Area.....	21
3.3.2	Inclusion of Gudauri.....	24
3.3.3	Project Justification.....	24
3.3.4	Proposed Zoning of Target Area.....	25
3.3.4.1	Setting Site-based Conservation Priorities	26
3.3.4.2	Minimum Critical Size of a Viable Kazbegi National Park	29
3.3.4.3	Proposed Conservation Areas	29
3.3.4.4	Proposed Community-Based Hunting Cooperative	32
3.3.4.5	Proposed Support Zone of Kazbegi National Park	35
3.3.4.6	Proposed Planning Area	35
3.3.4.7	Actual Land Use Map.....	36
3.3.4.8	Land Tenure Map.....	38
3.3.4.9	Potential Conflict Areas.....	38
3.4	Trust-Building Measures	41
3.5	Proposed Interventions	43
3.5.1	Quick-start Measures	45
3.5.2	Priority Interventions.....	46

3.5.3	Other Proposed Interventions	46
3.5.3.1	Financial Sustainability of the National Park and Associated Conservation Units	49
3.6	Gender Aspects	50
3.7	Proposed Project Approach	50
3.8	Logical Framework.....	51
4.	Support of Institutional and Legal Set-UP.....	51
4.1	Option 1: Biosphere Reserve	51
4.1.1	Legal Framework Requirements.....	51
4.1.2	Potential Administrative Structure of a Biosphere Reserve	52
4.2	Option 2: Strengthening Existing National Park and Establishing Support Zone	54
4.2.1	Co-management and Legal Requirements	54
4.2.2	Proposed Co-Management Structure for Kazbegi Park	55
5.	Project organisation and implementation.....	59
5.1	Grant Recipient.....	59
5.2	Project Structure	59
5.3	Implementing Agency	59
5.4	Staff Assignment and Implementation Schedule	61
5.5	Acquisition of Goods and Services.....	62
6.	Target groups and beneficiaries.....	62
7.	Project costs	63
8.	Risk assessment and mitigation opportunities.....	66
9.	Sustainable financing and exit strategy	66
10.	Consultant Votum	67

SELECTED REFERENCES

LIST OF MAPS

Map 1.1	Location of Project Area
Map 2.2.3	Vegetation and plant-ecological Units
Map 3.3.1 a	Planning Area by Sakrebulos
Map 3.3.1 b	Flora and Fauna
Map 3.3.4.1	Proposed Conservation Areas
Map 3.3.4.3	Conservation Areas on the Adjacent Russian Side
Map 3.3.4.4	Proposed Zoning of the Planning Area
Map 4.2.4.7	Actual Land Use by Sakrebulo
Map 3.3.4.9	Actual Land Use and Proposed Conservation Areas

LIST OF FIGURES

Figure 2.2.3 a	Plant Endemism in Kazbegi.
Figure 2.2.3 b	Vertical Zonation of Vegetation in Kazbegi
Figure 3.2.1.2 a	Criteria Used for feasibility of Biosphere Reserve
Figure 3.2.1.2 b	Summary of conclusions Biosphere Reserve
Figure 3.3.4	Proposed Methodologica Approach to Zoning

LIST OF TABLES

Table 2.2.3	Plant communities of Kazbegi
Table 2.3.1.6-a	Villages and Sakrebulos
Table 2.3.1.6-b	Actual Land Use (Hay Meadows and Grazing Areas)
Table 2.3.4	Average Daily Traffic on Mtskheta-Stepantsminda-Larsi Road
Table 2.5 a	Stakeholders: Government Agencies
Table 2.5 b	Stakeholders: International Donor Agencies
Table 2.5 c	Stakeholders: IGOs, NGOs and Academic Institutions
Table 2.5 d	Stakeholders: Private Sector
Table 3.2.1.3	SWOT Biosphere Reserve
Table 3.2.3	Advantages and Disadvantages of BR versus NP/Support Zone
Table 3.3.4.6	Size Comparison of the Proposed Zones of Planning Area
Table 3.5	Priority Needs as Perceived by the Communities
Table 5.3 a	SWOT Analysis Regarding APA
Table 5.3 b	SWOT Analysis Regarding NGO
Table 5.3 c	SWOT Analysis Regarding Consultant

LIST OF ANNEXES

Annex 1.3	List of Contacts
Annex 2.2.2	Biophysical Framework
Annex 2.2.3	List of Plant Species
Annex 2.2.4.1 a	List of Vertebrates
Annex 2.2.4.1 b	List of Birds
Annex 2.2.4.1 c	List of Mammals
Annex 2.2.5	List of Endangered Species

Annex 2.3.1	Summary List of Village Profiles
Annex 2.3.1.5	Report on Tourism Sector
Annex 2.4.2	Legal and Policy framework Biosphere Reserves Georgia
Annex 2.5	Stakeholder Analysis
Annex 3.2.1.2	Decision Support Tool Biosphere Reserve/NP-Support Zone
Annex 3.2.3	SWOT Analysis Biosphere Reserve/NP-Support Zone
Annex 3.3.2	Gudauri Swot analysis
Annex 3.3.4.1	KBA Method
Annex 3.4	Kazbegi Feasibility Study Inception Report
Annex 3.5.1	Mid-term Report and Quick-start Measures
Annex 3.5.2	List of Priority Interventions
Annex 3.5.3	List of Other Proposed Interventions
Annex 3.5.3.1	Caucasus Protected Area Fund
Annex 3.8	Logical Framework Analysis
Annex 4.2.2	Method for Selection of PA Governance Structure
Annex 5.3	Implementation Schedule
Annex 7	Proposed Preliminary Draft Project Budget

ABBREVIATIONS AND ACRONYMS

APA	Agency for Protected Areas
BR	Biosphere Reserve
CBC	Caucasus Biodiversity Council
CBD	Convention on Biodiversity
CPAF	Caucasus Protected Areas Fund
DFS	Deutsche Forstservice GmbH
ECP	Ecoregional Conservation Plan
EIA	Environmental Impact Assessment
EPN	European Neighbourhood Policy
ERP	Ecoregional Programme
FS	Feasibility Study
GTZ	German Development Cooperation
IUCN	International Union of Nature Conservation
KfW	Bank for Reconstruction and Development (Kreditanstalt für Wiederaufbau)
MAB	Man and Biosphere
MDG	Millennium Development Goals
MEPNR	Ministry of Environment Protection and Natural Resources of Georgia
NP	National Park
PA	Protected Area
PEA	Project Executing Agency
PIA	Project Implementing Agency
PIU	Project Implementation Unit
ISLUP	Integrated Spatial Land Use Planning
PRA	Participatory Rural Appraisal
REC	Regional Environmental Centre of the Caucasus
TJS	Transboundary Joint Secretariat
ToR	Terms of Reference
WWF	World-wide Fund for Nature

ADDRESSES

DFS Deutsche Forstservice GmbH
Wittelsbacherstr. 11
D - 85622 Feldkirchen

Tel. + 49 (0) 89 94 00 59 0
Fax + 49 (0) 89 94 00 59 79
E-Mail dfs@dfs-online.de
Internet <http://www.dfs-online.de>

1. INTRODUCTION

1.1 Background¹

Most of the six Countries of the Caucasus Ecoregion have become signatories to international conventions and agreements related to the conservation of biodiversity and in doing so, signalled their commitment to safeguard biodiversity, use the natural resources in a sustainable manner, reduce overarching threats, and minimize environmental risks.

During the intergovernmental consultation in May 2008 it was agreed to assist Georgia in the development of a biosphere reserve possibly to be located in the Kazbegi Region in the Greater Caucasus with a grant of up to € 4 million under German Financial Cooperation. This commitment is part of the Caucasus Initiative², more specifically the Nature Conservation Programme for the Caucasus³. Within the framework of the Caucasus Initiative, the overall Goal of the German Development Cooperation in the field of natural resource management is *“to help preserve natural resources for current and future generations while at the same time contributing towards local livelihoods and sustainable economic development in an effort to achieve the Millennium Development Goals (MDGs), notably MDG 7 and MDG 1”*⁴. This approach is based on three programme areas: (i) preservation of natural heritage, (ii) increased valorisation and sustainable use of biodiversity, and (iii) climate change mitigation and adaptation.

The Nature Conservation Programme as part of German Development Cooperation is promoted and supported by the Transboundary Joint Secretariat (TJS). Part of Germany's Caucasus Initiative is also the Caucasus Protected Areas Fund (CPAF)⁵.

The overall aim of the Nature Conservation Programme is to conserve the outstanding biodiversity and natural ecosystems of the Southern Caucasus and at the same time to promote their sustainable management and use. Thus, the improvement of local livelihoods and biodiversity conservation are important objectives of the programme concept.

The selection of the Kazbegi region as a possible area for the establishment of a biosphere reserve is based on the environmental and nature conservation policies of Georgia and the priorities of the Ecoregional Conservation Plan for the Caucasus (ECP). Selection criteria were the high and unique biodiversity of the main habitats,

¹ From: KfW 2009, ToR Tender Document for Kazbegi Proposed Biosphere Reserve Feasibility Study.

² The BMZ Caucasus Initiative is a contribution of German Development Cooperation to conflict prevention in the Southern Caucasus states of Armenia, Azerbaijan, and Georgia. The Ecoregional Conservation Programme is one of the cornerstones of the Caucasus Initiative promoting the establishment of cross-border national parks and the conservation and sustainable use of natural resources.

³ BMZ. 2006. Nature Protection in the Caucasus. BMZ Topics No. 156.

⁴ German Development Cooperation 2009: Caucasus Initiative – Regional Concept for the Southern Caucasus. “Conservation and Sustainable Use of Natural Resources”.

⁵ Caucasus Protected Areas Fund (CPAF).

high mountain forest fragments currently protected by Kazbegi National Park, and the Caucasian sub-alpine and alpine grassland ecosystems, which harbour a range of rare and critically endangered plant and animal species. Another selection criterion was that the region also offers potential for income-generating activities with focus on tourism. A preparation study has been elaborated by the Transboundary Joint Secretariat⁶. The study Area is shown by Map 1.1.

The proposed project, subject to the current feasibility study, is part of the Financial Cooperation between Georgia and Germany. The Project Executing Agency (PEA) is the Ministry of Environment Protection and Natural Resources of Georgia (MEPNR); the Ministry has assigned the Agency for Protected Areas (APA) as project implementation agency (PIA). The Ministry of Environment Protection and Natural Resources of Georgia and KfW are planning the approval-mission of the project in 2009; in consequence the consulting services of the Consortium "Deutsche Forst Service GmbH (DFS)" and "AGEG Consultants AG" were contracted for the implementation of this Feasibility Study (Ecoregional Programme III, Georgia, Kazbegi Project) which has taken place between the 2nd of October and the 15th of December 2009.

⁶ TJS 2009. Report to prepare the establishment of Kazbegi Biosphere Reserve.

INSERT THIS PAGE

MAP 1.1 Location of Study Area

1.2 Constraints and Limitations to the Feasibility Study

In May 2009 a delegation of KfW visited the proposed project area and came to the conclusion that the biosphere reserve concept offers a promising approach for the development of the region. According to the KfW Mission at the time the mayor of Stepantsminda municipality explicitly warned the delegation about the strong reservations of the local population against the establishment of “any kind of conservation area” in the Kazbegi District.⁷ The mayor’s statement is indicative of the wide-spread perception by people mistakenly thinking of a biosphere reserve as a protected area category instead of acknowledging it as a concept aimed at the integration of nature conservation and sustainable economic development.

In due consideration of the Mayor’s cautionary note about the local sentiments, the Study Team was specifically requested by KfW to adopt a highly participatory approach for the study in order to ensure that the local population understands the nature of the proposed project and the concept of a biosphere reserve.

The findings of the feasibility study support the concerns expressed by the Stepantsminda Mayor; there is no doubt that the most serious constraint to the potential establishment of a biosphere reserve locally is the strong opposition by local people to a biosphere reserve seen as another form of protected area covering the entire Stepantsminda District. This perception combined with the strong believe by the Kazbegi population in grandfathered traditional land rights and a strongly anchored communal land use philosophy allow for little tolerance to any outside interference.

The past top-down approach to the establishment of the Dedtoraki and Khde Strict Protected Areas in the Kazbegi District in 1946, the consolidation and expansion of the two areas in 1987, and the conversion into a national park in 2007 with expansion plans from 7000 ha to more than 60000 ha as proposed by APA in 2008 without involving and adequately informing local people undoubtedly have contributed to the recognized root causes of the strong local resentment of the Government and APA in particular. The problems exacerbated with rumours spreading about APA’s intention to promote --without prior public consultation and information-- the establishment of a locally and nationally little understood “biosphere reserve” that would encompass the entire Kazbegi Municipality.

Against this background the feasibility study team entered a highly explosive atmosphere and faced the formidable task convincing local people about the potential benefits of a protected area and/or a biosphere reserve. Time-consuming efforts spent on information exchange, awareness building and the development of a working relationship based on trust, resulted in serious time constraints to the actual feasibility study.

⁷ From: KfW 2009, ToR Tender Document for Kazbegi Proposed Biosphere Reserve Feasibility Study.

The trust-building measures elaborated and implemented as part of the feasibility study proved to be another serious constraint, demanding a lot of time and effort, which in hindsight, more effectively should have been spent on the feasibility study itself. It is argued that the trust-building measures have contributed more to trust-building between the feasibility study (FS) Team and the local population rather than trust in the proposed project and the Government.

1.3 Methodological Approach

The feasibility study commenced with a comprehensive stakeholder analysis, followed by the definition of the planning area, and a review of the concept of a biosphere reserve compared to a national park and support zone as two potential options meeting the overall goals and objectives of the proposed project.

A total of 50 key stakeholders ranging from Government Agencies, Donor Organizations, local and international NGOs and CBOs to Private Sector representatives of local and regional importance were identified and contacted (see Annex 1.3 “List of Contacts”). Stakeholder meetings centered on semi-structured interviews aimed at a general assessment of the stakeholder’s interest and current or planned involvement in the target area.

Prior to the field work and data compilation three workshops were conducted, the first aimed at the local authorities obtaining approval for the field-work, the second at all 25 communities located in the planning area informing the participants about the nature of the proposed project and the reason for the elaboration of village profiles. The third workshop addressed Gudauri residents serving to assess the suitability of including Gudauri into the planning area. At the community stakeholder workshop eleven trust-building measures were identified by the workshop participants, subsequently implemented and finalized by the end of November under supervision of the study team.

The rationale for the implementation of one single kick-off workshop involving all target area communities instead of several workshops in different locations dealing with the same subject matter, was to open one single dialogue based on one common understanding of problems related to the project area and one common vision for its sustainable economic development to be in compliance with the overarching conservation objectives inherent to the proposed project.

The field work focused on the elaboration of the 25 village profiles and the participatory mapping of actual land use providing the basis for the design of proposed quick-start measures and interventions with focus on livelihood stabilization, community enhancement and regional development, and strengthening APA’s position in the target area. The community profiles entail quantitative and qualitative socio-economic

and demographic information, complemented through a community-specific problem analysis and need assessment.

In parallel, background information was collected on high biodiversity areas guiding the tentative zoning plan for the target area and the definition of areas of high conservation value.

A multi-stakeholder mid-term review workshop was conducted in Tbilisi on the 5th of November in order for the team to present and discuss the preliminary findings of the study. Center to the workshop was a discussion of best options suitable to meet the overarching objectives of the proposed project with focus on a critical comparison of a biosphere reserve and a national park and support zone.

Local stakeholder participation, information exchange and awareness raising were mainstreamed into all components and activities of the feasibility study. Fact sheets and information materials on the FS, the biosphere reserve concept, the nature and purpose of a national park and support zone, and how all this relates to the proposed sustainable regional development, livelihood enhancement, and how this may impact future land- and resource use, have been elaborated and disseminated by the community mobilization specialists of the study team.

The results of the feasibility study and the consultant Votum were presented to APA and local authorities on the 27th of November 2008 in Tblissi.

2. SITUATION ANALYSIS AND DESCRIPTION OF PROJECT

2.1 General Remarks

The situation analysis focuses on an assessment and description of the (a) biophysical- (b) socio-cultural-economic-, (c) legal- and policy-, and (c) administrative framework related to the defined planning area. The assessment of existing framework conditions was used for the identification of data gaps and as background for the design of the proposed project components. Key findings are summarized as follows.

2.2 Biophysical Framework of the Kazbegi District

2.2.1 Climate

In general, the climate of the Kazbegi District, which is part of the northern slope of the Caucasus, is moderately humid, with pronounced altitudinal and microtopographic differences which are determined by the relief of the area.

In the lower zone of Kazbegi region (altitude up to 1,900 m), winters are comparatively dry and cold and the summer is prolonged and cool. The average temperature in January is between -3°C and -8°C; in July between 14°C and 19°C. Precipitation

ranges between 650 mm and 1000 mm per year, with a seasonal maximum in May and a minimum in January. Snow cover extends for three to four months.

At altitudes between 1,900 m and 2,600 m, winters are comparatively dry and cold and summers short and cool. Temperatures exceed 10°C for only 1-3 months and 5°C for only 4-5 months. The temperature of the warmest month is about 10-14°C. Winds are characteristic for mountains and gorges. An annual precipitation of between 1,000 mm and 1,200 mm per year has been recorded. Snow cover persists for 5-7 months.

At the zone of 2,600 – 3,400 m there is no real summer. The average temperature in winter is between -11°C and -15°C; in July it rarely exceeds 10°C. Above 3,400 m, a mountainous and moderately humid climate prevails, and permanent snow and glaciers are dominant. The average temperature in January and February is -14°C; only in July and August do temperatures rise above zero (about 60 frost-free days per year). Precipitation falls mainly as snow. Westerly winds predominate. The weather in the alpine, subnival and nival belt is highly variable, with frequent sudden changes in weather conditions.

Additional detailed information on temperature extremes and some additional climate statistics are given in Nakhutsrishvili et al. (2005).

2.2.2 Geology, Soils, Geomorphology, Mineral Deposits, and Landscape

Geology: The Kazbegi region is characterized by a complex geological structure. The oldest rocks in the Tergi Ravine are the paleolithic (330 million years) granites of Gveleti and Dariali. Sediment rocks are mainly from the early, middle and upper Jurassic period. In terms of its tectonics, the region is characterized by a north-south sequence of complex tectonic elements, namely the (1) anticline of the lateral ridge of the Greater Caucasus, (2) the syncline of Bejitini, (3) the anticline of the main ridge and (4) the Chiauri (Gudamakhari zone) syncline. The geological development history of the District started in the early and middle Jurassic periods. During the late Orogenesis (recent phase) the high mountainous relief was formed. Volcanic activities were expressed in multiple volcanic explosions. Mt Kazbek is one of these volcanoes. It is now dormant. There are also some young volcanoes on the main ridge, to the north-west and north-east of the Cross Pass (for more detail see Annex 2.2.2).

There are several deposits of minerals in the District: copper-polymetallic layer in Devdoraki, Elia antimonite layer, small crystal layers in Khde and layers of building stone (dolerite, granite, diorite, andesite and travertine). There are also many inert materials. Among the above mentioned resources only the Devdoraki copper-polymetallic layer ever had an industrial importance, managed by Belgians in the early 20th Century. The region is also rich in mineral waters. In certain places the output of mineral springs is significant. For example, the mineral water near the village Khetrissi is rich in calcium hydro-carbonate. Its output is 25-30 million liters per day. The mineral lake of Abano is fed from accumulated spring water enriched with carbon dioxide. It belongs to the calcium hydro-carbonate-sulfate type. The daily output of this spring is

about 2,5 million liters. Other examples of mineral springs are the Also Fansheti and Goristsikhe springs.

Kazbegi District has a high diversity of quaternary (recent) geo-morphological features. Its high mountainous tectonic-erosive relief is composed of glaciers, volcanic elements, karsts and other forms. Quaternary (recent) sediments are widely spread. Alluvial, proluvial and deluvial sediments are observed. The alluvial sediments in the Tergi ravine are arranged as a system of four terraces. In higher places, alluvial sediments are mixed with fluvio-glacial, limno-glacial and moraine sediments. Volcanic structures (including lava outflows, pyroclastic accumulations, andesite-dacite and andesite-basalts) are from the quaternary period.

Soils: The soils of the Kazbegi District are diverse reflecting the diversity of its geomorphology, geology, vegetation and climate (Nakhutsrishvili et al. 2005). Mountain-meadow skeleton soils and mountain-forest soils of average-acid and neutral pH dominate. They are often rich in humus. Nakhutsrishvili et al. (2005) list the following soil types: **(1)** deluvial-proluvial soils; **(2)** mountain-forest brown, medium-depth and shallow skeletal soils, occasionally with stones and boulders; **(3)** mountain-forest light-brown, medium-depth and shallow skeletal soils, with stones and boulders; **(4)** degraded medium-depth and shallow skeletal soils; **(5)** degraded forest and secondary meadow soils; **(6)** mountain-meadow soddy-skeletal soils; **(7)** weakly developed primitive soils, occasionally with exposed rock; **(8)** eroded and semi-eroded shallow skeletal soils, and **(9)** strongly eroded areas, ravines, exposed rocks, stone fills and bedrock outcrops.

Geomorphology: The geomorphology of Kazbegi District, which is one of the highest districts of Georgia, is dominated by the Greater Caucasus and its lateral ridges with their breaches, as well as three large flat-bottomed ravines (Khevi/Tergi, Truso and Sno) which are covered by young river sediments.

Khokhi Ridge is one of the largest Caucasus lateral ridges bordering the region to the east at Truso pass (3,150 m a.s.l.). On this ridge, from west to east Midargrabini Pass and Siverauti (3,785 m), Suatisi (4,480 m), Jimara (4,777 m), Maili (4,622 m) and Kazbek (5,047) mountains are located. The mountain group of **Khde** is located at the east of the Tergi Valley and to the north of Sno Valley. This group includes three meridional ridges (Khuri, Shavana and Kidegani).

Truso Valley stretches from the upper Tergi River watershed to the village Kobi, between the main and Khokhi ridges, extending to the south-east. Its altitude at the village Kobi is 1,950 m, at the village Abano 2,200 m and at the spring of the river Siverauti 2,450 m. Like Truso Valley, **Sno Valley** is a longitudinal gorge. It is mainly composed of clay shale and sand rock layers of early and middle Jurassic periods. The whole lower part of the Sno ravine is oriented to north-west from Nadarbazevi to the Tergi tributary. **Khevi Valley** forms part of the Tergi Valley from the village Kobi to Stepantsminda. It is directed to the east. Some places at the left side of the ravine are covered by quaternary lava originating from M. Kazbek (lava outflows of Mna, Pkhelshi, Arshi and Chkheri). The large, flat bottom of the ravine is filled with cobble-stones and sand rocks, formed by an accumulation of Ckheri lava outflow. There are two barriers

in the course of Tergi Valley (Sioni-Goristsikhe and Stephantsminda-Gergeti) that force the river into narrow gorges. Downstream of Stephantsminda begins the **Daryal Gorge**. It drops 1,000 m of altitude over a distance of 11 km, to only 1,210 a.s.l. **Khde Valley** is surrounded by Shavana and Khuro ridges and is particularly rich in rocks, glaciers, alpine meadows and waterfalls. The upper part of the ravine is a steppe area interspersed with alpine wetlands. The middle part of the river Khdis Tskhali enters the erosive ravine, cuts the Daryal Massif and creates continuous steps for about 4 km. The distance between the steps is 300 m.

TJS (2009) stresses the danger of avalanches, rock falls and landslides throughout the District, because of the steep terrain.

Landscape diversity: According to TJS (2009), landscapes of Kazbegi District comprise the following: **(1)** canyon-like gorges dominated by rocks, sparse vegetation and eroded soils; **(2)** medium-high mountains covered by beech forests; **(3)** mountain-valley landscape with floodplain vegetation; **(4)** subalpine birch sparse and crooked forests, shrubs, and high grass; **(5)** alpine meadows and alpine mats; **(6)** subnival landscapes with weakly developed soil and vegetation cover, and **(7)** nival-glacial landscape with permafrost soils and glaciers.

2.2.3 Flora and Vegetation

According to a recent analysis of the flora of Kazbegi (Nakhutsrishvili et al. 2005), the district is home to about 1,100 species of vascular plants, most of them belonging to the Asteraceae, Poaceae, Rosaceae, Fabaceae and Scrophulariaceae families. For a complete list of identified plant species for the target area it is referred to Annex 2.2.3.

The flora of Kazbegi is exceptionally rich in endemics (Figure 2.2.3 a). 27% of its flora are endemic, and at least five out of eleven of the endemic genera of the Caucasus (*Agasyllis*, *Dolichorrhiza*, *Symphyoloma*, *Trigonocaryum* and *Pseudovesicaria*) are represented.

A schematic vertical zonation of the vegetation of Kazbegi is illustrated in Figure 2.2.3 b. Zonation in nature does not always follow this pattern shifting and overlapping reflecting anthropogenic and topographical factors. There are also significant differences in flora and vegetation within the Kazbegi District: While plant communities of the Daryal Gorge are composed of species characteristic of the Eastern Greater Caucasus (e.g. *Pinus kochiana*, *Juniperus hemisphaerica*, *Heracleum leskowiei*), the central Khevi region is more typically covered by subalpine meadows, elfin woods and forests of *Betula litwinovii*, with tragacanth vegetation including *Astragalus denudatus* also present. In Truso Gorge, by contrast, *Kobresia capilliformis* meadows and communities of *Dryas caucasica* predominate.

Regarding the vegetation of Kazbegi, Nakhutsrishvili et al. (2005) distinguish 39 types of vascular plant communities that occur in Kazbegi. In addition to the communities listed in Table 2.2.3, they describe three types of subnival vegetation and mention the occurrence of various mosses and lichens.

With the exception of very few pine plantations near the valley bottom (e.g. near Stepantsminda and Qumlistsikhe), the mountain forests of Kazbegi are dominated by *Betula litwinovii* and other *Betula* spp. Towards the treeline, these forests become more elfin, and extended shrubberies of *Rhododendron caucasicum* and *R. luteum* occur. Apart from these communities, there are scrubs of *Dryas caucasica* and of *Juniperus hemisphaerica*. A different woody plant community dominated by Sea-Buckthorn (*Hippophae rhamnoides*) is found at the Tergi Valley bottom above and below Stepantsminda. These fragments represent another plant diversity hotspot, an important winter habitat for birds and a source of natural resources to the local people.

In spite of their low coverage, the forests and shrub communities of Kazbegi, as well as their ecotones are important centers of plant diversity and key habitat for numerous animal species. The shrub communities also protect slopes from erosion, mud-slides and avalanches, have a water-regulatory function and are a traditional source of fuel wood and other natural resources for the local population.

Table 2.2.3 shows that the greatest diversity of plant communities (16) is found in the subalpine belt, which underlines the importance of Kazbegi District as a biotope for subalpine meadows. These meadow communities are subdivided according to their humidity. Among the dry meadows, there are four community types dominated by *Agrostis tenuis*, *Festuca varia*, *Kobresia capilliformis*, and *Astragalus captiosus*, respectively. Mesophilous meadows are characterized either by *Anemone fasciculata* or by *Hordeum violaceum*. Among the rare-turf meadows, there are four types which are dominated by *Trisetum flavescens*, *Brachypodium pinnatum*, *Calamagrostis arundinacea* and *Bromopsis variegata*, respectively, while dense-turf meadows are represented, dominated by *Nardus stricta*, *Festuca vallesiaca*, and *Festuca ovina*, respectively. The latter mountain steppe type meadows have spread significantly under anthropogenic impact.

The subalpine meadows of Kazbegi are an important component of the district's overall biodiversity, providing protection against erosion, and forming a key resource as hay meadows and grazing areas.

Dense turf and carpet like alpine meadows that hold important biodiversity characterize the alpine belt. These are typically of much smaller growth than in the subalpine belt. Rocky outcrops, scree slopes as well as the subnival zone are typified by additional plant communities (Nakhutsrishvili et al. 2005).

A vegetation map of the Kazbegi Region based on several hundreds of vegetation records has been prepared for this feasibility study by Nakhutsrishvili et al (see Map 2.2.3). This map will be of importance when finalizing the zonation and defining conservation areas of high importance.

INSERT MAP this Page

VEGETATION Map 2.2.3

Figure 2.2.3 a: Plant endemism in Kazbegi. Source: Nakhutsrishvili et al. (2005).

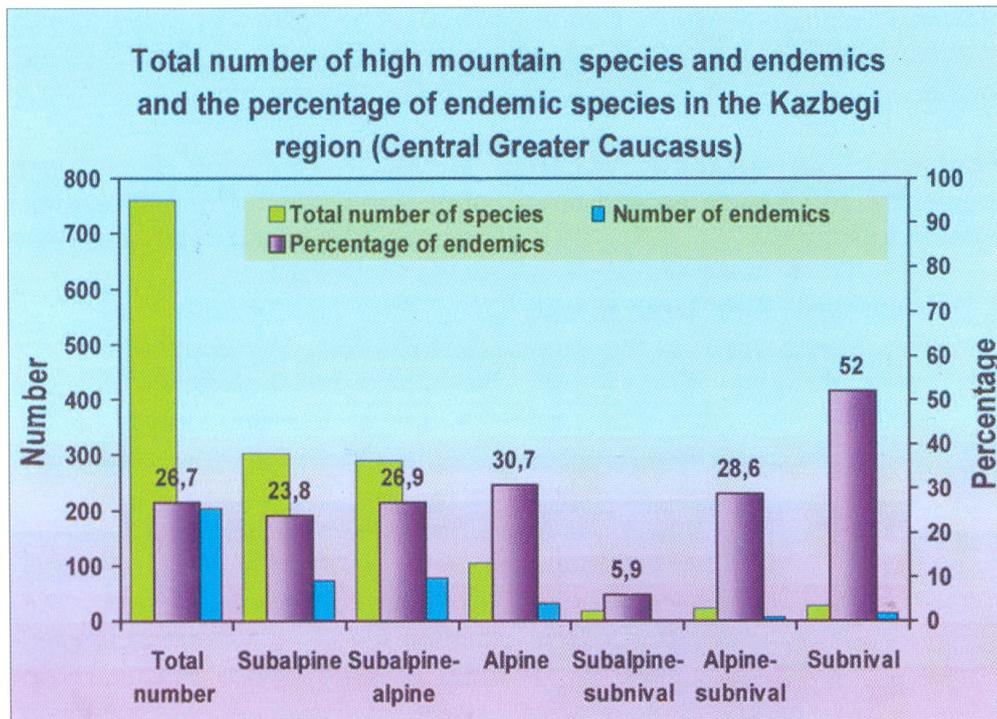


Figure 2.2.3 b: Vertical zonation of vegetation in Kazbegi.

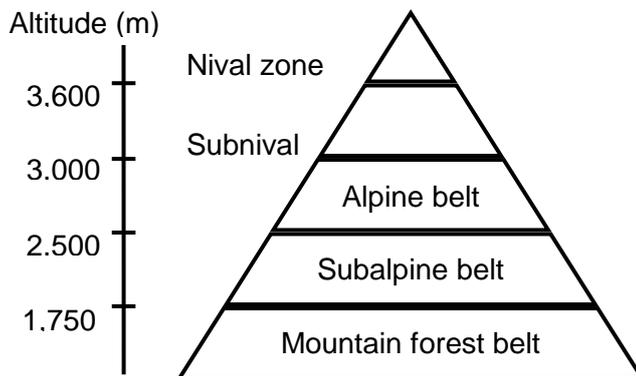


Table 2.2.3.1: Plant communities of Kazbegi. Modified from Nakhutsrishvili et al. (2005).

Vegetation of Kazbegi			
Forest and scrub communities	Subalpine herbaceous communities	Alpine herbaceous communities	Plant communities of rock and scree
<i>Betula litwinovii</i> forest	Subalpine tall herbaceous vegetation	<i>Carex tristis</i> dense-turf meadows	Dry rock communities
Elfin birch forest	Dry meadows (4 types)	<i>Festuca supina</i> dense-turf meadows	Moist rock communities
<i>Rhododendron caucasicum</i> shrubs	Mesophilous meadows (2 types)	<i>Festuca varia</i> dense-turf xerophilous meadows	Communities on marly and slaty scree
<i>Rhododendron luteum</i> shrubs	Humid meadows with <i>Trollius ranunculus</i>	Snowbed carpet-like alpine meadows	Communities on stones
<i>Dryas caucasica</i> scrub	Swamp meadows with <i>Deschampsia caespitosa</i>	Carpet meadows on skeletal substrates	<i>Trisetum rigidum</i> riversite communities
Scrubs of <i>Juniperus hemisphaerica</i>	Rare-turf meadows (4 types)	Secondary carpet-like meadows	<i>Pinus sosnowskyi</i> elfin communities on rock
Cushion Tragacanth formations	Dense-turf meadows (3 types)		

2.2.4 Fauna

In terms of their conservation value, alpine birds and mammals are the major faunal groups of the Kazbegi District. A complete list of the vertebrate fauna of Kazbegi was recently compiled by GCCW (2006) and is enclosed as Annex 2.2.4.1.a

Invertebrates and fish: The invertebrates and fish of Kazbegi are poorly studied, with only the **Brook Trout** (*Salmo fario*) documented from the region.

Herpetofauna: The herpetofauna of the Kazbegi District is inconspicuous, reflecting the high altitude of the area. Among the amphibians, only Green Toad (*Bufo viridis*), Common (“Caucasian”) Toad (*Bufo verrucosissimus*), Common Tree Frog (*Hyla arborea*), Eurasian Marsh Frog (*Rana ridibunda*) and representatives of the Caucasian Frog (*Rana macrocnemis*) group inhabit the area (Tarkhnishvili and Gokhelashvili 1999). Among the reptiles, there are several lizard species (including the narrow-range **Darevskia daghestanica**), Grass Snake (*Natrix natrix*) and Dice Snake (*Natrix tessellata*). There are also two species of vipers: In humid subalpine meadows there is **Dinnik’s Viper** (*Vipera dinniki*), whereas in dryer areas, the more common *V. lotievi* occurs is found (D. Tarkhnishvili, *pers. comm.*, 1 Nov 2009).

Avifauna: Kazbegi’s distinct avifaunal significance is underlined by (a) its large resident and breeding populations of alpine species, (b) its role as a raptor breeding area and migration bottleneck, and (c) its function as the only wintering area of two exceptional passerine populations in Georgia, and possibly in the Greater Caucasus (Annex 2.2.4.1.b “List of Bird Species”).

Ad a): Besides the Caucasus endemics **Caucasian Black Grouse** (*Tetrao mlkosiewiczzi*) and **Caucasian Snowcock** (*Tetraogallus caucasicus*), significant populations of **Corncrake** (*Crex crex*) and alpine passerines reside or breed in Kazbegi (e.g. Caucasian Chiffchaff *Phylloscopus lorenzii*, Ring Ouzel *Turdus torquatus*, two Chough species *Pyrrhocorax pyrrhocorax* and *P. graculus*). Mtskheta-Mtianeti Region as a whole holds about a quarter of the Georgian population of Caucasian Black Grouse (GCCW 2007), most of which are probably concentrated in Kazbegi. These species inhabit a wide range of habitats from the valley bottoms (e.g. *Crex crex*) to the high alpine belt.

Ad b): Kazbegi holds breeding populations of three vulture species (*Gypaetus barbatus*, *Neophron percnopterus* and *Gyps fulvus*), **Golden Eagle** (*Aquila chrysaetos*), **Peregrine Falcon** (*Falco peregrinus*) and other raptors. Its **Bearded Vulture** (*G. barbatus*) and **Griffon Vulture** (*G. fulvus*) breeding populations are of national importance (Gavashelishvili 2005, Gavashelishvili and McGrady 2006). Typical breeding areas for these species are steep cliffs. In addition, Kazbegi is an important migration bottleneck for eagles (*Aquila* spp.), harriers (*Circus* spp.) and Black Kite (*Milvus migrans*), particularly during spring migration. More than 1,000 migrating raptors per day have been counted from the Cross Pass and Sameba Church in Stepantsminda (G. Rajebashvili, *pers. comm.*, 31 Oct 2009).

Ad c): The Greater Caucasus is home to satellite populations of **Great Rosefinch** (*Carpodacus rubicilla*) and **Güldenstädt’s Redstart** (*Phoenicurus erythrogaster*). The nearest populations of both species are found in eastern Central Asia. While both species breed in the alpine belt above 2,500 m altitude, their only known wintering habitat in Georgia are the Sea-buckthorn shrub communities around Stepantsminda in Kazbegi. No wintering habitats are currently known from Azerbaijan or the North Caucasus, which makes it possible that the wintering hotspot around Stepantsminda is not only of national but also of ecoregional importance. There are plans to study the genetic status of both Caucasus

populations, as there is the possibility that they are genetically distinct from the core population, and hence a case of “speciation in progress”.

Kazbegi has been designated as an **Important Bird Area**, due to its Caucasian Black Grouse and Corncrake populations (Birdlife International 2009). Additional bird species and their habitats are listed in TJS (2009).

Mammals: Among the rich mammalian fauna of Kazbegi, notable groups include (a) insectivores and rodents, which are represented by several species endemic to the Caucasus, (b) carnivores, and (c) two species of artiodactyls of significant conservation and potential economic interest (Bukhnikashvili and Kandaurov 2002). Also see Annex 2.2.4.1.c for a complete list of identified mammals for the target area.

Ad a): Four species of insectivores and five species of rodents that are endemic to the Caucasus occur in Kazbegi. Among the insectivores, examples include **Radde’s Shrew** (*Sorex raddei*) and **Shelkovnikov’s Water Shrew** (*Neomys schelkovnikovi*). Among the rodents, prominent examples are the **Kazbegian Birch Mouse** (*Sicista kazbegica*), which has its only Georgian stronghold in Kazbegi, and the **Lang-clawed Mole-vole** (*Promethomys schaposchnikovi*), an enigmatic vole of uncertain taxonomic affinity. These small mammals inhabit a variety of habitats in Kazbegi. Many of them are associated with birch forest and grassland habitats.

Ad b): All Georgian large carnivores with the exception of the Leopard (*Panthera pardus*) and possibly Lynx (*Lynx lynx*) occur in Kazbegi. Among the large carnivores, the population of **Brown Bear** (*Ursus arctos*) is mainly associated with the mountain birch forests, whereas **Wolves** (*Canis lupus*) occupy a wider habitat range. An interesting peculiarity of the carnivore fauna of Kazbegi is **Stoat** (*Mustela ermineae*), a northern/central Eurasian species which is only known from Kazbegi in Georgia. No abundance estimates for large carnivores are currently available, which is partly due to their extremely secluded lifestyle.

Ad c): The **Eastern Caucasian Tur** (*Capra cylindricornis*) and the **Chamois** (*Rubicapra rubicapra*) are emblematic species of Kazbegi. While the Chamois only occurs in the southern part of the area including the right slope of the Truso gorge and south of the Sno Valley, the Tur has its centre of distribution further north, including the left slopes of the Truso and Daryal Gorges, Khde Gorge and some steep scree areas east of Stepantsminda. There are also sex-specific and seasonal differences in habitat preference (Gavashelishvili 2004). Both species are highly attractive to hunters, for trophies (mainly tur) as well as meat, and both species are traditionally hunted in Georgia. Similar to the carnivores, there are currently no abundance estimates for Kazbegi available for either species.

The bat fauna of Kazbegi is of little conservation importance (I. Natradze, *pers. comm.*, 6 Nov 2009). The famous Bat (Gamura) Cave is called so because its entrance is shaped like a bat, and not because it is inhabited by bats.

2.2.5 Threatened Species and Ecosystem Conservation Value

The current national and international plant red lists exclude herbaceous plants, which makes comparative statements about their threat status impossible. However, ecoregional Red List assessments of about 1,600 endemic plant species of the Caucasus including herbs are nearing their completion and should be publicly available by the end of 2010 (MOBOT 2009). It is recommended that these outputs be consulted as soon as available to inform the further development of the project.

Based on preliminary outputs, localities within Kazbegi are indicated for only 2 red-listed species of Georgian endemics (*Heracleum ossethicum* Manden – near-threatened, and *Arabis kazbegi* Mtzchvetadze - vulnerable). It is difficult at this stage to establish the occurrence of assessed Caucasus endemics in Kazbegi, but this should become progressively easier in 2010 (Batsatsashvili, pers. comm.). In addition, the following species were mentioned by GCCW (2006) as endangered, without having been assessed with Red List methodology: *Delphinium caucasicum*, *Primula bayernii*, *Eritrichum caucasicum*, and *Galanthus platyphyllus*.

In addition to the threat categories based on the national and international Red Lists, the following four species occurring in Kazbegi are among the 26 Focal Species of the **Ecoregional Conservation Plan** (Williams et al. 2006): Brown Bear, East Caucasian Tur, Chamois and Caucasian Black Grouse. The following three species recorded in the district are listed in the same publication among 15 species of special concern: Lynx (assuming it occurs in Kazbegi), Caucasian Snowcock and Dinnik's Viper. Conserving these species in Kazbegi would hence contribute significantly to the overall implementation of the Ecoregional Conservation Plan. For a list of endangered species it is referred to Annex 2.2.5.

2.2.6 Water Regime⁸

Glaciers: *The Kazbegi massif is the major area of glaciers in Khevi. Separate glaciers are found on peaks of the main divide that exceed 3,800 m asl – the Khde Gorde at the Kuro and Shavana ridges. According to data from the most recent studies, there are 99 glaciers in the Terek catchment, with a total area of 67.2 sq. km. The glacier of Devdoraki, with an area of 7.55 sq. km and a length of 7 km, is of particular interest, known for its ice avalanches recorded in 1776, 1778, 1785, 1808 1817 and 1832. The most serious recent collapse blocked the Terek River, stopping the flow there for 8 hours. In the recent 150 years the glaciers in Khevi have moved back: ice streams (glacier tongues) have shortened by 1-1.5 km, and small glaciers located high in the mountains have shortened by 0.3-0.5 km. Some minor glaciers have completely disappeared. In the last 100 years the total area under the glaciers has decreased by 21.8 sq.km.*

⁸ Citation from TJS, 2009. Activity Plan on Biosphere Reserves. Kazbegi Biosphere Reserve

Rivers: *The Tergi (Georgian for the Terek) is the main river in the hydrographic system of Khevi, originating from a glacier located at 3,200 m above sea level and exiting the territory of Georgia in the Daryal Ravine, at 1,200 m asl. Left tributaries of the Terek River, including the Amali, Chkheri, Mna, Suatisi, Devdaraki and others, flow on the slopes of the massif, whereas its right tributaries: Tnostskali, Kistaura or Khdestskali, Bidara and others run on the main and lateral watersheds of the Caucasus Ridge. There are a total of 48 rivers and numerous small streams in Khevi. These are mainly mountain rivers with typical high difference in the riverbed elevations and fast velocity of flow. The rivers form rather high waterfalls. The Amali, Chkheri and Kistaura are the fastest rivers; and the Terek and Snostskali are the widest ones. The rivers of Khevi are not deep: the depth of the Terek exceeds 1.5 meters, of the Snostskali 1 m, of Chkheri and Bidara 0.5 m and of Devdoraki and Kistaura 0.4 m. The rivers of the Terek basin feed from melting water (18 %), melting snow (29 %), rainfall (13 %) and underground waters (40 %).*

Lakes: *There are numerous lakes in Khevi, all of them very small. The lakes are found in the volcanic and glacial relief. A mineral lake in the Truso gorge, near the village of Abano, is of particular interest: a spring with carbonic acid water originating from carbonate rock forms a small lake that produces small 10-15 cm high fountains and causes the impression of „boiling“ water. There are four small lakes at 3,832 m asl in the Truso gorge, with a total area of about 1 ha.*

2.3 Socio-cultural Economic Framework

With an average altitude of 1800 m the Kazbegi is considered a high mountainous region. The lowest lying village “Gveleti” is situated at 1400 m above sea level, and the the highest “Djuta” at 2170 m. The region also includes the skiing health resort of Gudauri actually comprising two villages: Khumlistsikhe and Gudauri itself. The regional centre is the borough Kabuki.

In 2005 there were 47 settlements in the region (2981 households with 6254 inhabitants). After closing the border with Russia in 2005, most inhabitants left the region. The data compiled by the FS shows that over 50% of the 2005 population have left Kazbegi. Presently, there are 1,400 permanent households with 3,000 inhabitants. 45% of the inhabitants make up the available work force whereas 37% are pensioners and 18% school-children.

2.3.1 Village Profiles

During the Feasibility Study, the following villages were visited and their inhabitants interviewed: Sioni, Garbani, Arsha, Vardisubani, Kobi, Phansheti, Qoseli, Alsmasiani, Toti, Gaiboteni, Gergeti, Tcdo, Gveleti, Djuta, Karkucha, Akhaltsikhe, Sno, Achkhoti, Goristsikhe, Khurtisi, Khanobi, Gudauri, Tkharsheti, Stepantsminda, and Phkheshe. A

detailed demographic-socio-economic profile was elaborated for each village. A summary table for all data and villages is attached as Annex 2.3.1.

2.3.1.1 Demography

At current there are 1955 families located in the Kazbegi area of which 1366 are permanent residents, 475 families are summer residents, and 114 families are herders.

The results of the Feasibility Study (FS) clearly showed an over-aged population. Over one third of the population is 60 years and older as compared to the age group 0-18 years (18%). Observations made in the various villages also indicated that within the age group 19-59 years the majority of the people are 45 years and older. In some of the smaller villages (Almasiani, Djuta, Goristsikhe, Khurtisi) the majority of the villagers are 60 years and older. Given the fact that the present population dwindled from roughly 6,000 in 2005 to less than 3,000 in 2009 it is safe to assume that the available work force has shrunk significantly. The exodus of the younger generation causes very much a strain on any development effort.

More than half of the population are women (1609 women compared to 1353 men). In some villages (Gergeti, Vardisubani, Khurtisi) more than 2/3 of the inhabitants are women, and in their majority 40 years and older.

Of the 2962 Kazbegi inhabitants 1329 persons are forming the available work force (44%). The majority of the work force (885 persons) is either self-employed (792 persons) or owns small and medium businesses (93 persons). Self-employment means selling goods on the streets and in markets without a formal business. Only 342 persons are employed. Of these 342 persons are 204 men and 134 women. Most jobs and businesses are concentrated in Stepantsminda, Sno and Arsha. Arsha is the only village with more women than men in employment. The low level of employees (26%) and businesses owners (7%) compared to the overall number of the available work force indicates a) a lack of work available and b) a lack of investment potential. There are not enough businesses to create sustainable jobs in particular for the younger generation. The data also show that the main economic thrust and potential are in the hands of women while the male work force is diminishing.

The educational standard of the Kazbegi population is relatively high. Nearly all the inhabitants have a formal education (Secondary, Graduate, Student). Illiteracy is therefore very low.

2.3.1.2 Household Income and Employment

According to the Georgian State Department for Statistics⁹ the average monthly income in 2007 in rural areas per capita was **105.1 GEL**. If split according to sources of income, salaries from wages (15%) and revenues from the sales of agricultural products (10%) were more significant than revenues from self-employment (6%), keeping in mind that most of the work force is self-employed, meaning a lower income than the national average. The national average income increased by 5% from 2006 to 2007 whereas national average income for the urban population increased by 18% in the same time. This fact paired with a generally higher wage level (also for unskilled labourers) in the urban areas, provides incentive enough for the younger generation to leave their rural homes and migrate to the city. Adding to this fact is the observation that revenues generated from the sale of agricultural goods are dwindling (2006 to 2007: -11%). However, it is noteworthy that in rural areas remittance from abroad increased by 26% for the same period, outpacing the growth in urban areas.

Following the national trend, income from wages is most important in the Kazbegi region. Gudauri leads the table by providing enough employment for 35% of the available work force. This is understandable since Gudauri is the centre of winter sport and tourism in the region. The other extreme is Karkucha where 40% live off social welfare. In the overall, the contribution of salaries to the household income in the region is very low (average 25%). Self-employment is most common but provides only a fraction of what a salary-paid employee earns. Since most of the female work force is engaged in self-employment, a significant increase in the economic development of the region must put the emphasis on the economic development of women. Opportunities must be provided for them to move from self-employment to either a formal employment or entrepreneurship.

In most villages revenues from cheese production and potatoes are the main source of income. Villagers live of a combination of various agricultural goods predominantly cheese and potatoes, supplemented by the sale of hay and meat. The sale of milk contributes very little to the income.

2.3.1.3 Livestock

Animal husbandry has a long-standing tradition in the Kazbegi region. Before independence the region counted about 400 000 sheep of which half belonged to private farmers (see Chapter 2.3.2, History of Range Use). Overgrazing was a common threat to all of the Kazbegi region. With the break-up of the Soviet Union the economic crisis and the loss of the (now Russian territory) sheep winter pastures the number of sheep decreased to roughly 20 000 head of sheep.

⁹ Georgian State Department for Statistics – Statistics of Households in Urban and Rural Areas of Georgia, Tbilisi 2009

Most families of the Kazbegi region are engaged in animal husbandry. Apart from sheep there are 5 000 heads of cattle. Most of the shepherds (80%) are nomadic and so are 40% of cattle owners. At the end of October, sheep and cattle are taken to winter pastures of the Kakheti and Kartli regions. A few cattle-breeders own pastures on the Iagluja field in the Kvemo Kartli region. Others keep their livestock close to their winter homes in the suburbs of Dusheti, Tbilisi and Rustavi. In May the animals return to the Kazbegi summer range.

All villages – except for villages without permanent residents – own cattle and sheep. On the average, each family owns 2 cattle and 8 sheep. However, most of the cattle are kept in Sioni, Garbani, Sno and Stepantsminda. Most of the sheep are located in Arsha, Sno, Gudauri, Stepantsminda and Phkhelshe. Cattle provide milk, cheese and meat. Sheep provide wool and meat, and to a far lesser extent milk. All products are either for home-consumption or sold locally. The average yield per cow and year is rather low (960 kg or 990 l). Milk is sold for 4.20 GEL/l on average; cheese for 7 GEL/kg. The price of beef is 7.50 GEL/kg. The demand for beef exceeds the overall production in Georgia (self-sufficiency ratio 68%¹⁰). Meat from sheep and goat is not very much in demand (self sufficiency ratio 103%¹¹). Wool from sheep currently is of very low commercial value. Production is estimated at 30,000 tons per year. At 2 to 3 GEL per kilo wool production hardly contributes to the overall income of the Kazbegi people. The value of sheep wool has decreased more than 50% during the past 4 years¹².

The quality standards of milk, cheese and meat from cattle are reasonably good, while the marketing and value chain certainly needs improvement. This is unfortunately not the case for sheep wool and meat. Looking at the available, dairy products are still marketable at a rather good price while the sheep industry in Kazbegi continues to decline.

2.3.1.4 Agriculture

Apart from cattle and sheep villagers grow pigs and poultry. There are 325 pigs kept in the region, most of them in Khanobi and Sno (home consumption only). Pork meat fetches a higher price per kilo than beef (9 – 10 GEL). Most pigs are slaughtered at 130 kilos providing roughly 80 kilos of pork per pig. The current pig population has therefore a value of about 260,000 GEL.

The number of poultry in the region could not be established with certainty (home consumption only). Estimates go as far as 100,000 animals. Eggs are sold on the local market at 2.70 GEL per 10 eggs. However, data from the Georgia State Department for

¹⁰ Georgian State Department for Statistics – Agricultural Yearbook 2008, Tbilisi 2009

¹¹ dto.

¹² dto.

Statistics¹³ reveals that the overall poultry population has grown by 20% compared to 2007. Though no reliable statistics are available for the Kazbegi region, this trend appears also to apply to Kazbegi (pers. comm. with villagers during village profiling).

There are only small patches of arable land, mostly located in the river valleys. Potato growing is common to all villages, however mainly grown for own consumption, rarely as cash crop. There is no formal marketing channel for selling potatoes. Potatoes are grown on small patches (average 0.08ha per household) located in backyards and close to the village. The yield is about 400 kg per household. The quality of the potatoes is excellent. They are popular in Tbilisi where they usually fetch a higher than average price (average price per kg: 0.86 GEL). Sioni, Garbani, Arsha, Sno, Goristsikhe, Stepantsminda and Phkhelshe are the main growing areas in the region. The total area under cultivation amounts to 74.14 ha which corresponds roughly to 371 tons of potatoes with a market value of approximately 320,000 GEL.

With 359 bee hives bee-keeping is niche occupation in rural Kazbegi. The total honey production/year averages 7 tons. Most of bee-hives are located in Khanobi, Garbani, Sno and Djuta. Prices for honey vary by season. On average a bee-keepers receives 10 GEL per kilo. Beekeeping is mostly implemented on an artisanal basis without access to modern technology and knowledge. Only a few bee-keepers (apart from honey) produce wax, pollen, propolis and –rarely- bee-venom. The honey harvested is a typical wild flower honey which is quite liquid due to the high content of fructose. The total value of the honey harvest can be estimated at 70,000 GEL.

The region is known for its numerous herbs, plants and berries of medicinal and kitchen value including species such as sea-buckthorn, bilberry, barberries, sweetbrier, field-ash, pit, raspberries, broad-leaved garlic, yellow daisy, touch-and-heal, marjoram, caraway, and thyme. Medical plants are being used in the traditional medicine and rarely marketed. Kitchen herbs are used for own consumption only. Herbs from the Kazbegi region are widely known and appreciated for their taste and the fact that they grow naturally without exposure to fertilizer and/or pesticide.

Sea-buckthorn fruit are very popular, being harvested by women to be converted into juice and jam, sold at 4 GEL per 0.7 liter bottle. The remainder, containing pulp and valuable seed oil is not used. The production of Sea-buckthorn juice is for many women an important complementary revenue earner and a potential product of high commercial value.

Prior to the year 2005 a total of more than 580 greenhouse farms were operated in the Kazbegi region, most of them abandoned after the cut off of free natural gas as primary heating source. Only a few greenhouses are still in a relatively good condition but are of limited use due to the high energy prices in the region. Regenerative energy sources to be used for green-houses have not been explored so far.

¹³ IBID

Fruit trees including apple, pear, cherry, and sweet cherry are common to many villages of the target area. In Sno grapes from the Meskheta region with similar climatic conditions are cultivated. In Sno and Goristsikhe some families cultivate strawberries. Since snowberries from this high mountain region are harvested later than in other regions of Georgia sales are anti-cyclic, resulting in better prices. The low quantity grown however is insignificant in terms of sustainable income generation.

Only one trout hatchery operated by monks close to Sno village is found in the Kazbegi region producing approximately 50,000 trout/year, which are either sold or given to the local population free of charge. Commercial marketing would require refrigerated trucks and or tanks for live transport to the capital. Compared to meat, fish is relatively cheap (4,65 GEL per 1 kg frozen fish).

2.3.1.5 Tourism in the Region

The Kazbegi region is considered a diversified tourist destination including the Truso Gorge close to the village of Kobi (currently not accessible due to the prevailing border conflict with Russia), the Sno Gorge, including Chauki mountains and a climber's camp at the foot of Chauki cliffs, the Sameba (Holy Trinity) church, one of the most visited destination in Kazbegi region, and the Mount Kazbek and Devdoraki glaciers. The advantage of Kazbegi is its closeness to Tbilisi (150Km). The Kazbegi region however is a summer destination. Road access is inadequate due to the poor road condition.

Overnight facilities are offered through guest houses and by the only hotel of the region: "Stepantsminda". Most visitors are day-visitors. Only few come for a longer stay (hikers, backpackers and mountaineers). Lodging facilities and service in the region is sub-standard. Poor language skills by locals is considered a serious handi-cap for the lucrative foreign tourism market.

The local NGO "Mountain House", supplies basic information and equipment for outdoor tourism. The tourism season in the Kazbegi area usually starts in spring with bird-watchers and lasts until the end of October. Only very few tourists visit the region in winter.

Uncontrolled waste disposal contaminating the Tergi River watershed and side valleys are considered a major obstacle to tourism development in the region to be based on a unique nature experience. Emergency or rescue services are unavailable and medical facilities are limited to the poorly equipped and staffed Stepantsminda hospital. Banking services (e.g., ATM machines) are virtually non-existent, neither a regular postal service. A detailed report on the tourism sector is provided by Annex 2.3.1.5.

The gross income from tourism in the region amounts to roughly 1.1 Mio GEL/a (about 440,000 EUR). International visitors are believed to contribute 500,000 GEL (200,000 EUR). Overall revenue from tourism is considered high compared to the overall

household income in the region. Given the right framework conditions, the potential of the tourism industry in the region is relatively high.

2.3.1.6 Actual Land Use

The following chapter describes the actual land use in the Kazbegi region. The 25 villages are administratively attached to 5 Sakrebulo¹⁴. Table 2.3.1.6a provides an overview of the villages and their respective Sakrebulo of the target area. Stepantsminda is the administrative and economical centre of the region.

Table 2.3.1.6a: Villages and their respective Sakrebulo in the Kazbegi target area

Sakrebulo	Village	Sakrebulo	Village
Gorisikhe	Vardisubani	Sno	Sno
	Phkhelshe		Achkhoti
	Goristsikhe		Akhaltzikhe
	Khanobi		Qoseli
	Khurtisi		Djuta
	Tkharsheti		Karkucha
Kobi	Almasiani	Stepantsminda	Gergeti
	Kobi		Tcdo
Sioni	Sioni		Gveleti
	Garbani		Stepantsminda
	Arsha		
	Phansheti		
	Toti		
	Gaiboteni		
		Gudauri-Qumlischikhe	

The main land use in the region are pasture and hay meadows. While pastures are a common good for all people, hay meadows are usually privately owned. The term 'Private Land' also includes (apart from hay meadows) home gardens, potato fields etc. Table 2.3.1.6b below displays the distribution of land use by village.

¹⁴ Sakrebulo – Administrative Unit in Georgia (Gudauri-Qumlischikhe would count as the sixth Sakrebulo without villages attached to it)

Table 2.3.1.6b: Actual Land Use in the Kazbegi target area

Village	Pasture (ha)	Hay meadows (ha)	Privately owned hay meadows (ha)	Actually used hay meadows (ha)
Akhaltsikhe-Koseli	157.3	57.2	35.3	21.9
Arsha	21.2	21.5	42.5	
Artkhmo	21.6	20.6		
Gaiboteni	67.2	32.4	13.3	19.1
Garbani	95.2	92.9	74.54	18.4
Gergeti	297.0	78.2	60.0	18.1
Kanobi	179.8	56.8	42.4	14.4
Karkucha	220.0	62.6	34.6	28.0
Ketrisi	0.0	47.0		
Khurtisi	62.7	60.3	51.1	9.2
Kobi	0.0	39.3	43.3	
Kvemo Okrokana	271.4	0.0		
Pansheti	51.9	18.8	33.6	
Pkhelshe-Goristsikhe	78.9	68.2	97.6	
Sioni	453.7	34.3	132.1	
Sno-Achkhoti	366.9	66.5	384.0	
Stepantsminda-Gveleti	379.1	128.2	159.6	
Tkarsheti	49.2	13.5	27.8	
Toti	185.0	12.4	20.86	
Tsdo	45.9	23.8	8.8	15.0
Vardisubani	36	7.3	16.7	
TOTAL	3040.0	941.8	1278.1	144.1

It appears that some villagers use more land than they actually own. This applies in particular to the villages of Koseli and Karkucha where (communal) land is mostly used for hay-making by individual families without land title. Compared to most other communities, the village of Akhaltsikhe owns a large number of livestock: 160 heads of cattle belonging to 100 herder families and 600 sheep exceeding the carrying capacity of the designated village pasture (157 ha available compared to 260 ha needed for the combined number of livestock owned by the village residents). The demand for additional land is met by using currently un-used grassland under different ownership but in agreement with the respective owners.

On the other hand, there are numerous villages with an under-exploited potential of pasture and hay meadows. This is very obvious in the case of Sno-Achkoti or Sioni where land-use stays significantly below the carrying capacity which equals 1 cow or 6 sheep/ha. Of the 1.278 ha available only 942 ha are actually used. These findings appear to reflect the pattern to be expected from a dwindling and rapidly aging population going hand-in-hand with decreasing pressure on the land base.

The total area within and outside village bounds used for home gardens and mostly potato cultivation is negligible. Potato growers use not more than 74 ha in total (22%) of the available land. It appears that although the land base would permit expanding

agricultural areas without adverse environmental impacts it may not be feasible due to the insufficient work force available in the target area.

2.3.2 History of Range Use

Prior to 1921 most of Georgia was under rule of a feudal system, Kazbegi Region being one of the few exceptions. Here the land was equally distributed amongst all families and all land use issues were settled democratically by village elders. Villagers enjoyed communal use of designated cow pastures mostly located close to communities and along the lower foothills of the settled mountain valleys. Free range access characterized the slopes and upper reaches of the extensive mountain grasslands of the High Caucasus used as sheep pasture.

Post 1921 all land converted to state land. Officially, private ownership of livestock ceased to exist, although families in the Kazbegi region continued to own stock of sheep and cows for personal use, sharing traditional pasture with state-owned herds. This private ownership of livestock and the continuation of traditional range use by Kazbegi communities allegedly were tolerated by the authorities (pers. comm. M. Marsagashvili, MP Kazbegi, Nov 2009).

During the Soviet era the winter pasture of the state- (and privately-) owned sheep was located in the Kazlavi Region, facilitating the dramatic increase in sheep numbers to more than 400,000 summering in the Kazbegi District exceeding the carrying capacity of the very steep and erosion-prone slopes of the Tergi River watershed. The harsh winter of 1965 which also affected the Kazlavi winter range with exceptionally high snow fall and extreme temperature, caused a massive sheep die-off reducing the overall herd size to approximately 300,000. Following the die-off the overall number of sheep stayed the same until 1991 when Georgia received its independence.

The early post independence period was marked by a push for privatization of land and assets resulting in formerly state-owned livestock being distributed amongst families in the Kazbegi target area. With Georgia's independence and the establishment of international boundaries, the Kazbegi District lost the Kazlavi sheep winter range –now located on Russian territory- resulting in a dramatic sale and slaughter of the formerly very large sheep herds, reducing overall numbers from 300,000 to less than 30,000 animals.

Following the loss of the Kazlavi winter range, Kazbegi sheep owners have found temporary winter range for their currently rather small sheep flocks in Maruleuli (Rustavi District). Sheep herders have come to realize, however, that with increasing land privatization in the Maruleuli area and a surging market for sheep meat in the Near East, the current use of “borrowed” land is not sustainable.

2.3.3 Land Tenure

The majority of the rural families in the target area, in particular families living below or at poverty level are unable to afford the costs associated with the land registration process. This leaves them exposed to land speculators and depriving them of opportunities in accessing bank loans (unregistered land is not accepted as collateral) and/or to sell their land at fair market value.

Although the majority of families without a land title in the target area appears to be unable to register land for financial reasons (can't afford the survey and registration costs), others refuse to engage in legalization of their lands distrusting Government motives. The latter, highly vocal group of the Kazbegi Region, is mostly afraid of the Government using legal land titles as leverage to impose land taxes (pers. comm. with villagers). The third group refusing land titles and trying to convince their peers to stick together are highly traditional socialists strongly believing in communal property which historically has been utilized communally. This group does not see any need for changes as long as community structures remain strong and united (pers. comm. With villagers).

With Georgia's land reform of 1998 stipulating private land ownership, the creation of a land cadastre was supported through a bilateral financial agreement with Germany. Subsequently, with the financial assistance of KfW, a centralized cadastre system was established in Tblissi between 2001 and 2005 with branches located in all district capitals of Georgia. The cadastre system was complemented through a USAID project implemented by the Georgian NGO "Association for the Protection of Landowners Rights (APLR)" between 2002 and 2006 assisting families of rural areas in the land registration process. APLR's work in the Kazbegi district consisted of participatory mapping of communal and traditionally owned private residential plots inside villages. Each participating family was handed a document recognized by the central cadastre as proof of traditional ownership. Land registration, however, requires -in addition to the ownership papers- a legal survey and an official application to the land cadastre before a legal land title is provided.

The work by APLR in the Kazbegi district was flawed mostly because numerous families from the target area with a second home in Tblissi who were not present during the survey were either not covered by the survey, or the survey resulted in papers issued to the wrong name (pers. comm. D.Giorgadze, Director APLR). According to informed local sources (pers. comm. M.Marsagashvili) an estimated 80% of the Kazbegi families are still without a legal land title for their residential property.

2.3.4 Zemo Larsi Border Crossing

The FS team had been tasked with exploring the possible consequences of the anticipated opening of the Zemo Larsi border crossing for the planning area, as well as nature conservation and sustainable development in the region.

The Zemo Larsi check-point was closed by Russia on 8 July 2006. Since then, the installations on the Georgian site of the check-point were renovated with American financial support. There have been speculations about an imminent re-opening of the check-point throughout 2009, most recently in early November. The check-point is not only of importance for traffic between Georgia and the Russian Federation, but also (and perhaps more importantly) for transit movements between Armenia and Russia. Accordingly, the re-opening has featured prominently in Georgian-Armenian relations.

Before the closing in 2006, the check-point played an important role for the local economy of Kazbegi District: Inhabitants of Kazbegi would sell local produce in Vladikavkaz, and the Kazlavi area served Kazbegi residents as sheep winter range. A secondary economic effect of the trans-border traffic was that it offered a certain income to cafeterias and kiosks along the border road. Neither of these impacts has been quantified, nor has the ecological impact of the traffic along the Georgian Military Highway.

Data on the frequency of border crossings in Larsi which could be used as a proxy for traffic were collected by the Georgian Border Police until the responsibility for check-points was transferred to the Patrol Police in early 2009. As a result of this transfer, the Unit responsible for these statistics at the Border Police was dissolved, and no data for the period before July 2006 are currently available. Data for 2008 and 2009 from bi-annual traffic counts in Ananuri and Kobi, respectively have been provided by the Road Department of the Ministry of Regional Development and Infrastructure (Table 2.3.4).

Table 2.3.4: Average Daily Traffic on Mtskheta-Stepantsminda-Larsi Road

Year	Location	Private Car	Mini Buses<15, PickUPS	Buses & Trucks	Trailers & > 3 axels	Sum
2008 Avg.	km 20	964	278	61	14	1,317
	km 107	235	5	2	1	243
2009 April	km 20	1,121	305	56	5	1,487
	km 107	97	5	1	2	105
2009 July	km 20	1,056	342	105	34	1,537
	km 107	375	123	25	7	530

In order to evaluate the possible socio-economic and ecological impacts of an opening of the border crossing in Zemo Larsi on the Kazbegi District, two different scenarios need to be distinguished:

An opening of the check-point in the near future would most likely be limited to transit movements between Russia and Armenia, as there are no direct economic (or indeed diplomatic) relations between Russia and Georgia at the moment. Such an opening would significantly increase traffic along the Georgian Military Highway. It is impossible

to estimate how much this increase would be, because the pre-2006 figures are unavailable and cannot be used as a basis for such estimates because (i) Armenia's constraints in terms of trade links was greater in 2006 than it is in 2009, and (ii) allegedly there were other (if illegal) transit routes through Georgia in addition to the routes via Poti Port and Zemo Larsi before the 2008 August conflict. Increased traffic (to be assessed via an EIA) is expected to:

- Have moderate ecological impacts;
- Have moderate socio-economic impacts (confined to road-side trade), and
- Increase the likelihood that the Government of Georgia decides to initiate the planned rehabilitation of the Gudauri-Kobi section of the Georgian Military Highway. If this section would indeed be rehabilitated, this would have a significant long-term socio-economic impact on Kazbegi District as it would bring the district closer to the rest of Georgia and make it more accessible for tourists and goods.

An opening of the check-point to traffic between Georgia and Russia including local traffic, following a normalization of the relationships between Georgia and Russia in the long-term, would have the same effects as listed above but most likely at a larger scale, potentially re-open the Vladikavkaz market to products from the Kazbegi District, thereby increasing income options of the local population (unless this would be prevented by other factors). Although not directly related to the Zemo Larsi border crossing, the improvement of relations between Georgia and Russia that is implied in this scenario, would also raise the possibility of increased tourist visitation to Georgia including Kazbegi, with the associated socio-economic effects.

While the first scenario appears generally realistic in the short to medium term, major developments in Russian-Georgian relations would have to take place in order for the second to become reality. It is beyond the scope of this FS to discuss the likelihood of such developments.

2.4 Policy and Legal Framework Related to Nature Conservation in Georgia

2.4.1 Georgia's Protected Area System

The Protected Area (PA) system of Georgia has been described in detail in Qiqodze et al. (2007). The following information is an updated extract from this publication:

In 1996, the Georgian Parliament passed the Law on the System of Protected Areas. This law created the legal basis for the establishment of protected areas, with the objective to protect outstanding natural areas and valuable cultural heritage. It is still in force. The internationally recognized IUCN PA Categories and their application procedures were introduced to Georgia. To date, there are five categories of PA. Their

total area is 495,892 ha, which equals more than 7 % of the total territory of the country. Brief information on the PAs in each category is provided below:

1. Strict Nature Reserve (IUCN Category I): Access to Cat I PAs is prohibited – only educational visits and non-manipulative scientific research are allowed, subject to special authorization. Currently there are 14 Strict Nature Reserves in Georgia.

2. National Park (IUCN Category II): The first National Park in Georgia, called Tbilisi National Park, was established in 1973 (later abandoned, then re-established in 2007). In 1995, Borjomi-Kharagauli National Park was founded. Kolkheti National Park was founded in 1998, Tusheti and Vashlovani National Parks in 2003, Mtirala National Park in 2006, and Algeti and Kazbegi National Parks in 2007. It is planned to establish three more National Parks - in Racha, Svaneti, and Javakheti.

3. Natural Monument (IUCN Category III): The first three Natural Monuments were created in Georgia in 2003. Currently there are 14 of them. These are comparatively small areas, which nevertheless have significant biodiversity or scenic value. Additional Natural Monuments are currently being established throughout Georgia.

4. Managed Nature Reserve (IUCN Category IV): The first Managed Nature Reserve in Georgia was established in 1956 near Gardabani. There are 12 Managed Nature Reserves in Georgia.

5. Protected Landscape (IUCN Category V): There are currently two protected landscapes in Georgia – Tusheti Protected Landscape (27,903 ha) was the first one, established in 2003. Additional Protected Landscapes are being planned at the moment.

The role of the Agency of Protected Areas (APA) at the Ministry of Environment Protection and Natural Resources is described in detail in Chapter 2.5.1.

A 10-year **National Protected Areas System Development Strategy and Action Plan for Georgia** was developed in 2008, in collaboration with the IUCN POSC (IUCN 2008a). This plan lists priority actions with regard to the following subject areas: **(1)** PA system development, **(2)** improvement of legislation on PAs, **(3)** improvement of PA management, **(4)** financial sustainability, **(5)** capacity building, **(6)** development of the research and monitoring system, and **(7)** stakeholder participation. The objective of establishing the Kazbegi Biosphere Reserve was included into this strategy after the decision on the Ecoregional Programme III had been taken.

A joint analysis of the implementation of PA-related commitments under Multilateral Environmental Agreements by Georgia was conducted by Ministerial staff, with facilitation from the TEMATEA Secretariat IUCN POSC, in 2008. As a result, guidelines comprising four general principles and 67 specific actions for **Improved and Coherent Implementation of Conventions Relevant to Protected Areas in Georgia** were developed and published online (IUCN 2008b). These guidelines have also been taken into account in the above PA system development strategy.

In addition, WWF Caucasus, within the framework of the 2012 Caucasus Protected Areas Project, is currently developing an **Institutional Needs Assessment for Georgia's Protected Areas**, to be published in 2010. It is recommended that this

assessment is consulted and checked for its relevance to Kazbegi National Park during project implementation, once published.

2.4.2 Biosphere Reserve

As part of the Kazbegi Feasibility Study, an analysis of the way in which the UNESCO Biosphere Reserve Concept has been incorporated into Georgian PA legislation has been conducted, and recommendations for improvements of the legislative base of the establishment of Biosphere Reserves in Georgia have been derived from this analysis (**Annex 2.4.2**). This section presents the main conclusions, while key recommendations are summarized in Chapters 4.1.1 and 4.1.2.

The Law on the System of Protected Areas (7-th March, 1996. N 136-IIS) currently provides the framework for establishing and managing Biosphere Reserves in the country. The Law on the Status of Protected Areas (22-nd November, 2007. N 5486-IIS) is another legal document with relevance to BRs, as it establishes the current legal status (category), territory and boundaries of PAs created by the Georgian authorities. Some of these PAs could form core and buffer zones of BRs. For instance, paragraph 6 of this law establishes Kazbegi National Park, which is being considered currently as the core area of a potential Kazbegi Biosphere Reserve.

Article 3, Paragraph 2 of the Law on the System of Protected Areas of Georgia stipulates that in addition to PAs of the IUCN categories, it is allowed to establish “*categories, which are included in the international network of Protected Areas, such as the Biosphere Reserve, the World Heritage District and the Wetlands of International Importance*”. Hence, the law considers and treats BR as a type of PA, and general provisions of this law pertinent to PAs apply to BRs as well.

Article 10 relates solely to BRs. The provisions of this article define the objectives of BRs, requirements and criteria, a procedure for the approval of BRs following the Statutory Framework for BRs, and prescriptions for zoning. According to the Georgian PA law, Biosphere Reserves can comprise the following main zones: **(a)** Core or Strict Nature Protection Zone; **(b)** Managed Nature Protection (Manipulation) or Buffer Zone; **(c)** Restoration Zone; and **(d)** Traditional-Cultural Landscape Zone. According to the law, one or several IUCN categories of Protected Areas could be included in a Biosphere Reserve.

Article 12 of the Georgian PA law specifies the type of land ownership that are permitted in the zones of Biosphere Reserves. According to article 16 of the law, “...It is obligatory” to establish support (buffer) zones in Biosphere Reserves. Support (Buffer) Zones should be established “by using the category of Multiple Use Area (IUCN Cat VI) and are aimed to carry out measures of promoting a balanced activity of nature protection and sustainable development, and local financial resource generation. **Article 16** therefore mixes the buffer zone concept of the MAB Programme with the support zone concept of National Parks or other PAs. If anything, the support zone of such PAs would be comparable with the outer transition zone of BRs, but not the buffer zone.

According to **Article 18**, the APA has the authority to manage Biosphere Reserves and, “in exceptional cases”, to manage them together with other organizations; However, there is no institutional structure specified or required to be established for such a joint management.

Annex 2.4.2 contains a comparative analysis of the treatment of a BR in the Statutory Framework for BRs and the Georgian Law on the System of PAs. The following main conclusions regarding inconsistencies between the two and gaps in the latter can be drawn from this analysis.

Concept of Biosphere Reserves: As opposed to the UNESCO’ Statutory Framework, Georgian legislation considers and treats BR as a PA. Reconciliation of biodiversity and biological resources with their sustainable use, which is a key objective of BR, is missing in the list of objectives for establishing PAs under Georgian law. This inconsistency with UNESCO objectives for Biosphere Reserve is related to the fact that, in Georgian law, BRs are considered a type of PA, the main objective of which is nature conservation, whereas according to UNESCO’s concept, objectives for Biosphere Reserves go beyond classical objectives of PAs (UNESCO, 1996).

Zoning: The UNESCO’s Statutory Framework requires three zones in BRs, while the Georgian Law on the System of Protected Areas considers BR as a type of PA with four zones. None of the zones prescribed in Georgian law can fully serve the function of promoting and developing sustainable resource management practices as “traditional uses” does not necessary mean “sustainable uses”. In addition, there is some confusion in the Georgian PA Law about the buffer zone. E.g., in Article 10, related to Biosphere Reserves, the “buffer zone” is identified as a “Managed Nature Protection Zone”, where only “scientific research, environmental protection and restoration activities are allowed. However, later in Article 16, related to Buffer Zones in general, this zone is identified with “Multiple Use Area” or “Support Zone”, which “is aimed to carry out the measures of promoting balanced activities of nature protection and sustainable development”. Provisions related to zoning of BRs in Georgian legal framework are in need of change to ensure complete concordance with the UNESCO’s Statutory Framework.

Organizational arrangements: Current Georgian legislation does not provide sufficient ground for the APA and it’s Territorial Administrations to be involved in the management of entire BRs. The law on PAs gives the APA the authority to manage core and buffer zones of a BR. The APA is authorized to cooperate with other organizations, “in exceptional cases” for managing the buffer zones. APA has no authority in transition areas as there is no such area required by Georgian legislation for BRs. The Scientific Advisory Board, which is by current legislation the instrument for cooperation with other governmental organizations and local self-governance bodies, cannot fully undertake the role of mechanism for participation, trans-sectoral coordination and cooperation, as required by UNESCO’s requirements. Therefore, changes need to be made in Georgian legislation in order to provide for effective arrangements for managing BRs, including administration, coordination and facilitation of participation.

Management plans: According to TJS (2009), “The existing legal framework implies that management plans for BRs should have the same character as management plans for State Reserves, National Parks and other types of PAs that are managed solely by the APA. However, management plans for BRs must be different in purpose and scope from, say, a management plan for a National Park”.

Also, if a BR is organized in compliance with UNESCO’s Statutory Framework, it is required that various stakeholders are involved in its management. Therefore, it would be appropriate if management plans for Biosphere Reserves are agreed between all stakeholders and approved by an authority which is higher than the MoE – e.g. the President of Georgia. This kind of a plan for a BR would be better described as a development program in the context of the Georgian system. The program would identify “actions, which should be taken by various entities having a stake in the development of the area concerned” (TJS 2009). The core area and buffer zone could have its own management plan, more like a typical PA management plan.

In addition to these core observations, the analysis enclosed as Annex 2.4.2 identifies additional shortcomings of current Georgian legislation on the BR **designation procedure, participation in the World Network of BRs, and periodic reviews.**

2.5 Stakeholder Analysis

For this stakeholder analysis, the main stakeholders of the project were analysed regarding their mission and interest, activities in the region or with direct relevance to the region, their potential role in the context of the proposed project and their capacity with particular regard to that role. A secondary distinction is made regarding their involvement in Kazbegi District and the existing National Park. The stakeholders are grouped into following categories: (1) Government institutions, (2) International donor organizations, (3) Civil Society (including the Church, academic institutions, NGOs and CBOs), (4) Business sector. A detailed analysis, as well as contact details and visiting dates of those agencies that were contacted are attached in annex Annex(XXX).

The major findings and observations relevant for the implementation of the project are:

- The **Asian Development Bank (ADB)** is an international donor of potential importance, as the Indicative Assistance Programme for 2008-2009 comprises ca. USD 70-90 Mio of grants. Communications with ADB and national Government Agencies regarding inclusion of Kazbegi District into water sector rehabilitation activities within the framework of the ADB-GoG cooperation should be established early during project implementation
- The **Georgian Orthodox Church** occupies a prominent position in the public life. The church is an opinion leader among the local population, a technology leader regarding agricultural technologies and local crafts, and potentially an important land owner.

- The **private sector** of Kazbegi District is represented by livestock breeders and pastoralists, the guesthouse owners, hotel owners and others active in the tourism sector, and a few small businesses that are involved in the extraction of various building materials.
- An important umbrella organization of Georgian tourism operators, including many that are active in the Kazbegi District, is the **Georgian Tourism Association (GTA)** with 28 business memberships and activities in the fields of destination promotion, capacity building and training.

Table 2.5.a: Government Agencies with activities in Georgia relevant to the project.

Additional agencies are listed and described in TJS (2009). The Ministry of Finance of Georgia is not a stakeholder of this specific project, but will play its usual role as a recipient and distributor of the KfW grant for the project.

Institution	Mission	Activities in Kazbegi District/ Interest	Possible role	Capacity
Ministry of Environment Protection and Natural Resources (MoE)	Several subunits (e.g. APA, Environmental Inspectorate) of the MoE are fulfilling their functions in Kazbegi District. Priority actions: elaboration of an Environmental Code (basis for further legislative amendments, e.g. regarding co-management), the development of sustainable tourism, improvement of the Ministry's relations with wider society.	Currently no project activities dedicated to the District or Kazbegi NP. Current priorities: institutional capacity development, supported through a number of donor funded projects, including through GTZ and InWEnt.	Responsible Ministry and implementation partner of the project, including biodiversity conservation and natural resource use	- (reduced budget)
Biodiversity Protection Division/ MoE	Development and implementation of policy and legislation for biodiversity conservation inside and outside protected areas; provides expert advice to the Department of Natural Resources Licensing of the Ministry of Economic Development; hosts various MEA focal points; development of national biodiversity monitoring system; implementation of relevant MEAs (e.g. CBD, CITES). Functions still not clearly delineated from those of the APA	Exceptional biodiversity value of the District was acknowledged, division staff showed both interest and skepticism towards establishment of BR in Kazbegi District. Particular interest in using the Kazbegi project to pilot a new type of community based sustainable hunting scheme for Georgia	Strong role regarding policy development for participation and co-management of PAs, biodiversity monitoring and the development of policy and legislation for any sustainable hunting schemes. Should be represented in communication/ coordination mechanisms particularly regarding community based sustainable hunting scheme	- (limited size, reduced budget)
Inspection of Environmental Protection/ MoE	State sub agency of the Ministry of Environment and Natural Resources of Georgia. Relevant subdivisions: Urgent Response Unit (controlling illegal logging, poaching etc.) and Inspection Unit (expert inspections in the biodiversity and	Only 4 administrative acts (statements about violations) have been drawn up for Kazbegi District over the last two years. Interest in cooperation within the framework of the legal competencies of the Inspectorate; priority objective: further reform of the Inspectorate which may	PA rangers and Inspectorate staff cooperate regarding law enforcement in PAs. General collaboration regarding natural resource related law enforcement	- (limited staff capacity/ Eastern Central Bureau in Mtskheta)

Project Name

Task

Institution	Mission	Activities in Kazbegi District/ Interest	Possible role	Capacity
	natural resources field).	result in increased capacity at the national and district level.		
Department of Environmental Policy and International Relations/ MoE	Environmental policy development and long-term planning of the MoE, liaison with international partners and donors (MEA and international cooperation focal points are based at the Department) Leading the revision and re-drafting of the NEAP and NBSAP of Georgia, both of which are in preparation currently.	Not active on regional level but stake in regional activities of national or international policy, such as the establishment BRs. Support to the idea of establishing a BR in Georgia but not written in any policy documents. Generally follow the advice of the APA and Biodiversity Protection Division	Cooperation within the mandate of the Policy Department, role in general policy development aimed at participation and co-management, liaison with the MAB Programme in the course of a possible BR nomination.	+ (no constraints)
Forestry Department/ MoE	Development and implementation of forest policy including ecological, economic and political aspects of forest management, as part of national development strategy and stable development of the country.	Currently not active in the District, as forest patches refer to Kazbegi NP and therefore are managed by APA.	Involvement if forested parts (e.g. pine plantations) of the National Park are de-listed in the course of the re-zoning of the NP.	
Agency of Protected Areas (APA)/ MoE	Legal entity of public law, independently conducts political, governmental, social, educational, cultural etc. under the state control. Core mission: (a) manage protected areas of IUCN Categories I -IV, and other PAs in cooperation with other institutions; (b) maintain and supervise PAs; (c) PA system and capacity development planning, and (d) development of plans, draft laws and guidelines related to PAs. Additional functions: monitoring of rules, planning and development of new protected areas, popularization and development of ecotourism, planning and arrangement of PA infrastructure.	Kazbegi NP is managed by the APA through a Field Administration that reports to it. APA is currently compiling a catalogue of Natural Monuments of Georgia (IUCN Category III). While seven sites situated in the District, none of them has been shortlisted, in order not to preempt activities aimed at the conservation of these sites within the framework of this project. Interested in appropriate formate for nature conservation and sustainable development of Kazbegi District	Main national partner of KfW for the planned project; central role in implementing the project, supporting the necessary adjustments of the legal and institutional framework and ensuring the sustainability of operations of Kazbegi NP	+/- (unclearities with other legislation, lack of implementing legislation, limited institutional memory, limited staff capacity)

Project Name

Task

Institution	Mission	Activities in Kazbegi District/ Interest	Possible role	Capacity
Kazbegi National Park Administration	Territorial subunit of the APA, responsible for the management of the National Park and for liaison with the relevant State Institutions and other stakeholders.	In theory, the activities include protection of the NP, enforcement of the conservation regime, liaison with other institutions, control of natural resource use, research and monitoring, promotion/ organization of sustainable tourism, education and communication. Due to the limited capacity activities are implemented to a very limited degree only. Central interest of the administration is to have the capacity and resources to fulfill its functions adequately.	Key actor during project implementation and beyond, and key champion of the sustainable development for the whole of Kazbegi District.	- (limited staff capacity, limited budget, lack of infrastructure)
Department of Tourism and Resorts (DoTR)	Development and promotion of tourism in Georgia.	Conducted training (e.g. for guesthouse owners); currently collaborating with the NGO "Mountain House" to establish information boards and signposting, preparing the development of a Mountain Rescue Unit. Funding from the State Budget has been committed for a small tourist information centre. Priorities for 2010: development of tourism in the mountain regions. Collaborate with the Union Internationale des Associations d'Alpinisme (UIAA) and the private sector to conduct mountaineering training for guides	Important cooperation partner. Strengthened capacity to contribute to tourism development through establishment of tourist information centre in Stepantsminda; to be involved in regular communication with the NP Administration/ cooperation bodies.	+/- (reduced budget, staff reduction, strategic reorientation)
Ministry of Economic Development: Department of Natural Resources Licensing	Issue (partly auction) of licenses for the use of natural resources (timber, water, underground minerals, hunting and fishing) and export licenses for specimens of wild flora and fauna.	issued a number of licenses for resource exploitation in Kazbegi District. However, it appears that few or none of these licenses are currently being used.	interested in fulfilling its legal role in the Kazbegi District.	+ (no constraints)

Project Name

Task

Institution	Mission	Activities in Kazbegi District/ Interest	Possible role	Capacity
Ministry of Regional Development and Infrastructure (MRDI)	Development and implementation of policy, legislation and planning instruments for the coordinated development of Georgia's regions. Key role as a coordination agency for infrastructure development projects.	MRDI's Road Department maintains the roads of Kazbegi District and carries out rehabilitation works. MRDI is currently conducting a reform of regional development policy in Georgia, which will include the development of integrated spatial planning policies and may create useful synergies during the course of the project.	Potential consultation partner, should be engaged for advice on further developments regarding regional planning policies, laws and methods. Collaborates closely with the Regional Offices of the State Representatives – Governors, could be involved in the joint planning/ implementation of the project.	- (no regional units, limited capacity for a strong direct role)
Ministry of Regional Development and Infrastructure: Road Department	Maintenance and rehabilitation of Georgia's Roads.	The Road Department is responsible for the maintenance of the Natakhtari-Larsi Road ("Georgian Military Highway"). Planning to rehabilitate the road to Sno Village and parts of the road between Stepantsminda and the Sameba Church.	Collaboration with local authorities within the legal mandate and financial means of the Department.	+/- (no funds for major investments)
Ministry of Agriculture: Department of Regional Management	Implementation of agricultural policy and the development of agriculture in Georgia's regions.	Kazbegi District is not considered a favorable place for agricultural activities: no specific interest and no major activities. Minor activities may be conducted by the territorial unit for Mtskheta-Mtianeti Region. Potential sub-projects: intensification of meadows, use of improved seeds, support to the development of dairy farms.	Potential cooperation to be explored in the course of the project	- (reduced budget, limited interest)
Ministry of Internal Affairs: Border Police	Protection of the land and sea borders of Georgia.	Strong presence at borders with the Russian Federation and the breakaway region of South Ossetia. Border Police is based in Stepantsminda, permanent/ seasonal posts near Abano, Larsi and Juta. Interest in strong visitation in the border areas; increased tourism	Important partner of nature protection/ sustainable development (e.g tourism development); due to presence in remote parts of the District, added value in sensitizing them to nature conservation issues, by	+ (no constraints)

Project Name

Task

Institution	Mission	Activities in Kazbegi District/ Interest	Possible role	Capacity
			involving them in public awareness building and information events	
Ministry of Justice: National Agency of Public Registry	Legal Entity of Public Law, responsible for establishment and implementation of a registration system for ensuring recognition and protection of immovable property rights by the state.	Very few titles have been registered so far; no agricultural lands except for a few plots owned by the Orthodox Church. Territorial office in Stepantsminda, although all land title applications can be done on-line or directly at the central office in Tblissi	Fully implement its mission on site	
Ministry of Foreign Affairs: National Commission for UNESCO	Coordination and promotion of Georgia's cooperation with UNESCO; established in 1994 and reorganized in 2004.	Not active at the sub-national level. Interested in promoting activities related to UNESCO in Georgia; though Biosphere Reserves have never been discussed	Supporting role in relation to the establishment of any UNESCO-designated Biosphere Reserve or World Heritage Site in the Kazbegi District.	+/- (limited funds, small grants for priority areas)
Ministry of Culture, Cultural Heritage Protection and Sport (MoCCHPS): Georgian National World Heritage Committee	Elaboration and conduction of State policy on protection and development of Cultural Heritage; supervision on protection, the investigation and promotion of cultural heritage, drafting normative acts on cultural heritage zones, and other activities. Cultural Heritage Department; hosts national World Heritage Committee.	No information about activities of the MoCCHPS related to cultural heritage in the Kazbegi District. No natural WH sites in Georgia have been designated to date; no close collaboration of World Heritage Committee with the APA or the MoE.	In case a nomination of Kazbegi as a World Heritage Site is considered, the Commission – as well as the Ministry as a whole and the Cultural Heritage Department will become an important partner	
Ministry of Energy	Exploit existing energy resources, diversify imported energy supply, ensure energy safety, develop alternative energy sources (long-term goal of meeting the entire demand on electricity by local hydropower resources).	Promot establishment of small hydropower stations, to be financed by investors. Two non-operative stations and additional four potential small hydropower plant sites in Kazbegi District, but no concrete preparations for the rehabilitation/ establishment of hydropower stations	Important role for the promotion of the establishment of small hydropower stations; partner in piloting new innovative schemes of energy trade for the benefit of local communities	+/- (limited financial resources)
Office of State Representative –	Represent the State at the level of the region; coordinate policy	Department of Relations with Local Government and Public Organs;	Strong role as a communication facilitator and	+ (no

Project Name

Task

Institution	Mission	Activities in Kazbegi District/ Interest	Possible role	Capacity
Governor in Mtskheta-Mtianeti Region	implementation at the regional and sub-regional level; consulted by municipalities regarding local budget allocations. Representatives at regional level not legally established, although fulfilling their de-facto role.	responsible for the collaboration with Municipalities like Kazbegi. No major projects implemented	advisor to the project; should be represented in consultation and cooperation mechanisms that are to be established. Sufficient capacity as a monitor and facilitator of project preparation	constraints)
Sakrebulo	Local council, representative body of local self-government of Kazbegi District.	Leading representative body of the District. Interest is safeguarding local participation in the decision making on all issues of relevance to the District.	Sakrebulo (and not the Gamgeoba) should be the main local partner in the decision making processes; leading role in any communication or coordination mechanisms for NP + SZ/ BR set-up.	- (financial constraints; conflict with Gamgebeli/ Gamgeoba)
Kazbegi Gamgeoba	Executive government body of Kazbegi Municipality. Implementation of the decisions of the Sakrebulo and delivery of public services to Kazbegi District.	Responsible for implementing a wide range of activities. Interests: maximize the development effect, minimize land use restrictions, strengthen his position within the Municipality. Outside actors perceived as undermining his authority.	Important local implementation partners, involved in communication and coordination mechanisms, dissemination of information.	- (limited staff capacity)
Georgian Academy of Sciences: MAB National Committee	Promotion of implementation of the UNESCO MAB Programme in Georgia.	Not active since 2004; in 2004, elaboration of a draft concept "Comparative characteristics of the regions for the formation of the first biosphere reserve in Georgia". Promotion of the establishment of BRs	Future role depends on whether BR is established, and on the capacity development.	- (limited financial and staff capacity)

Project Name

Task

Table 2.5 b: International donor agencies with activities in Georgia relevant to the project.

Donor Agency	Relevant activities in Georgia	Activities in Kazbegi District	Possible role/interest
	PA establishment Development of water sector	Ecoregional Programme III, Kazbegi Project-	Donor Potentially transfer of best practice/experience
USAID	Coordination of PA projects, PA related capacity building	Elaboration of pre-FS, Advice to decision makers on above project	Coordination with TJS activities, application of TJS PA Management Planning Guidelines
European Union Protected Fund (CPAF)	Funding of PA running costs	-	Funding of Kazbegi PA running costs
Swiss Agency for Development Cooperation SDC	Sustainable management of the biodiversity in PA and forests (until 2016); Support to development of environmental code; Strengthening of local self-government;	-	Collaboration on specific aspects of sustainable natural resource use in Kazbegi (e.g. Forest certification); Integration of legal adjustments related to Kazbegi PAs into national legal reform; Advice regarding participation of local self-government in sustainable development of Kazbegi District;
World Bank	Rural tourism development; DGP Grant Programme for national NGOs, incl. environmental grants; Rural Energy Programme, including promotion of hydropower; Support to National Parks Reform (US DoI, 1999-2009); Sector Strategy Environment including participatory watershed protection, community forestry in preparation;	Project on land tenure in Kazbegi District commissioned in 2002 to Association of Protection of Landowners Rights (NGO-APLR)	Provision of information and advice; Further scope for collaboration to be determined. Interest in collaboration on participation of communities in PAs and natural resource management;
European Union Challenge Fund	Georgia Regional Development Fund (GRDF), Agribusiness Development Activity (ADA)	Energy Infrastructure Rehabilitation Project (North-South pipeline rehabilitation)	Information about ongoing activities, environmental impacts in prospective PAs within Kazbegi District (e.g. Sea-buckthorn areas S of Stepantsminda); Exploration of participation of actors from Kazbegi District in GRDF, ADA
Partnership for Action Georgia	Eco-Awards Programme, including grants on participation in PAs, sustainable tourism development in PAs	-	Advice on best practice approaches and lessons learned
World Bank Development	Support (loan) to water sector reform in Georgia under consideration	-	Possibly inclusion of Kazbegi District in cooperation ADB-Georgia regarding sewerage system rehabilitation
World Bank	Establishment of Protected Areas in Eastern Georgia and Kolkheti Wetlands	-	Need to take into account lessons learned from earlier WB PA projects
GEF	Financial sustainability of Georgia's PA system; Use of small hydropower at the community level; UNDP now responsible for GEF Georgia allocations;	-	Application of project outcomes regarding sustainable PA financing in Kazbegi; Contribution of GEF to CPAF considered
Switzerland)	Support to rural SMEs and marketing, including rural tourism	Support to NGO <i>Sustainable Tourism Centre</i> 2001-2002	Application of project outcomes and best practice approaches
Switzerland in Need (Republic)	Support to small businesses, CBOs/NGOs, tourism development	Support to NGO <i>Mountain House</i> , Stepantsminda	Potentially implementation partnership; Application of project outcomes and best practice approaches
Switzerland Aid Georgia	Agricultural tourism	Support to NGO <i>Mountain</i>	Application of project outcomes and best practice approaches

ation y)	Relevant activities in Georgia	Activities in Kazbegi District	Possible role/interest
		<i>House, Stepantsminda;</i>	practice approaches;
gation to	Management of waste, water, land use, environmental disaster risks; environmental advocacy; Establishment of Environmental Sector Policy Support Programme in preparation;	Inclusion of Kazbegi District in disaster risk management project	Coordination of activities with project on disaster risk reduction; Application of project outcomes and best practice approaches, particularly with re waste management;
	Livelihood improvement around PAs (Kolkheti Lowlands), finished	-	Application of project outcomes and best practice approaches; Reportedly considering further activities Georgia

Table 2.5 c: IGOs, national/international NGOs and academic institutions relevant to the project.

Organization	Relevant activities	Activities in Kazbegi District	Possible role/interest
Caucasus	Community Forestry, Local Agenda 21, support to protected landscape project in Khevsureti	-	Exchange of information and experience Interest in developing formats for local stakeholder participation and sustainable development;
Caucasus Programme Office	WWF Caucasus Programme, 2012 Caucasus Protected Areas project, implementer role in new PA projects for KfW, Norwegian MoFA, Development of new approaches to support zone management	Small grant support to "Zeta" environmental summer camp near Juta	Exchange of information Interest in the establishment of an effective conservation regime in Kazbegi District
Caucasus University Council	Promotion, implementation and updating of Eco-regional conservation plan, eco-regional communication	-	Regional platform for exchange of experience relevant to the project
Programme for the Caucasus	Development, translation of PA Management Guidelines, training, PA system planning, development of formats for local stakeholder participation in PA	-	Application of project outcomes and best practice approaches, particularly regarding Management planning, stakeholder participation in PA
ACRES	Research and practical projects on biodiversity conservation (particularly large carnivores, human/wildlife conflict)	-	Application of project outcomes and best practice approaches, particularly regarding human/wildlife conflict
CCW	Research and practical projects on biodiversity conservation (particularly birds), national BirdLife partner, publications on Georgian PAs; Elaboration of Caucasian Black Grouse National Action Plan (2007)	Baseline study for establishment of Kazbegi National Park (2007)	Application of project outcomes and best practice approaches Potential source of advice during project implementation, particularly regarding a bird conservation
ENN	Georgian sustainable development NGO/consultancy with diverse project portfolio, including communication participation in small hydropower development, advocacy, sustainable land management, EIA	Kazbegi included in Natural Disaster Risk Management project	Communication and coordination of project activities in Kazbegi District Application of project outcomes and best practice approaches
Stepantsminda	Promotion of economic development and livelihood security of rural population of Stepantsminda District (Tbilisi- based NGO)	School project (computer skills); City partnership with french partner city	To be explored further
Mountain House	Promotion of mountain tourism and environmental awareness raising	Support to mountain tourism in Kazbegi District, education, campaigns	Application of project outcomes and best practice approaches Possible local implementation partner
Sustainable Tourism Centre	Promotion of sustainable tourism in Kazbegi District	Establishment of "Kazbegi Climbers Hut", educational trail marking, awareness raising campaigns, guide training	Source of advice on local experience Possible local implementation partner
Kana	Promotion of sustainable rural development, organic agriculture, rural tourism	-	Application of best practice approaches from other regions of Georgia, e.g. regarding guesthouse training and certification
Georgica/CWC	Promotion of sustainable natural resource use in Georgia, certification (FairWild) and market chains for wild products	-	Cooperation regarding FairWild certification Kazbegi wild products, processing and marketing
Georgian University, Institute of Life	Research into the ecology and conservation of Georgian fauna	Field station in Stepantsminda, various research activities in	Source of advice regarding the zoning conservation regime of Kazbegi National Park

Organization	Relevant activities	Activities in Kazbegi District	Possible role/interest
Georgian Academy of Sciences, Institute of Botany	Botanical Research, regional coordination of Caucasus Plant Red List Assessment, to be finalized in 2010	Kazbegi District Research into flora and vegetation of the Caucasus, plant conservation	Source of advice regarding the zoning and conservation regime of Kazbegi National Park. Explicit interest in conservation of special plant communities in the District

Table 2.5. d: Private Sector Stakeholders

	Activities in Kazbegi District	Possible role/interest
Chicken breeders and hatchery operators	described in more detail in Chapter 2.3,	possible interventions aimed at the livestock sector are discussed in Chapter 3.6.
Guest house owners, hotels and other facilities active in the tourism sector	Greatest activity is related to Gudauri winter resort: Sport Hotel Gudauri, Hotel "Gudauri Hut", Hotel "Truso" and a number of smaller guest houses (Shamo, Panorama, Ozoni, Shino, Sno), operating services mainly during the winter and partly during the summer season; two restaurants in the skiing area and one ski hut, plus a few small vendors) described in more detail in Chapter 2.3.1.5	
Georgian Tourism Association (GTA)	important umbrella organization of Georgian tourism operators; active in the fields of destination promotion, capacity building and training; cooperation with the APA regarding the development of sustainable tourism; involved in marketing, trail marking and education activities in various PAs of Georgia	It is recommended to explore how the experience and expertise gained during project implementation can be harnessed during project implementation.
Truso Ltd.	Carbon acid gas and mineral water enterprise, used to hold a 25-year license for two areas in Kazbegi District. Until 2008 the company had lost its interest in exploiting the wells and the carbonated water continued to stream from the well uncontrolled, resulting in deterioration of the surrounding travertine area, a tourist attraction.	Uncertainty about future plans to exploit carbon acid gas and mineral water in the Truso Gorge
Asphalt Plant	Small asphalt producer but a major polluter in the area because it uses old tires as fuel, resulting in a thick black plume spreading over Truso Valley whenever the plant is operating.	exact ownership, order of magnitude of emissions, operation and scope for environmental improvements should be further explored during project implementation.

2.6 **Projects Related to the Project or Study Area**

During the implementation of the project, attention should be paid to lessons learnt during the following projects that have recently been implemented, or are being implemented, in Georgia. Some of these projects are relevant to the Kazbegi District, others because they address similar issues as faced by stakeholders in the District.

Sustainable Management of the Biodiversity in Protected Areas and Forests, South Caucasus: GTZ (in collaboration with various partners), 2008-2016, EUR several millions (BMZ). Various activities in support of sustainable biodiversity management in pilot regions in Georgia, Armenia and Azerbaijan, including certification, support to processing and market chain development for wild products. Support to environmental code development in Georgia.

Delivering protected area capacity and engaging traditional pastoral communities to conserve Georgia's unique and internationally important biodiversity in the Republic of Georgia, Khaketi region: NGO NACRES (in collaboration with FFI), 7/2009-12/2011, EUR 1.1M (EC). Various measures to address human-wildlife conflict, large carnivore conservation and overgrazing. Capacity building and advocacy.

Sustainable Development of Mountain Regions of the Caucasus – Local Agenda 21: REC Caucasus, since 2004, total EUR 1M (BMU). Development and implementation of Local Agendas 21 for eight model regions of the Caucasus, including Khevsureti (bordering Kazbegi).

2012 Caucasus Protected Areas Project: WWF Caucasus, 2007-2011, USD 1.2 Mio (MAVA Foundation). Establishment and support to national Coordination Committees on CBD PoW PA, PA establishment, biodiversity monitoring in PA, training and capacity building.

Catalyzing Financial Sustainability of Georgia's Protected Area System: Implementation tender pending, 2010-2013, USD 875K (UNDP). Development of financial planning and business planning methods, piloting of innovative financing methods in selected PA in the Greater Caucasus.

Halting the Loss of Biodiversity in the Southern Caucasus - Regional implementation of the Countdown 2010 initiative (and follow-up project): IUCN POSC (in collaboration with various partners), 9/2007 – 12/2009, ca EUR 365K total, (Norwegian Foreign Ministry). PA system development, support to biodiversity monitoring, promotion of ecotourism, improved implementation of PA-related international conventions.

Rural Tourism Development Project: ELKANA, CHF 694K, 2006-2008 (SDC). Hospitality management trainings, certification, PR, development of websites, trail marking, familiarization trips.

Rural Tourism Development Project (Employment and Infrastructure Initiative): USAID (in collaboration with DoTR and ELKANA), 1/2007-9/2009, USD 300K (USAID). Renovation of guesthouses, training, certification.

Strengthening local capacity and developing structured dialogue and partnerships for mitigating natural disasters and reducing poverty in Georgia: CENN, EUR 200K, 02/2009-02/2011 (EU). **Includes Kazbegi District.** Local capacity development and communication facilitation for disaster mitigation, study of link between disaster risk management and poverty reduction.

Promoting Sustainable Forest Management in the Support/Buffer zone of Mtirala National Park: NGO Mta-Bari, 07/2008 – 07/2009, USD 95K (CEPF Caucasus). Designation of a National Park Support Zone based on Georgian spatial planning law, in collaboration with three District municipalities, management plan development, PR.

Facilitating Stakeholder Participation in Protected Areas of Georgia: IUCN POSC (in cooperation with APA), 03/2009-08/2010, ca. USD 70K (Eurasia Partnership Foundation Georgia). Development of PA Advisory Boards, Friends' Associations, Junior Ranger Programmes as participation mechanisms, stakeholder trainings.

Market-oriented sustainable tourism development in Protected Areas of Georgia: Georgian Tourism Association (in cooperation with APA), 03-12/2009, ca. USD 60K (Eurasia Partnership Foundation Georgia). Development of signposting, tourism infrastructure and promotional materials for PAs, training for tourism stakeholders from around PAs.

In addition to the projects listed above, there have been a number of PA establishment and management planning projects in Georgia and its neighboring countries recently. Others are still ongoing. The lessons learned during the projects for the establishment of **Lake Arpi National Park** (Armenia) and **Javakheti National Park** (Georgia), as well as the ongoing establishment of **Zaqatala Biosphere Reserve**, which are all funded by KfW, should be taken into account during project implementation, and full use should be made of the Transboundary Joint Secretariat as a mechanism for communication and coordination of these activities.

2.7 Problem Analysis

The most visible environmental problems related to the target area are uncontrolled waste disposal and the sheet- and channel erosion marking the steep slopes lining the Tergi River watershed and feeder-streams, caused by excessive livestock activity in the past.

The Kazbegi National Park, originally established to protect the remaining forest fragments scattered throughout the lower Tergi River watershed and side valleys, is in urgent need of re-definition and effective management.

Frequent landslides and avalanches in the target area pose a permanent threat to communities, especially in the Sno Valley, compounding the economic hardships experienced by the villages which are already marginalized due to their isolation.

Recognized economic problems relate to the lack of job opportunities and economic alternatives in the target area, and most significantly to a rapidly dwindling and aging population with young people leaving their communities in search for a better life elsewhere.

The historical distrust of local people in authority, the Government and in particular the strong resentment of APA with a very low standing in the target area, pose serious threats to any donor project related to nature protection in the region. This is compounded by local peoples' open distrust in outside influences, not having been used to donor projects of any significance in the past.

Another recognized problem is the generally low level of environmental awareness.

For the project to become successful and sustainable it is of utmost importance to profoundly address the recognized problems by designing and implementing measures to mitigate the risks inherent to the problems. This applies in particular to a well planned and executed information and environmental awareness campaign, a grassroots oriented participatory planning approach aimed at conservation and sustainable economic development, and the strengthening of APA's image in the region by involving APA in all steps of the participatory planning and by assisting APA in the design and implementation of a co-management administrative structure that would empower local communities to be a partner in decision-making processes related to the protected areas and support zone.

3. PROPOSED PROJECT

3.1 Overall Goal and Objectives

The overall Goal of the bilateral aid agreement and the proposed project is the consolidation of sustainable economic development and biodiversity conservation in the Kazbegi District. Key objective of the feasibility study is to identify the most suitable option for reaching the overall goal. In accordance with the terms of reference emphasis in the feasibility study is to be placed on the investigation of the biosphere reserve concept as a preferred option by KfW.

The Terms of Reference for the feasibility study specify:

"...the challenge is to develop concepts which can demonstrate – in the long run - that harmony between the conservation of biodiversity and cultural goods and socio-

economic development is possible. The FS has to develop a project concept considering both aspects, i.e. the efficient conservation of protected areas and the socio-economic development of the families, living in and around the areas. Due to the current situation in the region, the concept shall be highly participative. The success of both the study and of the project depends to a large extent on the willingness of local people to join in the project idea and relevant activities.

The FS will provide KfW and the PEA with all the necessary information related to the decision as to whether the proposed project is feasible for Georgian – German Financial Cooperation. ”¹⁵

3.2 Options for Meeting Goals and Objectives

3.2.1 Option 1: Biosphere Reserve

3.2.1.1 Biosphere Reserve Concept

In the 1970s the “Man and Biosphere” (MAB) Programme of the United Nations Educational, Scientific and Cultural Organization (UNESCO) introduced the Biosphere Reserve (BR) Concept as a multi-level and multi-stakeholder approach to integrate biodiversity conservation, sustainable development and research. Biosphere Reserves are areas of terrestrial and coastal ecosystems, that serve as demonstration sites for conservation and integrated natural resource management. Each biosphere reserve is intended to fulfil three complementary functions. Its conservation function is to prescribe genetic resources, species, ecosystems and landscapes. Its development function is to foster sustainable economic and human development. Its logistical support function is to facilitate demonstration projects, environmental education and training, and research and monitoring. Biosphere reserves are being proposed by national governments and designated by UNESCO upon the fulfilment of the following criteria:

- Encompassing a mosaic of ecological systems representative of major biogeographic regions, including a gradation of human interventions;
- Be of significance for biological diversity conservation;
- Providing an opportunity to explore and demonstrate approaches to sustainable development on a regional scale;
- Appropriate size to serve the three functions of Biosphere Reserves;
- Appropriate zoning, recognizing a) core zones, b) buffer zones and c) an outer transition area;
- Organizational arrangements for involvement and participation of a suitable range of public authorities, local communities and private interests in the design and carrying out the functions of a Biosphere Reserve;

¹⁵ KfW ToR for the Kazbegi feasibility study

-
- Providing (a) mechanisms to manage human use and activities in the buffer zones; (b) a management policy or plan for the area as a Biosphere Reserves; (c) a designated authority or mechanism to implement this policy or plan; (d) programmes for research, monitoring, education and training.

Physically, each biosphere reserve should contain three elements. First, there must be one or more core areas - securely protected sites for conserving biological diversity, monitoring minimally disturbed ecosystems, and undertaking non-destructive research and other low-impact uses. Next is a clearly identified buffer zone, which usually surrounds or adjoins the core areas and is used for cooperative activities compatible with sound ecological practices. Last is a flexible transition area, or area of cooperation, which may contain a variety of agricultural activities, settlements and other uses, and in which local communities, management agencies, scientists, non-governmental organizations, cultural groups, economic interests and other stakeholders work together to manage and sustainably develop the area's resources. Although originally envisaged as a series of concentric rings, the three zones have been implemented in many different ways to meet local needs and conditions.

Biosphere Reserves remain under the sovereign jurisdiction of the states where they are located.

3.2.1.2 Added Value and Feasibility

i) Decision Support Tool

Is the Biosphere Reserve concept the best way of organizing sustainable development and biodiversity conservation in the Kazbegi District?

In order to support decision makers in deciding on the best arrangement for the integration of biodiversity conservation and sustainable development in the Kazbegi Area, the Feasibility Study Team (FS Team) has devised a decision support tool (Annex 3.2.1.2). This tool breaks down the overall problem into a set of logically structured tractable questions and provides information to answer these questions. It also provides a simple way of synthesizing the answers to these questions and arriving at a final Votum.

A Key question is: (a) whether a Biosphere Reserve (BR) concept is the best way of organizing sustainable development and biodiversity conservation in the Kazbegi District, more specifically, **(a)** is it feasible, and **(b)** does the added value of its application in comparison to alternative approaches outweigh its added cost.

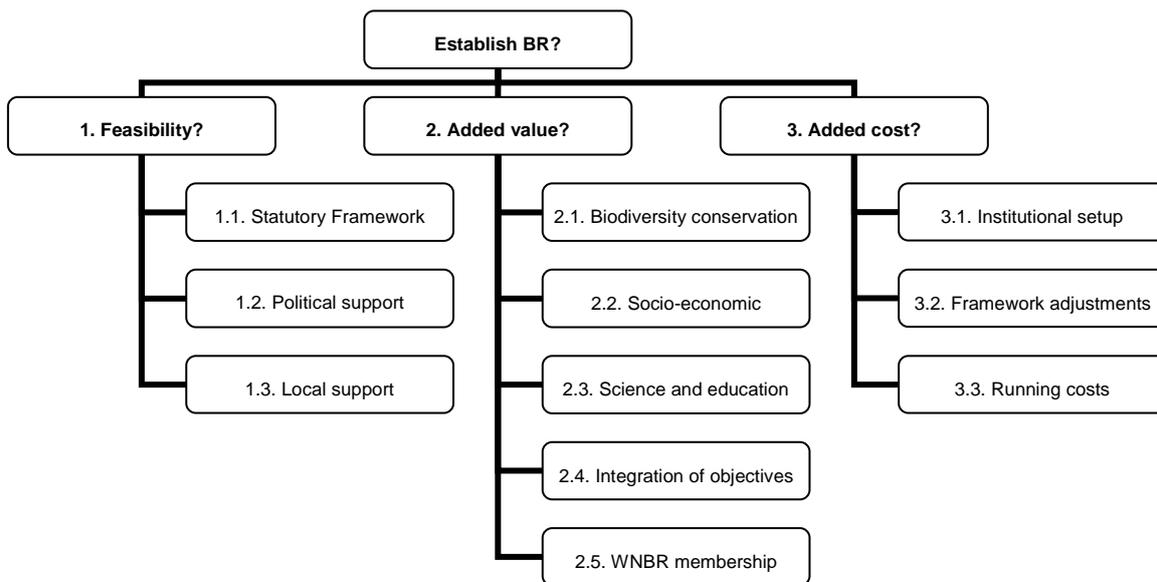
Another Key question is: what alternative approaches would generally be feasible. A tried and tested approach in Georgia (e.g. Borjomi-Kharagauli National Park and Mtirala National Park) is the establishment of one or several protected areas (PA) conforming to the IUCN PA Categories and a **support zone** around them. Similar to the BR approach, this approach allocates emphasis on conservation, and on

sustainable socio-economic development to separate zones within the overall planning unit. Experts on Biosphere Reserves acknowledge that this approach (National Park and Support Zone) generally can pursue the same objectives and include the same ways of working as a BR (Phillips, 2008, p. 3).

In order to identify the most suitable option for meeting KFW’s defined goals and objectives for the Kazbegi Region the BR concept is compared to a “National Park and Support Zone” arrangement for the purpose of this decision support tool. The assumption of feasibility for the alternative agreement is based on existing examples in other regions of Georgia. This does not preclude the need to introduce general legal amendments allowing for stronger co-management of the National Park, as well as natural resource management in the support zone in Kazbegi.

As shown by Figure 3.2.1.2a, the Kazbegi project would have to meet the BR criteria of the Statutory Framework of Biosphere Reserves (Criterion 1.1.), and would need to enjoy the necessary political support at the national-(1.2.) and local level (1.3.) in order to be feasible. The potential added value of the concept can be broken down according to the three objectives of biosphere reserves (Criteria 2.1. - 2.3.), the concept’s added value regarding the integration of these objectives (Criterion 2.4.), and the benefits of becoming a member of the World Network of Biosphere Reserves (2.5.). Potential added costs and risks need to be considered in relation to the institutional setup of the area (3.1.), the necessary adjustments to the legal and institutional framework at national level (3.2.) and recurring costs (3.3.).

Figure 3.2.1.2a: Criteria for feasibility, added value and added cost of the BR vs. the “NP and Support Zone” arrangement.



The conclusion for each criterion is summarized as follows. The full discussion and argument related to each criterion is provided by Annex 3.2.1.2.

Criterion 1.1. *Is it feasible to fulfill the criteria of the MAB Statutory Framework within the framework of the project?*

Conclusion: The FS observes a conflict between the requirements of the Statutory Framework for Biosphere Reserves to establish a “buffer zone” (Framework criterion 5b) and the special characteristics of the planning area, which render such a buffer zone difficult, not logical and impracticable to establish. In addition, there remains some doubt about the feasibility of innovative approaches to sustainable development of the region considering the rapidly dwindling work force, low population density, and the rapidly aging population. There also is doubt about successfully establishing a multi-functional BR Coordination Council conforming to Framework criterion 6. As a result, the feasibility of establishing a BR in the Kazbegi District is reduced, and Criterion 1.1. is only partly met.

Criterion 1.2. *Does the establishment of a BR in Kazbegi have the necessary political support at the national level?*

Conclusion: Although the BR concept is included in the Georgian PA law and mentioned in the NBSAP, the analysis of policy documents and statements of the MEPNR representatives and other stakeholders show that the establishment of a BR is not a major priority of the Georgian MEPNR or a prominent topic on the Georgian conservation agenda. There is general openness to test the approach (particularly if international donor funding is attached to it), but the robust autochthonous support that would be needed to overcome the considerable challenges involved in establishing a BR appears to be missing, and Criterion 1.2. is only partly met.

Criterion 1.3. *Can the necessary local support for a BR in Kazbegi be achieved?*

Conclusion: Although the prospect of donor funding for sustainable regional development may be attractive to the local population, the rather rigid zoning pattern that is central to the BR concept reduces potential local support to them; also the local perception of a biosphere reserve mistakenly identified as another protected area category continues to cause controversy. Criterion 1.3. is only partly met.

Criterion 2.1. *Would a BR be a better tool for biodiversity conservation than the alternative scenario?*

Conclusion: Given the fact that the planning and management of biodiversity conservation in the core and buffer zones of a future Kazbegi BR would have to rely on existing IUCN PA and TJS National Park methodologies, i.e. the same methodologies that are used for PAs, there is no added conservation value in applying the BR

concept. However, a BR managed according to IUCN or TJS Guidelines would also not be any worse than any IUCN Category PA, and Criterion 2.1. is partly met.

Criterion 2.2. *Would a BR provide a better framework for sustainable socio-economic development than the Support Zone of a National Park?*

Conclusion: Both BR and a National Park/Support Zone can provide a basis for conducting measures aimed at sustainable socio-economic development, but it depends on the quality of the measures themselves whether the desired development impact is realized. There is huge added value in high-quality development measures, but less added value of conducting them within a BR “outer transition zone” rather than, for instance, a National Park Support Zone bordering the National Park. Therefore, Criterion 2.2. is only partly met.

Criterion 2.3. *Does the BR concept facilitate demonstration projects, environmental education and training, research and monitoring more effectively than alternative arrangements?*

Conclusion: The BR approach holds no added value for the development or implementation of education, research, training or monitoring in Kazbegi. Since a BR might be a basis as good as a National Park to achieve these objectives, Criterion 2.3. is partly met.

Criterion 2.4. *Could the functions according to criteria 2.1. - 2.3. be more effectively integrated using the BR approach, as opposed to the NP and Support Zone integrated spatial land use planning approach within the framework of the alternative arrangement?*

The BR concept aims at integrating biodiversity conservation, sustainable socio-economic development and support to education and research. This is the same approach promoted through the National Park/Support Zone concept. However, the aim alone is not an added value. Added value depends on the extent to which the aim is actually reached in practice, or, more specifically, the extent to which the BR concept would be effective in reaching an integration of all three objectives in Kazbegi, in comparison to alternative arrangements.

This leads to the question of: ***how the BR approach offers to achieve functional integration.*** The answer of the Seville Strategy, Statutory Framework and Madrid Action Plan, is essentially threefold: **(1)** through zonation, **(2)** through participative land use planning, co-management and/or community management and **(3)** through application of a number of specific guidelines on issues like BR management, conflict resolution, provision of local benefits, and involvement of stakeholders in decision making (Objectives II.1.1. and IV. 1.1. – IV.1.5. of the Seville Strategy).

Conclusion: Because **(1)** the zoning guidelines of BR are not conducive to integrating conservation and development in the Kazbegi District, **(2)** the integrative effects of local participation could be used in alternative arrangements in the same way as in a BR, and because **(3)** the MAB Programme methodological guidance to achieve integration of BR functions as promised in the Seville Strategy has either not been delivered or is not accessible. The BR approach offers a more holistic general outlook, but no practical added value to integrate conservation, sustainable development and research/training in the Kazbegi District. Therefore, Criterion 2.4. is only partly met.

Criterion 2.5. *Would the planning area, its managers and stakeholders benefit from becoming part of the WNBR, beyond benefits of a National Park/Support Zone related national, regional and international networks?*

Conclusion: There is limited value for Kazbegi District in becoming part of the World Network of Biosphere Reserves and Criterion 2.5. is partly met.

Criterion 3.1. *Would the institutional setup for a BR be less costly or risky than the setup for alternative arrangements?*

Conclusion: A Coordination Council aiming at coordinating all functions of the BR would be costly, in terms of its establishment, operation and sustainability beyond the initial project lifespan. Unless it is designed as a pure communication body for existing institutions and stakeholders, it would probably also be less cost-effective than alternative arrangements, because of overlap, frictional losses and limited acceptance by local self-government. The BR Administration (in accordance with existing Georgian Law) would have management responsibility for the NP only, but at the same time would have to fulfill several support roles for the overall BR. Therefore, it is highly unlikely that the BR approach would reduce costs, compared to alternative arrangements, and Criterion 3.1. is not met.

Criterion 3.2. *Would the establishment of a BR necessitate adjustments to the legal and institutional framework of the conservation and sustainable development sector in Georgia that are more costly than those of alternative arrangements?*

Conclusion: The BR concept will come at a cost in terms of legislative and institutional arrangements. Therefore, the BR approach would likely result in additional costs related to legal amendments compared to a NP-Support Zone (although a concise quantification is difficult), and Criterion 3.2. is only partly met.

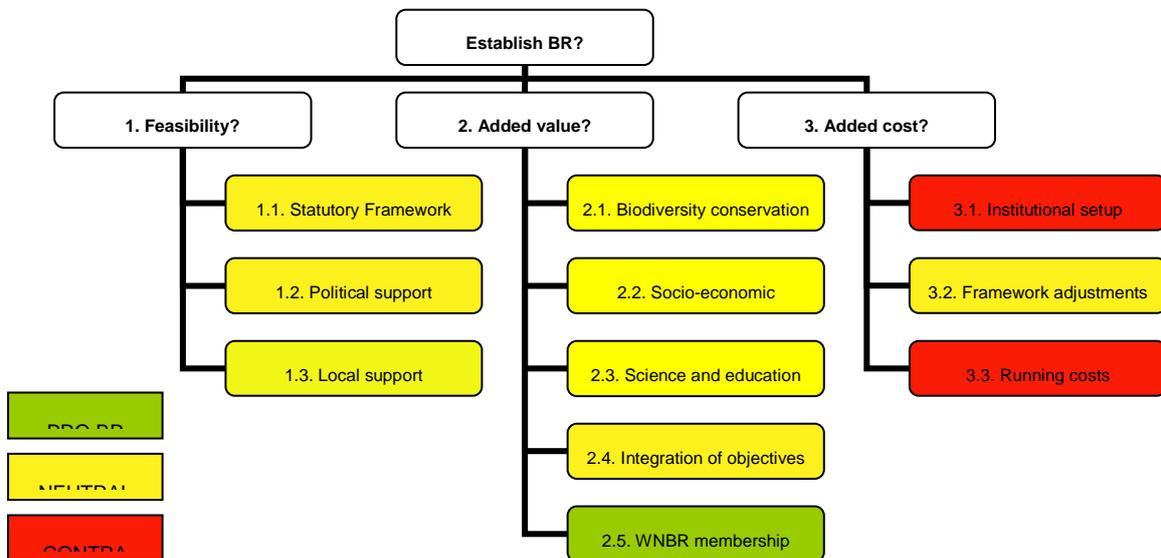
Criterion 3.3. *Would establishing a BR reduce the running costs of the planned area within or beyond the project lifespan, in comparison to alternative arrangements?*

Conclusion: Running a BR Administration would likely increase running expenses in comparison to a NP-Support Zone which may qualify for financial support by the Caucasus Protected Area Fund covering budget shortfalls if the qualifying criteria are fulfilled. Criterion 3.3. is not met.

ii) Summary

The feasibility of applying the BR approach to the Kazbegi District is in doubt, and even if it would turn out to be feasible, choosing the BR option would offer little added value at considerable added cost (Figure 3.2.1.2.b).

Figure 3.2.1.2b: Summary of conclusions for each criterion of the decision support tool.



iii) Additional considerations

The concept of a biosphere reserve fosters biodiversity conservation to be mainstreamed into the sustainable economic development of relatively densely settled predominantly rural areas with a high dependency on natural resources. Such areas are generally characterized by unsustainable and poorly controlled land and resource use threatening the ecological integrity of existing core areas of biodiversity conservation and the environment at large. The biosphere reserve concept focuses on people and their needs to be embedded in a sustainable environment. Stabilization of

livelihood and sustainable economic development, closely linked to a healthy environment and intact nature are central to UNESCO's original Man and Biosphere Concept which over time evolved into the more formalized Biosphere Reserve Concept (early 1970s) as it is known until today with little changes over the past 40 years.

The possible establishment of a BR in Kazbegi needs to be seen not only from the perspective of the planning area but also from a national and ecoregional perspective because it is clearly intended as a pilot project that, if successful, might be followed by additional BR projects in other places in the future.

Although many of the points that speak against the establishment of a BR in Kazbegi are of a general nature (e.g. 2.1. – 2.5.), there might be regions in Georgia that would be more suitable for a BR (i.e. where criteria 1.1. and 1.3. could be met more easily). From a strategic point of view, this means that attempting to establish a BR in Kazbegi, where the concept appears to be particularly unsuitable, might turn out to be counterproductive: **A failed attempt to establish a BR there would discredit the concept to an extent that its application in more suitable areas would become unfeasible, too.**

The BR concept is primarily aimed at managing cultural landscapes, which are characterized by a close interrelation of human activity and ecosystem function. In fact, it has been increasingly being applied to suburban and urban environments in the recent past. Kazbegi District, in contrast, has one of the lowest population densities of Georgia, and extensive high-mountain wilderness areas which are not cultural landscapes, the economic potential of which may be limited to tourism.

While its agricultural development potential is limited, due to climatic conditions, the District is of high symbolic value to Georgians and foreigners alike, is very easily accessible by Georgian standards, and already is among the prime tourist attractions of the country.

3.2.1.3 SWOT Analysis

Table 3.2.1.3 summarizes the strengths, weaknesses, opportunities and threats associated with the establishment of a UNESCO Biosphere Reserve in Kazbegi District.

There is sometimes confusion regarding the subject of SWOT analyses and the difference between strengths and opportunities or weaknesses and threats, respectively. In accordance with modern SWOT methodology, this analysis refers to a **defined objective**. Strengths and weaknesses are defined as **inherent** qualities of the general BR approach, the specific idea of establishing a BR in Kazbegi District, and the

cluster of institutions promoting this specific idea. Opportunities and threats are defined as factors that are **external** to the approach, the specific idea and the specific actors but nevertheless affect the likelihood of reaching the objective. Individual strengths, weaknesses, opportunities and threats are listed in order of importance.

Table 3.2.1.3: SWOT analysis for reaching the objective “establishment of a BR in Kazbegi District”.

Strengths	Weaknesses
<ul style="list-style-type: none"> - Inclusiveness of BR concept (integration of conservation, sustainable development and education/science) - BR approach explicitly includes outer transition / development zone in setup and management of the BR – generally strong basis for promoting sustainable development - Internationally recognized designation - Support of and technical input to BR establishment by TJS, experience from Azerbaijan 	<ul style="list-style-type: none"> - Relatively high proportion of wilderness areas within Kazbegi District and little land use pressure does not make a typical case for BR establishment there - Complex and costly institutional setup of BR - BR zoning pattern difficult to implement in Kazbegi District - Limited added value of BR concept as a biodiversity conservation tool - Seville Strategy/Madrid AP offer little practical guidance on how to reconcile development and conservation objectives in BR - Significant flaws in current national legislation on BR - Limited activity/capacity of Georgian National MAB Committee - Lack of dedicated financial instruments for sustainable management of BR
Opportunities	Threats
<ul style="list-style-type: none"> - Donor interest in testing the BR concept in Georgia - Awareness among government agencies of the need for improved stakeholder participation and mutual integration of development and conservation - Tourism development potential of Kazbegi District - Applicability of TJS participatory PA 	<ul style="list-style-type: none"> - Limited support to BR establishment among the APA, MEPNR, and throughout the conservation community in Georgia - Unfavourable demographic trend, depopulation and rapidly aging population limit development potential of Kazbegi District - Harsh environmental conditions and lack of agricultural land limit agricultural development potential of Kazbegi District

<p>management planning guidelines</p> <p>- Foreseen Larsi border opening may improve development potential of District (opportunity conditional on border opening)</p>	<ul style="list-style-type: none"> - Low acceptance of any PA extension of PA among local population and lack of trust to central government threaten constructive cooperation of local stakeholders, which is crucial for BR development - Lack of support from UNESCO MAB Programme to Georgian MAB Committee - No financial sustainability - Possibility of political tensions in the vicinity of the separatist area of South Ossetia - Centralization in Georgian PA system threatens implementation of co-management aspects of BR - Limited capacity of Georgian institutions for effective inter-institutional cooperation threatens integrative setup of BR
--	--

3.2.2 Option 2: Strengthening Existing National Park and Establishing Support Zone

3.2.2.1 Description of National Park and Support Zone

This option entails strengthening and significantly expanding the existing Kazbegi National Park to be converted into an ecologically viable conservation unit protecting rare high mountain forests and shrublands. The park expansion would permit protection of large tracts of diversified plant communities characterizing sub-alpine and alpine grassland ecosystems of the High Caucasus, which are currently not protected by the existing national park and which are under-represented by Georgia’s PA system at large. Expanding and strengthening the existing national park is of cardinal importance to Georgia’s protected area system with or without the establishment of a biosphere reserve.

New to the proposed second option (national park and support zone) is the designation, establishment and well targeted economic development of the park’s support zone. The establishment of a national park support zone is a legal requirement in accordance with Georgia’s Law on Protected Areas.

The NP support zone concept is well known to Georgia. It was first introduced to the country with the establishment of Borjomi Kharagauli National Park in the early 90s,

subsequently anchored in the country's new protected area legislation of 1996. Center to the support zone concept is the active involvement of park neighbours in the park- and support zone planning and management. Hence **national parks and support zones are considered one entity**.

Functions promoted by a biosphere reserve: **conservation, development and logistic support for demonstration projects, environmental education and training and research and monitoring** all have been inherent to the national park/support zone concept in Georgia from the beginning, actively promoted and implemented since the early 90s by WWF and later by USAID.

In reality, the only difference between a national park/support zone- and a biosphere reserve concept is that the biosphere reserve concept promotes a "buffer zone" to encircle the "core zone" (i.e., a national park) of a biosphere reserve, compared to a national park and support zone considered **one single entity without a buffer between the support zone and the national park**.

Although no specific rules to the selection and size of a support zone apply, it has become common practice to include all communities sharing a common boundary with the national park¹⁶. Applied to Kazbegi, all 25 communities located in the Tergi River catchment area would therefore qualify to be included in the support zone of the to-be-expanded Kazbegi National Park, since all either would border the park or share traditional land partly located inside the national park.

The philosophy of a national park/support zone and a biosphere reserve in reality differ little; both aim at the integration of people into biodiversity conservation and sustainable economic development related to protected areas and peripheral zones. The main difference lies in the approach taken to the integration. It is argued that the approach taken by the national park/support zone concept better reflects the Zeitgeist by placing more emphasis on people, effectively empowering park neighbours by involving them in decision-making processes related to the park and support zone. Although the biosphere reserve concept stipulates the creation of a multi-stakeholder management board, less emphasis is placed on the involvement of local people and even less on the empowerment of local people through participation in decision-making processes related to the "core zone" of a biosphere reserve. This fundamental difference in the approach is of utmost importance to the Kazbegi region. It is argued that in the Kazbegi region neither a biosphere reserve nor a national park would be accepted by the local population without community empowerment to be substantiated through active involvement in decision making processes related to the conservation units.

¹⁶ Schuerholz, G. 1998. *'Buffer Zone'*: a term to put to rest! IUCN CPA Newsletter

3.2.2.2 SWOT Analysis

Applied to the Kazbegi target area, the obvious advantages (strengths and opportunities) of a national park/support zone model over the biosphere reserve concept may be highlighted as follows:

- Although Georgia's Law on Protected Areas is in urgent need of review (currently implemented and spearheaded by GTZ) it provides a strong legal basis for a national park/support zone (**in contrast: existing weak and vague legal framework for a biosphere reserve**).
- A national park/support zone constitutes a well recognized, widely accepted and one of the most popular protected area categories in Georgia and globally (**in contrast: biosphere reserves are unknown to Georgia and substantially less popular globally**).
- It is argued that the concept of a national park and support zone is easier to understand and to be accepted/appreciated by local people than a biosphere reserve which is locally totally unknown.
- The participatory planning of a support zone and national park allows local stakeholders to formulate land- and resource use policies adapted to their lifestyle and local conditions fostering development of ownership (**in contrast: there are no prescriptions for participatory planning approaches, management plans, economic development plans etc. for biosphere reserves provided by UNESCO or any other available documents; nothing compared to the abundance of information, planning- and management guidelines for national parks and support zones, especially as related to IUCN's World Commission on Protected Areas**).
- Sustainable economic development of the support zone and respect for the protected hinterland (i.e. national park) to be achieved through empowering local people to take part in decision-making processes is expected to result in a "win-win" situation (**in contrast: it is not known how this could equally be achieved through the creation of a biosphere reserve**).
- Although never fully accepted, the Kazbegi communities are used to the existence of a national park which is expected to be more acceptable under the right framework conditions (sustainable economic development of the support zone to be felt at the household level) **rather than introducing an untested, unknown biosphere reserve concept does not offer any additional values**.
- According to Georgia's Law on Protected Areas it is mandatory to elaborate a management plan for a NP-support zone. This plan would cover most of the Kazbegi target area and all 25 villages of the planning area (**in contrast: no guidelines on the need for a comprehensive integrated management plan exists for a biosphere reserve, neither in the Georgian legislation nor UNESCO's guidelines**).

-
- Although the Kazbegi National Park is currently administered centrally by APA, an expanded park and well planned support zone requires a co-management structure which requires ministerial cooperation as a relatively new governance model to Georgia (opportunity). **On the other hand, a multi-stakeholder management board as a prerequisite for a biosphere reserve fails to provide guidance on how to involve and empower local people as key stakeholders. Also no guidance is given on whether the Board should assume overall responsibility for the management of the core zone of the biosphere reserve (Kazbegi National Park), which in accordance with Georgian legislation would remain the sole responsibility of APA.**

There are no recognizable threats related to the national park/support zone that would not equally apply to the biosphere reserve model (primary threat: lack of local acceptance). To the contrary, it is argued that a national park/support zone would be seen by local people as the “lesser evil” of both.

3.2.2.3 Added Value and Feasibility of a National Park-Support Zone

The rationale for a support zone of a national park is to support park neighbours in an effort to improve community development and to stabilize livelihood of local people who frequently are economically marginalized due to the isolation of such areas. This is achieved through participatory- and integrated spatial land use- and sustainable economic development planning of a support zone and the subsequent implementation of the resulting development plan.

In return for economic assistance provided to support zone communities, park neighbours are expected to take ownership in the over-arching conservation objectives for their hinterland which provides them with goods and services.

This concept has successfully been promoted in Georgia by WWF and for the first time applied in the country to Borjomi Kharagauli National Park in 1993 (the country’s first national park structured according to IUCN guidelines) with financial assistance of KfW (1995-2009). Meanwhile the concept has been successfully applied to other national parks in the country culminating in the first successful **co-management model applied to National Park Mtirala** which is managed by a multi-stakeholder Management Board with membership of community representatives from the support zone.

The philosophy of a support zone (i.e., in principle the same as a consolidated “buffer zone” and “transitional zone” of a biosphere reserve), promotes an even closer relationship between the “core zone” and people living in its neighbourhood than a biosphere reserve. This is in due consideration of the (mostly) pronounced dependency by park neighbours on natural resources. It is also for this reason that national parks in accordance with IUCN guidelines permit sustainable traditional resource use in desig-

nated (traditional use) zones inside a national park (instead of surrounding a park with an additional “buffer zone” --to keep people out of the core area or “buffering” the core area against people’s potential impacts -- as stipulated by the biosphere reserve concept). Thus the national park/support zone concept provides for a much more intimate relationship between park neighbours and the park by integrating people harmonically into the one entity **national park and support zone** instead of the biosphere reserve approach which fosters the establishment of a “buffer” zone separating people from the park.

3.2.3 Comparison of Options and Consultant Votum

The advantages of the option “national park/support zone” compared to the option “biosphere reserve” are apparent. There appears to be no added value offered through a biosphere reserve concept except for its international registration with UNESCO (no monetary nor other tangible benefits are affiliated with biosphere reserves). The UNESCO label for a biosphere reserve, however, is of questionable value in a country where UNESCO’s profile is very low. On a local level, the UNESCO label would be of no consequence.

It is argued that one of the key obstacles for the successful establishment of a biosphere reserve would be its mandatory zoning concept; more specifically, the definition of a mandatory “buffer zone” which simply would not be acceptable to local people. The Kazbegi communities strongly (violently) defend their traditional land use- and grandfathered property rights extending from valley floors to the high mountains of the Caucasus. An artificially imposed “buffer zone” applied to land considered communal and/or traditional private property would be outright rejected by local people who are fiercely defensive of traditional land rights. Any outside interference with traditional land rights are therefore expected to meet with greatest hostility jeopardizing any attempt to successfully implement any donor-supported conservation project in the target area.

Another recognized shortcoming for the successful application of a meaningful economic development as stipulated by the biosphere reserve concept is the lack of people living in a very sparsely settled area. The Kazbegi population has shrunk by half within the past five years (from 6000 in 2005 to less than 3000 in 2009) resulting in a rapidly aging population. This is not conducive to the biosphere concept that intends to connect people with conservation through well guided economic development. As a direct result of the low population density in the target area and the alarmingly declining population, pressures on the environment, and/or threats to the existing national park and other areas flagged as areas of high conservation value, are very low and decreasing making the establishment of a “buffer zone” as stipulated by a biosphere reserve redundant.

On the other hand, communities appear more open-minded, although still sceptical, regarding the participatory planning of a support zone as part of a national park. The option national park/support zone therefore appears the more suitable alternative also fully meeting the overall goals and objectives of German bilateral aid for the region: **“harmonizing biodiversity conservation and sustainable regional economic development for the benefit of the local people”**.

The official response to the suggestion by the FS team to UNESCO’s Secretary of the Man and Biosphere Program, aimed at the consolidation of the buffer- and economic development zone of a potential biosphere reserve for Kazbegi (pers. comm, Mr. Natarajan Ishwaran, Secretary Man and the Biosphere Programme UNESCO), converting the biosphere reserve effectively into a national park/support zone model, is still lacking. The only visible advantage of this option that would be more acceptable on a local level by eliminating the “buffer zone” as key obstacle, however, would be the UNESCO label attached to the biosphere reserve. Although this option has been proposed to UNESCO, it is doubtful that the proposed change would be achievable and acceptable in the short run.

The option for a radical change of the existing and rather outdated biosphere reserve concept has also been brought to the attention of UNESCO. It has been suggested (pers. comm. Secretary of MAB) to use the biosphere reserve label in the future as a certification tool for well managed national parks and support zones with full integration of local people into the planning and decision-making processes (i.e., co-management). This would not only add great value and prestige to the certified protected area but also signal proper framework conditions for potential donor investments and make it more visible and attractive to tourists who can expect acceptable service standards. This however is a long term vision not achievable in the near future and not acceptable to UNESCO under the current legal framework guiding UNESCO’s Man and Biosphere Programme.

Since there is no doubt that Kazbegi National Park will need to be strengthened and developed within the framework of this project, the alternative between the formats “Biosphere Reserve” and “National Park plus Support Zone” does not affect the core conservation regime to be developed/established. It is merely an alternative between two approaches to managing areas **outside** the core conservation zones of Kazbegi District. Advantages and disadvantages of both approaches are compared in Table 3.2.3 and a detailed SWOT analysis related to the options considered is provided in Annex 3.2.3.

Table 3.2.3: Comparison of advantages and disadvantages of the establishment of a Biosphere Reserve vs. a National Park - Support Zone in the Kazbegi District.

BIOSPHERE RESERVE	
<i>Advantages</i>	
<ul style="list-style-type: none"> - Explicit designation given to areas outside NP core zone - International label 	<ul style="list-style-type: none"> - Clear stipulation for the establishment of strong coordination mechanism outside core zone, e.g. through Biosphere Reserve Council
<i>Disadvantages</i>	
<ul style="list-style-type: none"> - Significant gaps in current BR- related legislation of Georgia would defer implementation - Limited support to BR establishment among the APA, MEPNR, and throughout the conservation community in Georgia - Lack of support from local and other stakeholders - Relatively high proportion of wilderness areas within Kazbegi District and little land use pressure does not make a typical case for BR establishment in target area - Unfavourable demographic trend and depopulation limit development potential of Kazbegi District - BR zoning pattern difficult to implement in Kazbegi District - Limited added value of BR concept as a biodiversity conservation tool - Seville Strategy/Madrid AP offer little practical guidance on how to reconcile development and conservation objectives in BR 	<ul style="list-style-type: none"> - Need to establish a “buffer zone” - UNESCO (and label of biosphere reserve of little local/national significance) - BR Concept complex and difficult to communicate, because of multifunctionality - BR approach cannot create development potential but only catalyzes meeting the existing development potential – which is limited in Kazbegi District - Costly institutional setup a particular problem because of missing financial sustainability of biosphere reserve - BR approach challenging to existing institutions in Georgia, as it requires high capacity for inter-institutional cooperation and joint decision making - Centralization in Georgian PA system threatens implementation of co-management aspects of BR - Lack of support from UNESCO MAB Programme to Georgian MAB Committee - Lack of dedicated financial instruments for sustainable management of BR
NATIONAL PARK AND SUPPORT ZONE	
<i>Advantages</i>	
<p>Existing sufficient legal framework for establishment of support zone of National Park</p> <ul style="list-style-type: none"> - Existing experience with the establishment of NP support zones in Georgia (Borjomi-Kharagauli NP and Mtirala NP) - Potential application of the bottom-up <i>Mtirala Model</i> of NP Support Zone designation would 	<p>Flexibility of support zone approach and its institutional framework</p> <ul style="list-style-type: none"> - International best practice examples from managing remote wilderness areas with high tourism development potential as NPs with Support Zone - Low population density, declining and aging

empower Local authorities (designation by Municipality under Georgian Spatial Planning Law) - Familiarity of local population and national stakeholders with NP, resulting in better acceptability and easier CEPA - -Easy integration and harmonization of resource use in support zone and NP	population resulting in reduction of adverse impacts on environment and biodiversity -Tourism sector has significant development potential in the District, and tourism development is consistent with NP/Support Zone format -Available financial instruments for sustainable management of MP and Support Zone
Disadvantages	
None recognizable	

In due consideration of all pros and cons of the local applicability and feasibility of a biosphere reserve concept vs. a national park-support zone model, the Consultant Votum is therefore in favour of Option 2:

A strengthened and expanded national park and a well planned support zone involving all stakeholders guided by sustainable economic development objectives for the benefit of the local population.

3.2.4 World Heritage Site: an added Value?

Another option for receiving an internationally recognized UNESCO status and a label that enjoys a much higher prestige and wider-spread international recognition than a biosphere reserve would be through the label of a “World Heritage Site”. This highly interesting option would appear more suitable and acceptable to local people since there are few restrictions attached to awarding Heritage status to an area of outstanding natural beauty and culture. The World Heritage label is highly prestigious flagging the selected site as an area of global importance. The prospects for a successful application in the Kazbegi case appear to be good due to the favourable framework conditions offered by the target area.

By regarding heritage as both cultural and natural, the Convention of World Heritage is a reminder of ways in which people interact with nature, and of the fundamental need to preserve the balance between the two. A key benefit of ratification, particularly for developing countries and countries in transition, is access to the World Heritage Fund. All things considered, the Kazbegi area appears to be a prime candidate for the designation of a World Natural Heritage due to its outstanding natural and cultural features, especially the very prominent Kazbegi Glacier being increasingly threatened through global climate changes.

Another advantage would be that IUCN as a key advisor to the Programme is in a position to promote the declaration and possible financing of the Kazbegi National Park and support zone as World Natural Heritage. IUCN of course would be interested in the establishment of a viable national park of global significance, especially in a trans-boundary context. The same applies to the Caucasus Biodiversity Council. The issue of recognizing the target area as World Heritage Site was discussed with both IUCN Switzerland (pers. comm. T. Jaeger) and the Head of the Caucasus Biodiversity Council (pers. comm. H. Jungius) who are both fully supportive of the NP-Support Zone model at the same time sharing the FS team's concerns regarding the successful application of a biosphere reserve in the target area.

3.3 **Project Components**

3.3.1 **Definition of Target Area**

The definition of the planning area to be covered by the feasibility study was guided by the following ecological and other criteria. Conforming to the favoured option of Georgia's new Ministry of Regional Development it appeared logical and ecologically sensible to include the entire water catchment area of the upper Tergi River watershed and tributaries. The boundary of the planning area therefore follows the water divide and ridgeline of the High Caucasus covering all of the upper Tergi River micro-watersheds and catchment areas located to the west, south and east of the planning area, bordering Russia to the north (see Map 3.3.1.a "Planning Area by Sakrebulo"). The selected boundary of the proposed planning area also happens to coincide with the District boundary of Stepantsminda including all of the five Sakrebulo Goristsikhe, Kobi-Gudauri, Sioni, Sno and Stepantsminda.

The primary ecological reasons for the definition of the planning area have been the occurrence and distribution of selected trigger species (flora and fauna) typifying this eco-regional unit (Map 3.3.1.b Flora and Fauna) and its critical importance to rare and nationally endangered plant associations, habitat of numerous endemic and unique species.

INSERT MAP 3.3.1.a “Planning Area
by Sakrebulo

This Page

INSERT MAP 3.3.1.b “Flora and
Fauna”

This Page

3.3.2 Inclusion of Gudauri

The question whether to include Gudauri or not appeared to be redundant considering the large and scattered land distribution of the Kobi-Gudauri Sakrebulo which covers all of the Truso Valley and the major part of the upper Tergi River water catchment area. For ecological reasons it is therefore essential to include the Sakrebulo Gudauri in the planning area.

Another reason has been in view of Gudauri's economic importance providing contributing over 50% to the Stepantsminda municipal budget. It is evident that without the Gudauri revenue the municipality could not function. The results of a SWOT analysis investigating the advantages and disadvantages by including the Gudauri sakrebulo in the overall planning area are attached as Annex 3.3.2.

3.3.3 Project Justification

The overall conservation value of the ecosystems of the Kazbegi Planning Area are underlined by the wide range of threatened species and critical plant ecological units that occur in the Kazbegi District. The outstanding conservation value of the area is further highlighted by the following facts:

- Kazbegi forms an important part of the Khevi-Tusheti Priority Conservation Area of the Ecoregional Conservation Plan for the Caucasus.
- Kazbegi has been designated in 2009 as Important Bird Area by "BirdLife" International and flagged as an Important Plant Area by "PlantLife 2009".
- The importance of Kazbegi for conservation at the ecoregional level has been highlighted in the Message from Gudauri (IUCN 2006).
- Kazbegi predominantly consists of high mountain ecosystems which are currently under-represented in the Georgian PA system (2.49% PA coverage for high mountain ecosystems, versus 7.6% average coverage for all ecosystems).
- There are several sites and objects of particular conservation interest in the region, which have been short-listed for the designation of Natural Monuments by the APA.
- Kazbegi has exceptional symbolic value as part of the natural heritage of Georgia (Kikodze and Gokhelashvili 2007).

Taken together, this support clearly justifies the existence and further development of conservation areas of outstanding biodiversity value in the target area not systematically addressed in previous zoning attempts by APA. Against this background a Gap Analysis for the identification of Key Biodiversity Areas taken both flora and fauna into consideration has been performed within the current feasibility study in close cooperation with Georgia's Academy of Sciences and the Tblissi State University leading to the proposed zoning described in the following Chapters.

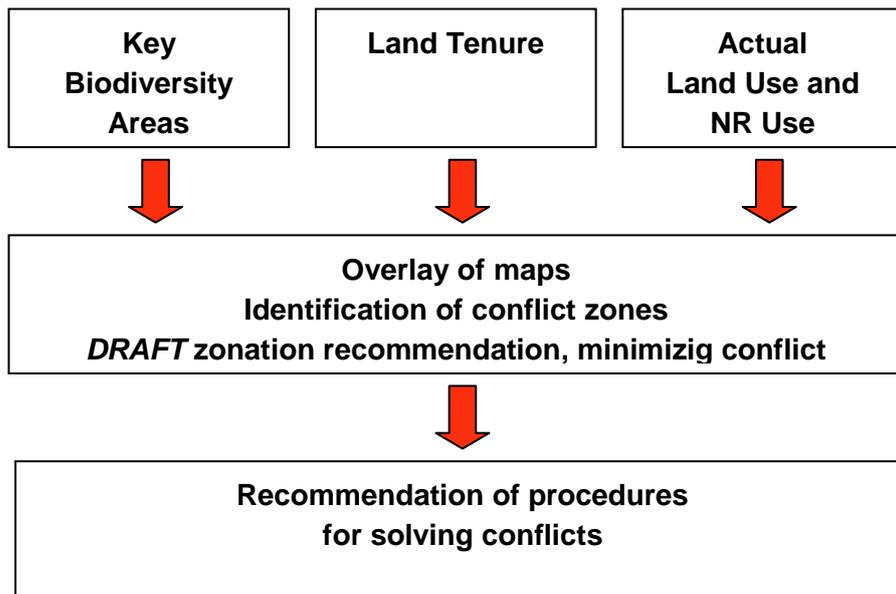
3.3.4 Proposed Zoning of Target Area

The current delineation of Kazbegi National Park is not based on a systematic site prioritization process, but the result of a somewhat erratic history: In 1976, the Dedtoraki and Khde Strict Protected Areas, which had existed since 1946, were joined into the Kazbegi SPA and extended by addition of forested patches, to a total area of 3,481 ha. This was again extended to 8,707 ha in 1987 (Chikovani et al. 1990). The result was a mosaic of many isolated forest patches with little connectivity between them. In 2007, the SPA was re-designated as a National Park without further changes to its boundaries, and in 2008, a proposal for its extension was elaborated by the Commission for the expansion of Kazbegi National Park at the APA. Implementation of this proposal, which is based on expert opinion but not documented methodology proposes an expansion of the National Park to > 60,000 ha. The expansion plans have been halted pending the FS for the prospective Kazbegi Biosphere Reserve.

It should be noted that the above history refers to the delineation of the area on paper. It appears that the SPA and National Park were never fully enforced in reality.

The current FS and the planned establishment of a BR or similar arrangement present an opportunity to re-delineate and zone the planning area, based on a rational integrated spatial planning methodology that takes into account conservation value, land tenure and actual land use. This process needs to be driven by the Sakrebulo and Gamgeoba of the District, in collaboration with APA and the donor. The FS suggests the following methodology for the re-delineation and zoning process (Figure 3.3.4):

- Mapping of Key Biodiversity Areas, using a GIS-based international best practice methodology (Langhammer et al. 2008).
- Mapping of land tenure, based on data from official sources (Gamgeoba, NAPA) and available information from previous donor funded projects (e.g. USAID-APLR).
- Participatory mapping of actual land use based on village visits by the FS Team. This is particularly important as traditional and actual land use (and tenure) in Kazbegi is not always reflected by official tenure data.
- Overlaying of layers 1-3 and identification of conflict areas. Elaboration of a draft zonation and delineation procedure for further discussion.
- Recommendation for conflict resolutions.

Figure 3.3.4: Proposed approach to Zoning

3.3.4.1 Setting Site-based Conservation Priorities

In order to identify areas most in need of conservation efforts and to arrive at the most effective and cost-efficient allocation of protected areas within the Kazbegi District, the IUCN method for the identification of “Key Biodiversity Areas” (known as “KBA Method”) was used (Annex 3.3.4.1). The KBA method is practical, easy to use, feasible and recommended for the prioritization of conservation areas in undisturbed natural settings. It is described in detail in the IUCN KBA Guidelines (Langhammer et al. 2007).

The KBA identification process uses two criteria: vulnerability and irreplaceability. Vulnerability is measured based on the occurrence of species that are listed in either national Red Books or the IUCN Red List of Threatened Species in the planning area. Irreplaceability is assessed based on either the proportion of the distribution area of species covered by the planning area or the proportion of individuals of the global population living in the planning area. Only species are used as KBA trigger species which exceed a pre-defined threshold of vulnerability and irreplaceability. Criteria and thresholds for KBA trigger species are summarized in Annex 3.3.4.1.

Once the KBA trigger species are identified for a given planning area, their vulnerability in the planning area to various defined threats is scored based on “severity”, “immediacy” and “scope”, to yield an impact score. The threat with the highest impact score, whether to the site, or to trigger species if individually assessed, is taken as the impact score for the site/species, and used to calculate a vulnerability score for the site as a whole. Finally, a conservation priority score can be calculated and mapped for each grid square within the planning area.

For this feasibility study a KBA per trigger species within the Kazbegi District based on both the national and international Red Lists were identified. The KBA trigger species in the Kazbegi District are Eastern Tur, Chamois, Brown Bear, Long-clawed Mole-vole, Kazbegi Birch Mouse, Caucasian Black Grouse, Caucasian Snowcock, Giant Rose Finch, White-winged Redstart and Corncrake (cf. Sections 2.2.3 - 2.2.5). Apart from these species, prominent cliffs used by colony breeding vultures and as nesting/roosting sites of other rare and endangered birds (Bearded Vulture, Griffon Vulture, Egyptian Vulture and Golden Eagle – cf. Section 2.2.5) were included. The KBAs of the trigger species were overlaid and their conservation priority scores summed and converted to a scale of 0-1 to derive the final maps of global and national conservation priority scores for Kazbegi District.

Kazbegi District contains the endangered riparian forest predominated by Sea-buckthorn (*Hippophae rhamnoides*) on the River Tergi, and provides food and cover for many passerines and small mammals, including threatened and restricted-range species. This habitat also provides cover for Otter (*Lutra lutra*). Other types of forests that grow on slopes are dominated by birch (*Betula litwinowii*), juniper (*Juniperus* spp) and pine (*Pinus cochiana*) trees. Forest cover in Kazbegi District is small (4% of the district) but harbors a high diversity of species (incl. endemics), and provides timber and other building material, fuel, soil fertility as well as protection from landslides, avalanches, flash floods and sediment load. Forest cover is the basis for the existing Kazbegi Nature Reserve (IUCN category I). According to expert advice specifically requested for this study, most of endemic plants and other high conservation value plants found in Kazbegi District grow in forests, mountain steppes and wetlands (see Section 2.2.5 and its annexes). Thus, a a top conservation priority was assigned to Sea-buckthorn cover, other forest types and wetlands.

This procedure yielded a conservation priority map for the entire Kazbegi District which was used to inform the re-zoning proposal and additional designation/re-designation recommendations for protected areas that are included in this feasibility study, together with land tenure and actual land use (Map 3.3.4.1 Proposed Conservation Areas).

INSERT MAP 3.3.4.1 “Proposed
Conservation Areas”

This Page

3.3.4.2 **Minimum Critical Size of a Viable Kazbegi National Park**

The much needed expansion of Kazbegi National Park to a total of at least 25,000 ha, composed of an eastern and western section encompassing samples of all ecosystems found in the study area, is expected to meet the minimum critical size requirements of a typical mixed High Caucasus grassland-shrubland-forest ecosystem. This is based on the following arguments.

An area of 25,000 ha (equals approximately 22% of the planning area or 17% after deduction of the area covered by glaciers respectively) of a stand-alone, typically large-scale ecosystem is expected to provide viability to the majority of its animal populations with densities of 1 individual per 10 ha or denser, which is enough for most larger herbivores as well as the medium-size predatory mammals (fox size). This should be enough for the survival of most animal and plant species as well as plant associations typifying the target area¹⁷. This may still not provide minimum area requirements for species with larger home ranges such as wolf, brown bear, eagles and vultures.

Under less favourable conditions, fewer species may maintain their population at a viable level. It should be emphasised, however, that if this targeted ecosystem size was set aside for the sustainable protection of the last remaining populations of the larger mammals, it would be grossly undersized and inadequate. That, however, is **not** the case in the planning area. The proposed Kazbegi National Park is meant as a building block of an interlinked protected area system, which only in its combined composition maximises both species diversity and survival durability of all species, including the ones that require large territories. If the proposed Kazbegi eastern and western sections can be connected with equal sized similar ecosystems on the other side of the international border, the overall size of the combined conservation area could be reduced, still safeguarding the level of species-specific genetic variability within viable populations while meeting minimum critical size requirements for a conservation unit such as a national park.

3.3.4.3 **Proposed Conservation Areas**

Based on the identification of Key Biodiversity Areas (KBA results) and the calculation of minimum critical size requirements for a National Park in the target area the following conservation areas are proposed. It should be understood that the boundaries of the proposed conservation areas are tentative, to be adjusted to site-specific requirements. The tentative boundaries of the proposed conservation areas have to be

¹⁷ These criteria need reconsideration for areas with migrating ungulates, but not applicable to the High Caucasus.

discussed/negotiated with local stakeholders and communities as part of the proposed participatory planning process for the national park and support zone that will include local communities who have to agree to the boundaries.

i) National Park. The existing Kazbegi National Park does not meet minimum critical size requirements for the targeted ecosystems to be protected by a national park. It insufficiently covers important ecosystems of the area which are currently under-represented by Georgia's protected area system.

All factors considered, it is suggested that the proposed expansion of the national park would best result in two sections separated by the Tergi River, each covering some of the highest biodiversity areas identified for the Kazbegi Region. The proposed eastern section would be converted into one single consolidated unit excluding some of the isolated forest fragments without physical connection between them. These fragments should be de-classified and become subject to special policies and regulations to be elaborated jointly with local stakeholders as part of the NP support zone. The corresponding enforcement would become the responsibility of community rangers (Chapter 3.5). The eastern section will share a common boundary with the support zone and ecological corridor of the Zapovednik Erzi and Zakaznk Ingushsky located on the other side of the international border (see Map 3.3.4.3). The total size of the Eastern Section would be 7,550ha,

The western section, with 16,790 ha over twice the size of the eastern section, encompasses highly diverse habitats extending from the valley bottom of the Tergi River watershed to the Glaciers bordering Russia to the north. This section includes several key micro-watersheds originating from the glaciers and steeply walled canyons covered by unique plant associations formed by the diverse micro-climates typical for the highly dissected terrain. It is hoped that the western section will eventually be amalgamated with the ecological corridor and a newly to-be created protected area on the other side of the international border which would place the entire glaciated mountain area of the Kazbegi region under protection. A protected area to be created on the other side of the international border, jointly with the proposed western section of the Kazbegi National Park would create one single contiguous conservation area of formidable size, protecting vital winter and summer ranges of key herbivores located on both sides of the international boundary (see Map 3.3.4.3).

INSERT MAP 3.3.4.3 “Protected
Areas on the Russian side bordering
Kazbegi)

This Page

ii) Other proposed Conservation Areas. Based on the ecological gap analysis (Chapter 3.2.7.1) four other key areas of high biodiversity importance have been identified. Two of the areas are located in the floodplain of the Tergi River to the north and south of Stepantsminda. Both areas are characterized by plant communities dominated by Sea-buckthorn a vital winter range for the Greater Caucasus satellite populations of **Great Rosefinch** (*Carpodacus rubicilla*) and **Güldenstädt's Redstart** (*Phoenicurus erythrogaster*). The only known wintering habitat of both species in Georgia are the designated areas which are therefore not only of national but also of ecoregional (global) importance. The combined total size of both areas is less than 250 ha. Special habitat protection measures are essential for the long-term survival of the two red-listed bird species. The most suitable protection category in accordance with Georgia's Law on Protected Areas still has to be determined, although it is suggested that the equivalent of an IUCN category III area would be most appropriate.

Another area identified primarily as critical nesting habitat of colony-breeding vultures and a perching area of prominent raptors are the Mt. Kaberjini Cliffs located to the south of the Tergi River between the Truso and Sno Valley. The total area to be protected would be approximately 500 ha (see Map 3.3.4.1).

The Ghudo Gorge has been flagged as an area of key biodiversity importance mainly because of its highly diverse ecosystems harbouring a large species diversity in habitats formed by unique micro-climates in a very differentiated landscape. This area of high conservation importance (2,415 ha) would also be most suitable as an IUCN category III protected area, being too small to qualify for a national park but being in need of a relatively strict protection. This area would not tolerate commercial resource extraction or any settlements.

The combined total of the proposed five identified conservation areas for the planning region amounts to approximately 25% of which 2,7% would be proposed sanctuaries and 22% national park.

3.3.4.4 Proposed Community-Based Hunting Cooperative

The Kazbegi Planning Area offers a unique opportunity for the establishment of a hunting concession, an option discussed during the feasibility study with the Ministry's Biodiversity Protection Division as the responsible agency for hunting concessions in Georgia. Past plans for the re-establishment of hunting concessions in the target area never materialized mostly due to legal problems related to red-listed key animal species targeted for hunting.

Hunting concessions in Georgia's past have been mostly affiliated with one single concessionair, a model not suitable for the Kazbegi planning area where hunting has been a highly traditional and well respected pastime embedded in the local culture.

Traditional local hunters appear to be very knowledgeable about local wildlife and nature in general, respectful of biological cycles of key species hunted, and ethics related to hunting methods and treatment of wild animals. There is great local resentment of hunters illegally entering the area to shoot wildlife rather indiscriminately with little consideration given to hunting seasons and closures. This applies in particular to weekend hunters from Tblissi frequently arriving by helicopter to access remote high elevation areas to rather indiscriminately shoot even red-listed trophy animals and other wildlife irrespective of rules and regulations.

Against this background the proposed model for the establishment of a community-based hunting cooperative should be seen. The potential structure of the cooperative, membership, functions and responsibilities and the management implications for a designated hunting block and its wildlife have been discussed with local hunters from the Kazbegi communities. The generally positive response to this innovative model for a co-managed hunting block suggests to advance the idea for the benefit of local hunters and wildlife.

Obvious advantages of a community-based hunting model are:

- Involvement of local people in a highly traditional pastime;
- Legalizing hunting in the hunting block set aside for the cooperative and legalizing an activity currently officially classified as “poaching”, contributing to the already strong local resentment of the Government and authority;
- Peer pressure as expected to occur within a cooperative would have a positive effect on hunters and wildlife, ultimately increasing the level of civil obedience and game populations;
- Effective protection of the designated hunting block and its resources against illegal intruders;
- Reducing highly destructive helicopter hunting;
- Potential revenue generation through well controlled and organized trophy hunting as one of the cooperative’s responsibilities;
- Organized and well conducted periodic big game species count monitoring population trends and providing the basis for species-specific quota allocation;
- Concrete measures for habitat conservation and enhancement;
- Potential for international certification of a hunting cooperative (sustainable wildlife management, scientifically assessed hunting quotas and periodic census of game species are a prerequisite for international certification).

The proposed Cooperative Hunting Block with an area of 24,910 ha, covers the entire upper Tergi River watershed (most of the Truso Valley) bordering Russia to the North and Ossetia to the North-West (see Map 3.3.4.4 “Proposed Zoning”). The Hunting Block would provide protection against upstream expansion of settlements currently threatening the Truso Valley. A community-based hunting cooperative would be an innovative model in Georgia which could be applied to other areas if successful.

Project Code Report Title

**Ошибка! Ис-
точник ссылки
не найден.L:
34**

Project Name

Task

INSERT MAP 3.3.4.4 “Proposed
Zoning”

This Page

3.3.4.5 Proposed Support Zone of Kazbegi National Park

The proposed Kazbegi National Park Support Zone includes all 25 communities of the five Sakrebulos of the designated Terghi watershed planning area. The Sakrebulos Stepantsminda, Goristsikhe and Sioni contribute significant sections of their territory to the proposed protected areas, whereas the Sakrebulos of Sno and Kobi-Gudauri only border the to-be expanded Kazbegi National Park. According to available information the larger part of the Ghudo Gorge proposed conservation area is un-registered land not forming part of a Sakrebulo as required by Georgia's legislation. This also applies to the northern, mostly glaciated section of the planning area which borders Russia not being assigned to a Sakrebulo. The total size of the Support Zone would be approximately 40,000 ha.

3.3.4.6 Proposed Planning Area

All Sakrebulo sections of land currently not actively utilized (16,359 ha) and all land without designated ownership (except for the glaciated northern areas to form part of the national park) are included in the designated planning area of 108,977 ha covering the entire Stepantsminda municipality. This planning area will be subject to integrated spatial land use planning (ISLUP) as part of the proposed project.

A size comparison of the proposed zones shows that less than 25% of the total planning area is allocated to conservation in form of protected areas. The National Park constitutes approximately 22% of which approximately 5% are composed of glaciers. The proposed Hunting Cooperative constitutes 23% and the Support Zone of the National Park approximately 37% of the planning area.

Table 3.3.4.6: Size Comparison of the Proposed Zones of Planning Area

Proposed Zones of the Kazbegi Planning Area	Ha	% of Total Area
Total Planning Area (Stepantsminda District)	108,977	100
Proposed Conservation Areas (Total 27,544 ha = 25%)		
1) Proposed National Park Total	24,340	22
<i>Eastern Section</i>	7,550	
<i>Western Section</i>	16,790	
2) Buckthorn Area A	110	0,1
3) Buckthorn Area B	130	0,1
4) Kaberjini Cliffs	549	0,5
5) Ghudo Gorge	2,415	2
Community-based Hunting Cooperative	24,910	23
Support Zone	40,250	37
Remaining Planning Area	16,359	15

3.3.4.7 Actual Land Use Map

Actual land use in the target area was assessed through participatory mapping by the FS team jointly with community members of each of the 25 communities located in the planning area as part of the village profiling process (see Map 3.3.4.7 “Actual Land Use by Sakrebulo”). The information provided by the communities refers to areas (polygons) used by each village for livestock grazing and hay making only. Although each village has designated agricultural land, agricultural plots are small-sized and all located within village bounds. Agricultural land is divided into family plots mostly used for cultivation of subsistence crops such as potatoes. The results obtained from the participatory actual land use mapping appears more reliable than information available from official statistics which are mostly outdated.

It is noteworthy that land polygons of Sakrebulos located outside the main Sakrebulo area are not used at all. This applies in particular to the Stepantsminda and Sioni Sakrebulos. In the overall, the actual land use for livestock and hay-making is surprisingly low reflecting the sparsely settled target area, decreasing human population and the low number of livestock (see Map 3.3.4.7).

INSERT MAP 3.3.4.7 “Actual Land
Use by Sakrebulo”

This Page

3.3.4.8 Land Tenure Map

According to the centralized land registry (cadastre) an estimated 80% of all households of the Stepantsminda planning area don't have a legal land title (Chapter 2.3.2). The available land title map for the target area therefore does not reflect the true land tenure pattern. As explained in Chapter 3.3.4 it was hoped that the land title map would be one of the three key map layers to be used for the identification of potential conflict areas between conservation goals and actual land use/land tenure interests. The very few land titles currently registered and the remaining 80% unregistered plots all represent residential properties within communities. All of them are located adjacent to the flood-plain of the Tergi River and in the the Sno Valley, none interfering with proposed conservation areas.

3.3.4.9 Potential Conflict Areas

The superimposed map layers "Actual Land Use"(Map 3.3.4.7) and "Proposed Conservation Areas" (Map 3.3.4.3) provide the information needed on potential conflict areas (Map 3.3.4.9 "Land Use and Proposed Conservation Areas").

As shown by Map 3.3.4.9, no visible land use conflicts exist in the proposed Eastern Section of the Kazbegi National Park. Several potential conflict areas resulting from overlapping livestock grazing/haying areas and conservation interests, are recognizable for the western section of the proposed Kazbegi National Park, primarily located along the tentative southern boundary. Several of the identified potential conflict areas can be avoided by simple elimination of the areas from the national park (boundary adjustment). Others can be incorporated as part of a traditional use zone to be established inside the national park, thus accommodating controlled traditional grazing and hay-making. The proposed tentative boundaries of the national park will be subject to the participatory planning process related to the national park and support zone. This process involves all communities of the support zone as major stakeholders. It will be left to the discretion of the communities to decide on mutually acceptable national park boundaries, resulting in a best compromise between conservation and local land use interests.

Although the proposed Mt. Kaberjini conservation area does not show visible conflict areas at this point, the area entails several currently inactive stone quarry concessions which may be re-activated in the future with unknown impacts on the conservation objectives for the area. Re-activation of the quarries in question should therefore become subject to a prior environmental impact assessment, a stipulation to be incorporated into the management policies applied to this conservation unit.

The identified potential conflict area of the Ghudo Gorge conservation area can be eliminated through boundary adjustment. The only real potential conflict areas are the two Sea-buckthorn conservation units located in the Tergi River floodplain. Cooperation by local people is essential in the sustainable protection of these two highly accessible areas currently used for livestock grazing (without adverse impacts on the buckthorn thickets) and artisanal utilization of buckthorn fruit. As long as the Sea-buckthorn shrubs are not physically being destroyed (very unlikely inside an active floodplain) this critical bird habitat will be safe.

**INSERT MAP 3.3.4.9 “Actual Land
Use and Proposed Conservation Areas”**

This Page

3.4 Trust-Building Measures

At the open community stakeholder workshop which kick-started the field work of the feasibility study (see Inception Report, Annex 3.4), a participatory problem analysis was conducted by five work groups assembled from the workshop participants, followed by the identification of suitable trust-building measures to be implemented as part of the feasibility study in accordance with the terms of reference. The nature and purpose of the trust-building measures were explained and discussed with the workshop participants. The following criteria were established for proposed measures to qualify for implementation:

- To address a key problem/concern of local significance;
- To benefit as many community members and households as possible;
- To be highly visible and appreciated (exposure) by community members;
- To address specific age groups and/or gender of community importance;
- To be suitable for in-kind contributions;
- To require low capital investment (micro-project);
- To be completed within short time-frame (within timeline of the feasibility study);
- To reflect the urgency of the problem to be resolved;
- To be related to environmental issues;
- To fit into the overall context of the feasibility study and the expected future project;
- To be sustainable.

Eleven of the 18 trust-building measures developed and proposed by the five work groups of the workshop were tentatively chosen, meeting most of the qualifying criteria.

The five spokes-persons of the work groups who were elected by the workshop assembly as trusted community members, were then selected to form a supervisory committee that assumed the overall responsibility for the supervision, timely implementation and quality control of the trust-building measures.

After a detailed scrutiny on site and the approval by APA and KfW, the following eight trust-building measures were implemented and completed by the end of November 2009:

- Pilot project on the sustainability of public spaces of the combined kindergarten/ elementary school in the village of Gergeti addressing issues of energy efficiency, and school gardens, involving the planting of fruit-trees.
- Establishment of an environmental information facility at the Kazbegi Health Center.
- A demonstration project of a citizen initiative addressing the issue of organized garbage disposal and a related clean-up campaign of the Tergi River banks inside Stepantsminda.

-
- Support of a woman group for the production of traditional handicrafts (region).
 - Pilot project on sustainable village development for Garbani Village involving the planting of tree species in support of the promotion of local bee-keeping and village beautification.
 - Establishing an internet café at the headquarters of “Mountain House” NGO in Stepantsminda for the benefit of local youth and tourists.
 - Implementation of an environmental awareness campaign involving the 11 schools of the Region (theme painting and creative contest “how to protect our nature and environment).
 - Pilot project on sustainable village development for Sno village: Garbage clean-up campaign on the river banks and orientation on sustainable water management (potable water and sewage disposal).
 - Catalyzing ownership of local youth of their environment: Joint brainstorming and hands-on workshop on how to improve outdoor meeting spaces at the health center of Stepantsminda.
 - District-wide photo competition "nature and environment".

The organization, implementation, supervision and follow-up activities related to the measures proved to be extremely time-consuming and controversial placing a heavy burden on the FS Team. The disagreement between APA, KfW and the Consultant on the most suitable measures selected to achieve much needed “trust” amongst local people seriously impacted on the timely start of the measures and was little understood by the local people. The allegedly legal requirement to pay taxes on funds being disbursed after the funds were already allocated as brought forward by APA posed another serious hurdle to the timely execution of the measures.

In retrospect, although the trust-building measures may have assisted in forming a working relationship build on trust between the FS Team and part of the local population, the measures did little to improve the relationship between local people and APA judging by the strong negative reaction to APA at a wrap-up “event-day” celebrating the successful completion of the trust-building measures in Stepantsminda.

The overall value of trust-building measures as part of a feasibility study appears questionable judging by the current experience. It is argued that a feasibility study does not offer the opportunity to effectively achieve trust through the implementation of measures which may not even allow emergency infrastructure needs of poor rural communities. Trust-building within the short timeline of a feasibility study that is aimed primarily at the collection of data in support of a project feasibility assessment and project design is highly unlikely to happen. Trust-building is a process requiring much time and effort beyond the scope of a feasibility study.

3.5 Proposed Interventions

Potable water, product marketing, employment opportunities -especially for women and younger age groups-, village infrastructure, protection against avalanches and landslides, river bank fortifications and energy supply are amongst the highest priority issues on the agenda of the Support Zone Communities (see Table 3.5). Waste management and tourism have also been highlighted by some communities but appear to be of less overall concern to the Kazbegi communities. This is the result of the village profiling regarding the most urgent needs as perceived by the 25 communities of the planning area. It comes as a surprise that there is no mention of livestock and agriculture, the staples of local people's livelihood. There also appears no mention of the need for greenhouse rehabilitation as a former key revenue generator.

As shown by Table 3.5, most of the key issues will be addressed by the interventions described in the following Chpaters. All interventions mentioned have been discussed with the communities and truly reflect priorities perceived by the communities.

Proposed interventions related to regional development and conservation have been discussed with local, regional and national authorities related to the project area. The interventions proposed are based on the findings of the FS and are designed to reflect the holistic approach adopted by the FS Team to the proposed harmonic and well synchronized integration of biodiversity conservation and sustainable regional economic development.

Table 3.5: Priority Needs as Perceived by the Communities of Planning Area

Community	Priority Needs as Expressed by Communi- ties	Addressed by proposed In- terventions
Sioni	Sewage, village spring out of order, waste management, river bank protection	Mostly
Garbani	Potable water supply, access to markets	Partly
Arsha	Access to market, employment opportunities for women	Fully
Vardisubani	Employment opportunities for women, market access for village products	Fully
Kobi	Village infrastructure not adequate for tourism, energy supply inadequate, fuel wood to cover energy needs	Partly
Phansheti	Potable water supply, water sanitation, market access (bridge)	Partly
Qoseli	Potable water supply, access to markets, avalanche and land slide protection	Partly
Almasiani	Access to market, energy covered by fuel wood, poor electricity supply	Partly
Toti	N/A	
Gaiboteni	N/A	
Gergeti	Potable water supply, access to markets, poor electricity infrastructure	Partly
Tcdo	Potable water supply, no employment opportunities for younger people, inadequate electricity supply	Partly
Gveleti	N/A	
Djuta	Market access, electricity supply inadequate	Fully
Karkucha	Market access, potable water supply, waste management, poor electricity infrastructure, better employment for women	Mostly
Akhalsikhe	Land slide and avalanche protection, potable water supply, poor income situation	Mostly
Sno	Land slide and avalanche protection, water sanitation, income situation, river bank protection	Fully
Achkhoti	Land slide and avalanche protection, income situation, market access	Partly
Goristsikhe	Existing tourism infrastructure inadequate	Partly
Khurtisi	Market access (bridge), potable water supply, better income generation for women	Partly
Khanobi	River bank protection, low income, market access (bridge)	Partly
Gudaauri	Potable water supply	Not addressed
Tkharsheti	Land slide and avalanche protection, income situation, market access	Partly
Stephantsminda	Access to market, tourism under-developed, waste management	Fully

Phkhelshe	Poor village infrastructure, market access,	Mostly
-----------	---	--------

3.5.1 Quick-start Measures

The following proposed project interventions are aimed at sustainable regional development to be harmonized with conservation measures to be achieved through specific measures targeted at (a) livelihood stabilization and enhancement, (b) community enhancement and development, (c) regional initiatives, and (d) strengthening the position and image of the Agency of Protected Areas through the establishment and participatory planning and management of identified conservation areas of high biological importance.

It is self-evident that the negative population trend in the Kazbegi Region and the rapidly aging population clearly limit the local economic development potential due to the lack of work force. This has been a key factor in designing the proposed intervention package for the target area. Interventions aimed at strengthening the local presence of APA and establishing conservation areas will not be affected by the decreasing and aging local human population, although remaining a big overall challenge. This requires a concerted effort by all stakeholders, in particular the commitment by APA, to empower local stakeholders through sharing decision-making processes.

Although it cannot be the primary goal of the project to stabilize the population by creating more favourable economic and other framework conditions in the target area, it is hoped that the project at least can contribute to achieving this goal which will be the greatest challenge of all.

Key to the design of the proposed project will therefore be an achievable and measurable exit strategy applied to the sustainable development of the region and the sustainable protection of viable conservation areas of outstanding ecological value.

The terms of reference for the feasibility study requested the selection and design of "**Quick-start Measures**" to be initiated at the onset of the project. Primary criteria applied to the selection of the proposed quick-start measures have been: (a) providing a significant contribution to the harmonization of the overall conservation and economic sustainable development objectives inherent to the project; (b) preparing the basis for an overall successful project with visible and tangible benefits to local people; (c) creating ecologically viable and sustainable conservation areas, and (d) providing immediate benefits to the region and local people to be felt at the household-level.

Some of the proposed Quick-start Measures were identified at the local stakeholder workshop conducted at the onset of the feasibility study in Stepantsminda; others resulted from the village profiling efforts. The following Quick-start Measures have

been the focus of the mid-term report, in compliance with the terms of reference for the feasibility study (Annex 3.5.1):

- Eliminating *Brucella abortus* in the study area as a debilitating disease affecting the local human population and in support and preparation of project interventions aimed at the enhancement of the economically promising dairy processing production in the region.
- Assisting the Djuta community as the remotest and most isolated village of the target area in stabilizing the village energy supply by providing the village with an ecologically friendly hydro-electric power plant in order to reduce local hardship caused by frequent power outages mostly as a result of landslides and avalanches.
- Contributing to the creation of tourism-friendly framework conditions by comprehensively addressing waste management, currently one of the most visible environmental problems in the target area.
- Taking important steps for the strategic development of sustainable tourism through well targeted capacity development initiatives.
- Embarking on participatory Integrated Spatial Land Use Planning encompassing the entire defined planning area of the Stepantsminda Municipality as a basis for organized and well planned development.

3.5.2 Priority Interventions

In parallel to the Quick-start Measures it is recommended to initiate the following **Priority Interventions** considered vital components of the overall project (For details on the proposed activities see Annex 3.5.2):

- Implement a well designed and comprehensive environmental awareness and project information campaign aimed at all age classes and target groups in the project area by making use of “support groups” to be composed of highly motivated and trusted community members from the target area.
- Kick-start and implement the participatory planning process for the national park, designated conservation areas, and the the support zone sustainable economic development. This process is expected to last one full calendar year resulting in the identification of the infrastructure and equipment needs for the conservation areas and the formation of the proposed co-management administrative structure for the national aprk and support zone.

3.5.3 Other Proposed Interventions

The following proposed interventions address (a) specific livelihood stabilization initiatives aimed at the improvement of living standards of the rural families mostly

living of subsistence agriculture (livestock included); (b) community enhancement and regional initiatives; and (c) measures aimed at the improvement of the working relationship between APA and the local communities (For details on the activities highlighted below it is referred to Annex 3.5.3):

i) Livelihood enhancement:

- Enhancing dairy production through selective breeding, sustainable range management and improved marketing and sales channels thus providing the basis for an economical viable cheese production. The dairy sector is overwhelmingly in the hands of women so a positive economic impact will simultaneously be gender-related.
- Strengthening and enhancing beekeeping through training as a part of diversification process in regional agriculture. Honey, beeswax and other hive products will be harvested and sold through formal and informal sales channels. The pollination effect of bees adds an additional benefit.
- Niche products:
 - In cooperation with the women's association in Arsha supporting wool processing as a part of the traditional regional culture despite the decline over the years.
 - Supporting the proper collection, marketing and sales of culinary herbs and medicinal plants through training and marketing assistance probably in connection with the upcoming GTZ FairWild certification project.
 - Implementing a greenhouse pilot project with focus on valuable herbs in conjunction with a biogas testing facility.

ii) Community enhancement

- Sewage Treatment: At current, none of the target area communities is engaged in environmentally compatible sewage disposal. Although several villages, including the municipality of Stepantsminda, have closed pipe sewage disposal systems, raw sewage is directly drained into natural drainage channels, creeks and rivers. Untreated sewage is causing a serious health hazard in communities where potable water is being increasingly contaminated by livestock and human waste. Manure stock-piled during winter in backyards, is often placed very close to surface water and potable water supplies, contaminating water supplies especially during spring melt.

It is recommended for the project to join forces with the Asian Development Bank currently embarking on a country-wide water treatment and protection initiative showing special interest in creating synergies with KfW in the project area.

In this context it is recommended to assess the feasibility of introducing well ventilated state-of the art latrines as a replacement of the currently widely used make-shift latrines causing an environmental and human health hazard in numerous villages.

- Land Title Registration: As part of the proposed information campaign an effort should be made to properly inform villagers on the advantages of legal land titles. It is suggested that villagers who are not aware of the importance of land titles in an effort to secure legal land ownership, are dangerously exposed to land speculators and are unable to use their residential land and dwellings as collateral if needed. For detailed information related to the issue of land titles it is referred to Annex 3.5.1.

iii) Regional initiatives

- Tourism Development: Supporting capacity development of the sustainable eco-tourism sector in the region through training, organisational development and marketing. Connected to the agricultural value chain, sustainable tourism will support the regional economy.
- Access Improvement: Purchasing light tractors with snow-ploughing and earth-moving equipment to be stationed in those villages frequently cut off due to avalanches and land slides.
- Community Ranger Service. The rationale for establishing a Community Ranger Corps is to: (a) assist the Kazbegi National Park Rangers in the enforcement of environmental and land-/resource use policies applying to the traditional use zone of the national park and other designated conservation units in the target region; (b) enforce environmental rules and regulations developed in the participatory planning process for the support zone of the target area (including waste management and sewage issues), and (c) most important, to assume responsibility for the enforcement of policies and the control of the forest fragments to be de-classified within the national park re-definition process.

Key objective of this proposed project component is to establish a Community Ranger post in each of the five Sakrebulo to be composed of a total of ten rangers, two for each Sakrebulo.

It is recommended for the project to carry the costs related to the establishment and equipment of the community ranger stations and the operational cost for the duration of the project (six years). The Community Rangers will be employees of the Stepantsminda Municipality.

The idea of Community Rangers has been discussed with target area communities during the feasibility study and has received a positive response in principle.

- Strengthening the existing Kazbegi National Park will be achieved through: (a) the proposed re-definition and expansion of the park to be converted into a viable ecological entity of national and global importance; (b) capacity development of existing staff, essential infrastructure development and provision of equipment in accordance with the specifications of the management plan and business plan for the park, and (c) most important, **empowerment of community representatives** as equal members of the proposed Management Board of the park to be part of the decision-making process. This will be achieved through the proposed integrated spatial land use planning providing the basis for spatial sub-division of land use polygons, but most importantly through the proposed participatory planning related to the national park and the economic development of the support zone. In this context a sound cooperation between stakeholders will be of vital importance, this applies in particular to fostering a working relationship to be built on trust between APA and the local Kazbegi population.

iv) Improving working relationship between APA and local population

Strengthening the local image of APA is expected to be achieved through: (a) the proposed environmental awareness and information campaign by using support groups to be trained with the assistance and participation of APA; (b) active involvement of the existing NP administration in the participatory elaboration of the management plan for the national park and associated conservation areas and for the support zone sustainable economic development plan; (c) close collaboration with the community rangers in all activities related to the conservation areas; and (d) the participatory implementation of the NP management plan to be based on co-management involving representatives of the support zone communities.

3.5.3.1 Financial Sustainability of the National Park and Associated Conservation Units

The issue of financial sustainability of the upgraded national park and associated conservation areas in the planning region will be addressed by the proposed business plan to be elaborated complementary to the management plan for the park. It is evident that without securing the financial sustainability any park improvement as critical component of the proposed project is in jeopardy. Judging by the status quo of the Kazbegi National Park, APA is currently not in the financial position to allocate the funds needed for the sustainable protection and management of the park. This scenario is not expected to change in the long-run. It therefore is of urgency and greatest importance to define innovative financing strategies in order to secure long-term financing.

The Caucasus Protected Area Fund (Annex 3.5.3.1) could become an important instrument for bridging the expected financial shortfalls of the Kazbegi Park on termination of the KfW sponsored project. A crucial part of the project's exit strategy will be to achieve financial sustainability within the project timeline. The business plan for the park will therefore be an important tool the design of long-term financial strategies. The elaboration of a business plan is also a legal requirement for a park to qualify for CPAF assistance.

3.6 Gender Aspects

The gender aspect plays an important role in the project. More than half of the Kazbegi population are women. Their economic situation is worse than that of men. Most of them are self-employed or work in the informal sector. On the other hand and among others, women are at the core of the dairy production since they are milking the cows and manufacturing cheese and other dairy products. Improving the livelihood of the population of Kazbegi means to a large extent improving the livelihood of women. The project's support zone interventions reflect the importance of women in the rural value chain through supporting dairy production, wool processing, and niche products processing such as culinary herbs and medicinal plants.

3.7 Proposed Project Approach

The proposed project approach is based on three main project management principles inducing and assuring ownership of the project by the local population:

- Participation – From the very beginning of the implementation process, an active involvement in the planning and implementation of the project by the local population has been a '*conditio sine qua non*'. Given the experience of the FS team of being confronted with very much scepticism by villagers, farmers and officials in the region it is absolutely necessary to provide tools for proper participation of the local population. Any approach that may be perceived by the Kazbegi people as top – down will lead to project failure because of project rejection. It became clear during the FS that locals demand open and frank discussions. While such demands are on one hand tedious and time consuming, they will on the other hand provide the basis for local ownership.
- Transparency – The project management and the implementing must adhere to a strict policy of transparency towards the local population. During the FS it became quite obvious that a deep-seated distrust and low level of confidence in measures undertaken by the central government is immanent. This lack in confidence must be overcome in order to win the 'hearts and minds' of the Kazbegi people. An essential pre-requisite to successfully recruit the active cooperation

and participation of the target group is the open and transparent handling of all project issues.

- Empowerment – The decision making process must be in the hands of the local population, while guided by the Consultant and the Implementing Agency. Without empowerment the project will not be able to execute its adopted role as a mediator between nature conservation and regional economic development. Both, implementing agency and Consultant will have to delegate the decision making process to the regional/local (village) level. According to the experience of the FS team, only this will create an atmosphere of trust and confidence, which is a fundamental requirement for the success of the project.

Participation, transparency and empowerment are universally accepted and proven project management principles. The situation in Kazbegi - including politically fragile conditions with the closeness to the Russian border – requires a careful and sensitive approach on behalf of the implementing agency and Consultant. More listening to the Kazbegi people and less (or better no) dictating will defuse tensions and create an atmosphere within which the region will flourish economically while simultaneously conserve the nature, unique in the world.

For the reasons mentioned above, the project headquarters must be based in Kazbegi. It would also be highly advisable if the implementing agency increased its visibility in the region substantially. The proposed awareness/information campaign using support groups with membership from the communities, frequent discussions with the elders of the villages and other dignitaries of the region, a permanent presence indicating a real interest in the well-being of the people thus fostering an active exchange of information and opinions (formal and non-formal), need to be initiated and kept not only during the lifetime of the project but beyond. Then and only then, implementing agency and Consultant will be in the position to achieve their ambitious goals.

3.8 Logical Framework

The logical framework analysis is attached as Annex 3.8.

4. SUPPORT OF INSTITUTIONAL AND LEGAL SET-UP

4.1 Option 1: Biosphere Reserve

4.1.1 Legal Framework Requirements

Taking account of the wide range of issues and objectives incorporated into the UNESCO' concept of Biosphere Reserves, and following a comprehensive analysis of the current legal framework which is presented in **Annex 2.4.2**, it is recommended that

a **Framework Law on Biosphere Reserves** is adopted by the Georgian Parliament. Such framework law would have a higher potential to accommodate trans-sector cooperation and stakeholder participation, as needed for sound BR development. Annex 2.4.2 lists the key issues to be addressed in this new law.

Beyond this, the FS Team agrees that: “*all legislation regulating related issues would of course continue to apply and would retain its importance in the Biosphere Reserve, in particular in the outer transition area. Such issues include: agriculture, forestry, hunting, fishing, fauna and flora, protected areas, spatial planning and building, energy, traffic and communication infrastructure, economic development, environmental protection and use of water. All such sector legislation will be necessary for an optimum Biosphere Reserve development*” (TJS 2009).

If a framework law is indeed established, the **Law on the System of Protected Areas** (1996) will also need to be amended, basically by removing provisions related to BRs. The MEPNR would then also be responsible for arranging the review of the draft Biosphere Reserve legislation by different Ministries and for consideration in a session of the Georgian Government before submitting it to the Georgian Parliament.

After an appropriate legal framework for establishing BRs compatible with the UNESCO concept is in place, each BR can be established by adopting a law on establishing that specific BR (see Annex 2.4.2 for details). The President of Georgia would be responsible for approving management plans/development program for Biosphere Reserves after they are developed and agreed by all stakeholders. The President could establish a working group and assign the responsibility to the MEPRN to lead the participative process for preparing the management plan.

4.1.2 Potential Administrative Structure of a Biosphere Reserve

The recommended administrative structure of BRs in Georgia that is presented below would meet the requirements for UNESCO Biosphere Reserves, while taking into account the specific institutional setup and the responsible authorities in Georgia. This structure is largely based on the model proposed by TJS (2009). The arrangements include a **BR Administration**, **Coordination Council** (or “BR Management Board”), a **Scientific Advisory Board** and a consultative regional **Biosphere Reserve Forum**.

It is suggested that the **BR Administration** function of the entire BR be given to the appropriate “Territorial Administration” of the APA. The BR administration would be subordinated to the APA. In this case, the statutory document of the Agency of Protected Areas and the Typical Statute on Territorial Administrations may need to be amended to take into account the new functions of this agency and its subordinated Territorial Administrations.

The FS Team agrees that: “*Assignment of the administration functions to territorial administrations would not mean that other already existing institutions will need to give*

up responsibilities. Communal or municipal authorities will keep on playing their important roles. Farmers will keep on managing their farmland, businessmen will keep on running their businesses. But they should all find support and assistance from the Biosphere Reserve administration to help them to develop and implement ideas that will contribute to the success of the Biosphere Reserve". (TJS, 2009). Detailed tasks of the BR Administration are listed in DFS (2009).

It is further recommended that **Biosphere Reserve Coordination Councils** are established to allow the requested involvement and participation of all stakeholders, including local populations, in Biosphere Reserve development. In accordance with the setup laid out by TJS (2009), the BR Coordination Councils could act as a "Board of Directors or representation mechanisms to coordinate activities of all actors involved each within their own mandate and competence" (TJS 2009). The agencies that would need to be represented in the Coordination Councils are listed in Annex 2.4.2.

This Council should provide a permanent structure for involvement of all stakeholders and coordination of actions and measures towards a sustainable development of the Biosphere Reserve. In addition, "the Biosphere Reserve administration should service the Council as secretariat preparing and inviting for meetings, providing minutes of meetings" (TJS 2009). Detailed tasks of the BR Coordination Councils are listed in DFS (2009).

A **Biosphere Reserve Forum** should be established at each BR, as an instrument to provide involvement of the entire local population and other interested sides. This forum should have more of a consultative rather than a decision making character. "The Biosphere Reserve Forum should be an offer to everybody in the Biosphere Reserve to get involved" (TJS 2009). In view of the importance given to science by the UNESCO concept of Biosphere Reserves, and in analogy to the setup established for Georgian PAs, establishment of a **Scientific Advisory Board** could also be considered for each Biosphere Reserve. The Scientific Advisory Board should strongly involve the MAB National Committee, as far as warranted by that Committee's capacity. Details regarding the Boards are discussed in Annex 2.4.2.

Legal establishment of the proposed institutional set-up: The status, tasks, authorities, functions and financing of BR Administrations would be established by the framework law on Biosphere Reserves or a specific law on establishment of a particular BR. MEPRN would be authorized to appoint Administrations and provide adequate financing. APA would submit the staff composition of the administration to the Minister for approval.

Objectives, tasks, authorities, and functions of the Coordination Council would be established by framework BR law or specific law on the establishment of particular BRs. BR Coordination Councils, which must have a broader representation and mandate than Scientific Advisory Boards have for their PA, should be established/approved for each particular BR by an authority higher than the Minister of Environment – e.g. the President of Georgia. However, a problem with this approach is

that membership of the Council will need to be re-approved regularly, because of staff turn-over in the institutions involved. To avoid this problem, the law establishing specific BRs could also establish the institutional composition of the Council and then the APA or the MEPNR would ask respective institutions to nominate their representatives in the Council.

After a specific BR is legally established, APA should prepare a draft list of Scientific Advisory Board members and the MEPNR should approve this list, as it is current practice with PAs. Objectives and functions of such Scientific Advisory Board in relation to BRs should be established by the framework law on BRs.

The BR Forum's meetings should be organized periodically (e.g. once a year), or whenever there is a need to consult with the wider stakeholder constituency of the BR, by the BR Administration, in cooperation with the administration of the municipality or municipalities concerned. Local people and NGOs should be invited to the forum, and there should be public announcements in addition. The composition of the forum would not need a formal approval. Objectives and functions of such Fora, as well as the responsibilities of the BR Administration to support their work, should be established by the framework law on BRs.

Additional details on the institutional setup for BRs in Georgia are given in Annex 2.4.2 and in TJS (2009).

4.2 Option 2: Strengthening Existing National Park and Establishing Support Zone

4.2.1 Co-management and Legal Requirements

The social systems of small, resource-based communities are embedded within broader social–ecological context. In today's world, all local communities have some level of interaction with regional and national governments, NGOs, and neighboring resource users. The global commons has no remote locations. Effective linkages across scales of management that foster the evolution of local-level conservation, strlngs most cases. Existing traditional people-state relationships constitute the legacies of past and current colonialism, including imposed land- and resource use policies implemented with little awareness of community livelihoods.

These impositions can make the prospects of community-based conservation efforts difficult to realize since state agencies typically resist devolving power to local communities. Top-down imposed policies can also undermine traditional institutions of community management that previously supported resource conservation.

In several cases around the world, local communities and indigenous people of hinterland regions have negotiated self-government agreements with national

governments that specify rights for use and self-management of important resources. But even in cases of negotiated self-government and comprehensive land claims, communities are embedded within broader legal institutions, creating a need for community rights that secures access to resources and systems that provide for cross-scale communication and accountability. In cases where communities share use of commons with other communities and there are potential issues of resource scarcity, there is a need to establish vertical (across levels of organization) and horizontal (across the same level) linkages of resource governance among resource user communities, state agencies, and others. These arrangements fall within the rubric of co-management, defined as the sharing of power and responsibility in decision-making between state governments and communities in the functions of resource management (and conservation). Co-management functions may range from law enforcement and habitat protection, resource use management and monitoring, impact assessment, policy making, operational planning and budgeting. When implemented with a focus on learning-by-doing, these arrangements are referred to as adaptive co-management.¹⁸

Formal and informal co-management has proven critical in the development of strategies that support livelihoods and conservation initiatives, contributing to social learning and social–ecological resilience at local and regional scales. Examples of successful co-management arrangements related to conservation and sustainable land/resource use exist although experience show that co-management systems may not be easy to implement, even without the stresses of social–ecological change.

Because state governments are reluctant to give up authority in resource management to communities and national interests typically take precedence over local interests, communities involved in co-management may have to be creative and fully engaged to be heard in highly charged political processes as typical for the Kazbegi target area.

Georgia's current Law on Protected Areas does not explicitly permit official co-management agreements involving community representatives on decision-making bodies. The current Law allows for "consultation" of local stakeholders only, although a precedence appears to have been set in Georgia for the Mtirala National Park which currently appears to be very successfully co-managed by community stakeholders and park authority.

It is argued that proper functioning and viability of the Kazbegi National Park may only be achieved through local ownership, to be achieved through empowerment of local stakeholders. Co-management that involves local community representatives in the decision-making processes related to conservation and overall resources use will be a

¹⁸ Nigel Dudley and Grazia Borrini-Feyerabend, 2005. A tool to help selecting the appropriate IUCN categories and governance types for protected areas

crucial prerequisite to success. This requires legal changes to the existing Georgian framelaw that currently is under review. It therefore is strongly recommended that the Law under review addresses inter alia the full range of Governance options for protected areas, permitting APA the flexibility to adopt mangement stuctures and authority most appropriate for a specific situation.

4.2.2 Proposed Co-Management Structure for Kazbegi Park

IUCN has identified the following four main governance types:

Type A: Protected areas with decision-making authority, responsibility and accountability in the hands of national (or sub-national) government.

Type B: Co-managed protected areas (several social actors share decision-making authority, responsibility and accountability).

Type C: Private protected areas (land and resource owners hold decision-making authority, responsibility and accountability).

Type D: Community conserved areas (indigenous peoples or local-settled or mobile-communities hold decision-making authority, responsibility and accountability)

For this feasibility study the matrix-based method by Dudley and Borrini-Feyerabend¹⁹ which has been adopted by IUCN as an accepted tool to determine the most appropriate form of governance for a national park, has been employed. This method is based on a complex set of questions organized by theme blocks aimed at finding the most suitable approach for any particular site (see Annex 4.2.2). The following theme blocks are used with a wide range of pertinent questions related to:

- Land tenure, history, rights and equity;
- People-nature interaction;
- Social values (livelihoods, economics etc.);
- Traditional occupancy;
- Sacred and cultural values;
- Relation to cultural identity;
- Integration in the landscape/seascape;
- Interest in management.

The matrix used for the analysis of framework conditions addresses a wide array of subjects such as traditional and actual land tenure and use, natural resource dependency by local people, attitudes towards authority and central Government, local

¹⁹ Nigel Dudley and Grazia Borrini-Feyerabend, 2005. A tool to help selecting the appropriate IUCN categories and governance types for protected areas

acceptance of Government rules and regulations, sustainability of protected areas with or without local involvement, and many more.

As rightly pointed out by the authors of this method, the choice of management approaches or governance types is seldom a simple black and white decision which is reflected by the matrix approach; rather than leading to one single answer it shows which categories and governance types are likely to be the most successful in any particular situation. After answering all questions, the validated ticks and crosses for each governance type are summed up and filled into a score sheet. The sum totals provide an indication of the one or more governance types that appear as the most appropriate for the protected area tested.

Applied to the framework conditions related to the proposed Kazbegi National Park as the category of best choice, the results of this very comprehensive analysis clearly favour a governance model based on co-management of the park with strong representation of community stakeholders.

Against this background the study team recommends the establishment of a Kazbegi National Park and Support Zone Management Board to be composed of:

- The Kazbegi National Park (KNP) Director (permanent non-voting member)
- One additional KNP staff member (permanent non-voting member)
- One representative of the Governor's Office
- One representative of the Ministry of Agriculture;
- One representative of the Sacrebulo;
- One representatives of the local NGO Forum,
- Six representatives of the 25 Support Zone communities (one representative per Sacrebulo except for Stepantsminda with 2 representatives due to its large size).

The KNP staff, a representative of the Governor's Office, Ministry of Agriculture, and Sacrebulo, would be permanent members of the Management Board. All other members are elected by their constituents. The community representatives are elected by ballot with candidates proposed by the following five Sacrebulos of the Planning Area: Goritsikhe, Kobi-Gudauri, Sioni, Sno and Stepantsminda.

Key functions and responsibilities of the KNP Management Board would be *inter alia* to approve the annual operational plan and budget of the KNP, to intervene and resolve all conflicts arising between the KNP and the local population, to co-decide on the selection and employment of key KNP positions, to oversee the implementation of the support zone economic development plan, to request expert advise on all issues which cannot be resolved by the Board, to catalyse all applications for development activities in the support zone and request professionally conducted environmental impact assessments as required.

The administrative structure of the Kazbegi National Park would remain a line-staff administration which allows for easy expansion and/or staff reduction as needed. Program Chiefs would operate on the same administrative level and have equal reporting lines (Chief of protection, Chief of administration, Chief of tourism, Chief of research and monitoring, and Chief environmental education and awareness). Depending on the work volume of a Program, additional positions can be added or removed as required, still maintaining clear reporting lines and responsibilities.

The KNP administration would operate under the supervision of the KNP Management Board and the Ministry of Environment. The KNP would continue to be fully responsible for the day-to-day activities of the KNP and its overall protection and management in accordance with the Management Plan, Business Plan and Annual Operational Plans.

It is proposed that the Management Board elects its Chairperson (majority vote) for a three-year period from amongst the elected Board Members. The Chairperson of the Management Board will announce dates for re-election of Board Members well in advance. It will be the responsibility of the Chair to:

- Arrange and implement four Board meetings annually;
- Prepare and elaborate the agenda for each meeting to be distributed amongst Board Members one week prior to each meeting;
- Chair the Board meetings.

Emergency Board meetings can be called by the Board Chair or his/her representative at any time if required. An appropriate Charter for the Board needs to be elaborated in accordance with Georgian Law.

5. PROJECT ORGANISATION AND IMPLEMENTATION

5.1 Grant Recipient

The recipient of the grant will be the Georgian Ministry of Finance.

5.2 Project Structure

5.3 Implementing Agency

In order to determine the best possible Project Implementing Agency, the FS looked at the three options (a) APA, (b) NGO, and (c) Consulting Firm for which a SWOT analysis has been implemented for each option (see Tables 5.3 a, 5.3 b and 5.3 c)

i) **Option APA.** It was observed that APA has little or no acceptance in the local population. This is re-enforced by the fact that the local facilities of APA are in a deplorable state. There is a high level of distrust on both sides, which would prevent open and transparent communication. As mentioned before, ownership and empowerment of the people in Kazbegi is of ultimate importance if the project wants to succeed. If applied, a top-down approach would provoke an adverse effect. This will only serve to alienate the people in Kazbegi. If KfW decides to support the proposed project, an exit strategy for the time after is required. There are doubts that APA is in the position to impartially develop such an exit strategy. It is undeniable that APA has great potential to evolve into an organisation developing innovative ideas and concepts. The staff is determined but lacks professional exposure and experience to some extent. Since the average age of the staff has dropped significantly, staff fluctuations might occur frequently. APA will play an important role in the project, but it seems not feasible at this time to burden the organisation with the task to run the project.

Table 5.3.a: SWOT Analysis Regarding APA

<p>Strengths</p> <ul style="list-style-type: none"> Administration Professional experience National coordination 	<p>Weaknesses</p> <ul style="list-style-type: none"> Low Local Acceptance Local Representation weak Inflexible hierarchical structure Not impartial
<p>Opportunities</p> <ul style="list-style-type: none"> Creating national network Launching Innovations Setting the Trend for future Projects 	<p>Threats</p> <ul style="list-style-type: none"> Staff Fluctuation Not Able to pass on ownership and empowerment to local population Change in policies

ii) Option NGO. It is very doubtful whether a local NGO has the administrative capacity and competence to handle a project of this magnitude (i.e. EUR 4 Mio). There is also the question if an NGO can act impartially, as it may have other vested interests. Per se, an NGO wants to exist 'forever', so failure to design, prepare and execute a meaningful exit strategy is a reasonable assumption. However, an NGO, which is rooted in the community has great potential to actively participate in the implementation of the project. This rooting is a part of developing ownership and enabling empowerment for the Kazbegi people. Also, an NGO can very well serve as mediator between the government (APA) and the local population. This however, requires an open and transparent line of communication. Close cooperation with the government is a very sensitive issue. Such a cooperation might be interpreted as siding with the government. Therefore, the threat exists that the support and acceptance of the NGO with the locals might dwindle. This would be very harmful for the long-term goal of a self-sustaining future for the National Park and the region.

Table 5.3.b: SWOT Analysis Regarding NGO

Strengths	Weaknesses
Local integration	Not impartial/Exit Strategy
Ownership	Regionally confined
Local competence	Narrow focus
	Not impartial
	Low administrative capacity and competence
Opportunities	Threats
Creating national network	Continuity
Joining international NGO networks	Staff fluctuation
Integrative capacity	Dwindling acceptance in the population

iii) Option Consultant. The Consultant will provide the technical and scientific competence required. A well selected Consultant brings more to the table than just the experience and competence of implementing similar projects. In this specific project the Consultant is asked to act as mediator between the government and the Kazbegi people. It cannot be mentioned often enough: empowerment of the people is of utter importance. The Consultant must therefore insist on the impartiality of his role during the implementation; the Consultant will only be present for the project timeline and his input will be phased out over the lifetime of the project. It therefore is in the interest of the Consultant to design and implement a clear exit strategy leading to sustainability of

the activities launched by the project. In addition, the project would receive a lot of attention through the international network the Consultant has to offer. However, a Consultant heavily depends on the administrative capacity and competence of the counterpart organisation.

Table 5.3.b: SWOT Analysis Regarding Consultant

<p>Strengths International Expertise Local acceptance Impartiality Exit Strategy International network</p>	<p>Weaknesses High dependency on counterparts administrative capacity and competence</p>
<p>Opportunities Mediating between Government and local population Innovative capacity Trend setting</p>	<p>Threats Experts availability</p>

When weighing the Pro's and Con's of all three possible options, it is obvious that the best solution will be to give the implementation of the project into the hands of an international consultant, who will work in close cooperation with APA and local NGOs.

5.4 Staff Assignment and Implementation Schedule

A mixed team of national and international experts will manage the project. An international (CTA) and a national long-term expert (DCTA) are going to be at the helm of the project. Together they will guide and lead the project implementation. Since the focus of the project is on biodiversity and the Management of the National Park, both long-term experts should have a respective background with outstanding experience. Both should be firmly anchored in the international conservation network. Given the importance of target group participation, ownership and empowerment, the international long-term expert should have ample experience in participative management planning including business and support zone planning as well as experience in Integrated Spatial Land Use Planning.

The long-term experts would be supported by a number of international and national short-term experts. While it is suggested to leave the exact determination of short-term expertise to the requirements of the implementation, possible short-term expertise would include production and marketing of dairy products, beekeeping, marketing of

agricultural products, capacity development of rural associations, range management, marketing of medicinal plants and herbs, and eco-tourism capacity development.

A detailed implementation schedule as requested by the ToR of the FS is attached as Annex 5.3.

5.5 Acquisition of Goods and Services

The acquisition of goods and services will follow the rules and regulations of the Georgian Government and of KfW under the guidelines of German Financial Cooperation.

6. TARGET GROUPS AND BENEFICIARIES

The project's direct target group is defined as follows:

- The project targets the rural poor population in the Kazbegi region (2,962 inhabitants). Women constitute over 50 % of the target group. The planned activities will be embedded in a strategy that supports ownership and empowerment of the local communities. It will foster self help initiatives of the people and of local organisations.
- The project contributes to enhance directly and indirectly the living conditions of roughly 3,000 individuals.

The Terms of Reference as presented by the KfW request the Consultant to prepare an analysis of the target group. This has been done for all the villages within the proposed project area. The project will target the rural population who are largely depending on subsistence farming. Apart from the fact that the region has lost much of its traditional agricultural value (due to the closing of the Georgian-Russian border), villagers – as it is true for all rural people living on subsistence farming – are particularly vulnerable with regard to natural resource depletion. The project is expected to combine conservational aspects with a sustainable socio-economic development of the region. Farmers will be supported to improve their agricultural production through the more efficient use of locally available natural resources. Increasing the diversification and integration of production systems will contribute to strengthen the stability of the whole ecological and economical framework.

As it is true for many rural regions, women carry the main responsibility for the well being of their families. They are expected to benefit in multiple ways from the planned activities. Dairy farming for example, is in the hands of women, and so is the cheese production. Through the women's cooperative in Arsha, young women learn to manufacture traditional clothes, which are sold in Tbilisi and abroad.

The target group consists of individual households and farmers' associations. Every household can cooperate with the project on a purely voluntary basis. Groups of interested farmers are encouraged to form respective associations (Dairy Farmers' Association, Beekeepers' Association, etc.). Through these associations the project is channelling its training inputs in terms of activities directed to conserve the ecological balance while improving the livelihoods of the local population in a sustainable manner. A participative and people empowering approach to the project will be at the basis of all community based activities.

All 25 communities of the project area as well as the Georgian Ministry of Environment will be beneficiaries of the project. The latter will benefit from capacity development within APA.

7. PROJECT COSTS

The estimated costs of the project are displayed in the draft budget below. The overall budget amounts to 3,278,000.00 EUR (see Table 7). The lion share of the budget will directly benefit the target groups including the National Park Management. The costs for Project Management are estimated at 332,000.00 EUR over a 5 –years project period. Included in the budget line Project Management are the costs for the production of an image film about the innovative nature of the project.

The costs for consultancy service are estimated at 1,050,000.00 EUR. This budget line is all-inclusive (fees, per-diems, accommodation, international travels). Contingencies for adjustment have been added related to possible inflation. A detailed budget is attached as Annex 7.

Project Code Report Title

Table 7: Proposed Preliminary Draft Budget

**Ошибка! Ис-
точник ссылки
не найден.L:
65**

Project Name

Task

Measure	Activity	EUR
Quick-start Measures		443,000.00
	Environmental Information Campaign	18,000.00
	Kazbegi NP Management Plan, Business Plan and Support Zone Plan	80,000.00
	Brucellosis Campaign	162,000.00
	Hydro-Electric Power Plant in Djuta	54,000.00
	Waste Management Campaign	67,000.00
	Tourism Development Initiatives	25,000.00
	Integrated Spatial Land Use Planning	37,000.00
National Park		853,000.00
	Infrastructure	620,000.00
	Equipment	100,000.00
	NP Operational Costs (for 5 years)	80,000.00
	Community Ranger Corps	45,000.00
	Operational Cost Community Rangers (for 5 years)	40,000.00
Support Zone Development		430,000.00
	Support Dairy Industry	285,000.00
	Support Beekeeping	20,000.00
	Support Niche Industries	110,000.00
	Support Women's Cooperative Ashra	15,000.00
Project Management		332,000.00
	Project Administration	90,000.00
	Office Operations	12,000.00
	Communications	10,000.00
	Office Equipment and Materials	20,000.00
	Vehicles	50,000.00
	Project Promotion - Image Film	150,000.00
APA Capacity Development and Promotion		30,000.00
Consulting Services	ILTE 24 PM, ISTE 15 PM, NLTE 30 PM, NSTE 24 PM	1,050,000.00
Contingencies (5% of total budget)	Includes adjustment for inflation rate (estimated at 3% annually)	140,000.00
Total Budget Activities		3,278,000
Budget prepared under the assumption that the project will has no tax liability		

8. **RISK ASSESSMENT AND MITIGATION OPPORTUNITIES**

The greatest risk is linked to achieving local ownership and acceptance of the project and its goals and objectives namely sustainable regional development to be harmonized with nature conservation. The risk can only be mitigated through demonstrating the tangible and intangible benefits of project interventions and the establishment of the proposed conservation areas, active local stakeholder participation in the planning and implementation process and most important, empowerment of local people. The latter can only be accomplished through a co-management agreement with equal representation of the local communities on a multi-stakeholder Management Board empowered to guide the management of the conservation areas and the development process of its support zone.

9. **SUSTAINABLE FINANCING AND EXIT STRATEGY**

The exit strategy is to achieve sustainable financing for all proposed interventions, local acceptance and ownership in the project goals and objectives and an effective and efficient co-management organizational structure for the conservation areas and support zone that is fully supported by the Government and anchored in the national legislation.

Except for the proposed expansion of Kazbegi National Park and related activities financial sustainability has been in-built into all proposed interventions for the Kazbegi support zone and region. The financial sustainability of the Kazbegi National Park and affiliated sanctuaries located in its support zone will be subject of the proposed business plan for Kazbegi National Park to be elaborated within the framework of the project. A management plan and a supporting business plan are two key requisites qualifying a National Park to apply to the Caucasus Protected Area Fund (CPAF) for financial support to be used to cover budgetary financial shortfalls.

The CPAF is a start-up conservation trust fund that is devoted to nature protection in the South Caucasus. Its initial sponsors are the German Government (BMZ/KfW), WWF Germany (which received a portion of its funding from WWF Netherlands), Conservation International (CI) in the United States, and the multi-lateral Critical Ecosystems Partnership Fund. For details on the current status of the CPAF and opportunities to apply for funding once the Kazbegi National Park has been established as a recognized viable ecological entity see Annex 3.5.3.1.

10. **CONSULTANT VOTUM**

The Consultant has come to the conclusion that the optimum approach to reaching the overarching goals and objectives of the proposed project (sustainable development of the Kazbegi Region to be harmonized with the needs for nature protection) requires the expansion and strengthening of the existing Kazbegi National Park, the protection of other identified key conservation areas, and the designation and sustainable development of a national park support zone which includes all 25 communities located in the target area. Furthermore that a critical prerequisite to success and the development of local ownership will be the creation of a multi-stakeholder Kazbegi National Park Management Board with equal representation of local communities

SELECTED REFERENCES

Anonymous. 1996. Law on the System of Protected Areas of Georgia. Downloaded from <http://www.dpa.gov.ge/index.php?site-id=27> on 30/10/09.

BirdLife International. 2009. Important Bird Area factsheet: Kazbegi, Georgia. Downloaded from Data Zone at <http://www.birdlife.org/> on 30/10/2009.

Bridgewater, P., A. Phillips, M. Green, and B. Amos. 1996. Biosphere Reserves and the IUCN system of protected area management categories. Canberra: Australian Nature Conservation Agency. 1-17.

Bukhnikashvili, A. and A. Kandaurov. 2002. The annotated list of mammals of Georgia. *Proceedings of the Institute of Zoology.* 319-336.

Chape, S., S. Iyth, L. Fish, P. Fox, and M. Spalding. 2003. *2003 United Nations List of Protected Areas.* Cambridge: UNEP World Conservation Monitoring Centre. Downloaded from http://www.unep-wcmc.org/wdpa/unlist/2003_UN_LIST.pdf on 30/10/09.

Chikovani, T. G., N. V. Vronskii, G. N. Gigauri, and B. E. Kurashvili. 1990. The Strict Protected Areas of Kazbegi. In *The Strict Protected Areas of the USSR. The Strict Protected Areas of the Caucasus.* Moscow: Misl. 183-190. In Russian

Dudley, N. Editor. 2008. *Guidelines for Applying Protected Area Management Categories.* Gland, Switzerland: IUCN. Downloaded from <http://data.iucn.org/dbtw-wpd/edocs/PAPS-016.pdf> on 30/10/09.

Gabrielian, E. and O. Fragman-Sapir. 2008. *Flowers of the Transcaucasus and Adjacent Areas.* Ruggel: A.R.G. Ganter Verlag Kommanditgesellschaft. 416 pp.

Gavashelishvili, A. 2004. Habitat selection by East Caucasian tur (*Capra cylindricornis*). *Biological Conservation* 120: 391-398.

Gavashelishvili, A. and M. J. McGrady. 2005. Breeding site selection by bearded vulture (*Gypaetus barbatus*) and European griffon (*Gyps fulvus*) in the Caucasus. *Animal Conservation* 9: 159-170.

Gavashelishvili, L. 2005. *Vultures of Georgia and the Caucasus.* Tbilisi, Georgia: Georgian Center for Conservation of Wildlife - GCCW and Buneba Print Publishing. 96 pp.

Gavashelishvili, L., R. Gokhelasvili, Z. Javakhishvili, and D. Tarkhishvili. 2005. *A Birdwatching Guide to Georgia.* Tbilisi: Georgian Center for Conservation of Wildlife - GCCW and Buneba Print Publishing. 131 pp.

German MAB National Committee. 2005. *Full of Life. UNESCO Biosphere Reserves - Model Regions for Sustainable Development.* Heidelberg: Springer.

Gokhelasvili, R., L. Gavashelishvili, I. Kazalikalishvili, and Z. Javakhelishvili. 2007. Baseline Studies on Kazbegi Protected Area. Georgian Centre for the Conservation of Wildlife. Unpublished Report. 33 pp.

IUCN. 2008a. National Protected Areas System Development Strategy and Action Plan for Georgia (Draft). In Georgian. 63 pp. Downloaded from <http://www.iucn.org/caucasus>.

IUCN. 2008b. Improved and Coherent Implementation of Conventions Relevant to Protected Areas in Georgia - Guidelines for the Effective and Coherent Implementation of MEAs through National Legislation, Policy and Programmes. 39 pp. Downloaded from <http://www.iucn.org/caucasus>.

IUCN and GCCW. *Conference Report : Message from Gudauri. Launching the Countdown 2010 in the Caucasus: From Commitments to Action.* Gudauri, Georgia, 15-17 May 2006. 2006. Downloaded from <http://www.countdown2010.net/caucasus/FinalReportGudauri.pdf> on 30/10/09.

Javakhishvili, Z. 2007. The National Action Plan Caucasian Black Grouse (*Tetrao mlokosiewiczii*). Tbilisi: Georgian Center for Conservation of Wildlife - GCCW and BirdLife International, European Division Office. 1-20.

Körner, Ch., G. Nakhutsrishvili, and E. M. Spehn. 2006. High-Elevation Land Use, Biodiversity and Ecosystem Functioning . In *Land Use Change and Mountain Biodiversity* . ed. E. M. Spehn and M. Körner Ch. Liberman London, New York: Taylor & Francis Group, Boca Raton. 3-21.

Langhammer, P. F., M. I. Bakarr, L. A. Bennun, T. M. et al. Brooks, R. P. Clay, and et al. 2007. *Identification and Gap Analysis of Key Biodiversity Areas: Targets for Comprehensive Protected Area Systems.* Gland, Switzerland: IUCN. Downloaded from <http://data.iucn.org/dbtw-wpd/edocs/PAG-015.pdf> on 30/10/09.

Loiskandl, G. 2009. History and development of the concept of biosphere reserves. Powerpoint Presentation. Regional Workshop *Preparing for the implementation of biosphere reserves.* Tbilisi, 3-4 March 2009

Loiskandl, G. 2009. Objectives and Characteristics of Biosphere Reserves. Powerpoint Presentation. Regional Workshop *Preparing for the implementation of Biosphere Reserves,* Tbilisi, 3-4 March 2009

Missouri Botanical Gardens. Caucasus Plant Red List Assessments. 2009. Downloaded from

http://www.mobot.org/MOBOT/Research/caucasus/pdf/Caucasus10_11_high%20quality on 30/10/09.

Nakhutsrishvili, G. 1990. General physical and geographical characteristics. Ecological and geobotanical studies at the Kazbegi High-Mountain Station (Central Caucasus). Tbilisi. 22-24.

Nakhutsrishvili, G. and O. Abdaladze. 1998. Plant Life in High Mountain. Proceedings of Kazbegi IV International Symposium. Tbilisi: Institute of Botany, Academy of Sciences of Georgia. 144 pp.

Nakhutsrishvili, G. 2003. High-mountain vegetation of the Caucasus Region. In: Nagy, L. Grabherr G. Körner Ch. and Thompson, D. B. A. Alpine Biodiversity in Europe. Ecological Studies (167), 93-103.

Nakhutsrishvili, G., O. Abdaladze, and M. Akhalkatsi. 2004. Concerning the treeline vegetation of the Kazbegi Region (Central Caucasus). *Bull. Georg. Acad. Sci.*, 169 (N1): 122-125.

Nakhutsrishvili, G., O. Abdaladze, and A. Kikodze. 2005. *Khevi, Kazbegi Region*. Tbilisi: Institute of Botany, Georgian Academy of Sciences. 55 pp.

Nakhutsrishvili, G. 2009. The vegetation of the subnival belt of the Caucasus. *Arctic, Antarctic and Alpine Research* 30: 222-226.

Phillips, A. 1998. Biosphere Reserves and Protected Areas: What is the difference?. In IUCN (Ed.), Proceedings of a workshop at the 1996 IUCN World Conservation Congress, Montreal, Canada. Gland, Switzerland and Cambridge, UK: IUCN. 7-10.

Qiqodze, A., R. Gokhelashvili, I. Tabagari, I. Kazalishvili, and D. Qiqodze. 2007. Kazbegi Nature Reserve. In *Protected Areas of Georgia*. Tbilisi: Tsignis Sakhelosno, 210-217.

Tarkhnishvili, D. and R. Gokhelashvili. 1999. *The Amphibians of the Caucasus*. Sofia: Pensoft Publishers. 239 pp.

Tarkhnishvili, D., A. Kandaurov, and A. Bukhnikashvili. 2002. Decline of amphibians and reptiles in Georgia during the 20th Century: virtual vs. actual problems. *Zeitschrift für Feldherpetologie* 9: 89-107.

Tevzadze, L., K. Metreveli, G. Loiskandl, I. Dvali, and M. Garforth. 2009. TJS Activity Plan on Biosphere Reserves. Report to prepare for the establishment of Kazbegi Biosphere Reserve, Georgia. Tbilisi: Transboundary Joint Secretariat for the Southern Caucasus. 1-62.

Thomas, L. and J. Middleton. 2003. *Guidelines for Management Planning of Protected Areas*. Gland, Switzerland: IUCN. Downloaded from <http://data.iucn.org/dbtw-wpd/edocs/PAG-010.pdf> on 30/10/09.

TJS, 2009. Activity Plan on Biosphere Reserves. Kazbegi Biosphere Reserve.

Transboundary Joint Secretariat for the Southern Caucasus. 2008. National Park Management Planning in the Southern Caucasus: an Adaptive, People-centred Approach. Draft Guidelines. 1-76. Downloaded from http://jointsecretariat.org/uploads/NPMPGuidelines_DraftForPiloting_EN.pdf on 30/10/09.

35. **UNESCO.** 1996. *Biosphere Reserves: The Seville Strategy for Biosphere Reserves and the Statutory Framework of the World Network of Biosphere Reserves*. Downloaded from <http://unesdoc.unesco.org/images/0010/001038/103849Eb.pdf> on 30/10/09.

UNESCO. 2002. *Guiding Principles for projects on Biosphere Reserves*. Downloaded from http://www.unesco.org/mab/doc/brs/Guid_princip.pdf on 30/10/09.

UNESCO. 2002. *Seville+5 Recommendations: Checklist for Action*.

UNESCO. 2004. *Biosphere Reserves Nomination Form, official English version*. Downloaded from <http://www.unesco.org/mab/doc/brs/BRnomformE.pdf> on 30/10/09.

UNESCO. 2008. *Madrid Action Plan for Biosphere Reserves 2008-2013, English version*. Downloaded from <http://unesdoc.unesco.org/images/0016/001633/163301e.pdf> on 30/10/09.

Urushadze, T. 2004. Comparative characteristics of the regions for the formation of the first Biosphere Reserve in Georgia. Unpublished report.

Williams, L., N. Zazanashvili, G. Sanadiradze, and A. Kadaurov. 2006. *An Ecoregional Conservation Plan for the Caucasus*. Tbilisi: WWF Caucasus. 222 pp.

Yavruyan, E., I. Rakhmatulina, A Bukhnikashvili, A. Kandaurov, I. Natradze, and S Gazaryan. 2008. *Bats Conservation Action Plan for the Caucasus*. Tbilisi: Universal. 48 pp.

Project Code Report Title

**Ошибка! Ис-
точник ссылки
не найден.L:**

73

Project Name

Task