

**SECOND REGIONAL DEVELOPMENT PROJECT**  
**IMERETI REGIONAL DEVELOPMENT PROGRAM**  
**IMERETI TOURISM DEVELOPMENT STRATEGY**

**STRATEGIC ENVIRONMENTAL, CULTURAL HERITAGE  
AND SOCIAL ASSESSMENT**



Tbilisi, December, 2014

## ABBREVIATIONS

GNTA	Georgia National Tourism Administration
EIA	Environnemental Impact Assessment
EMP	Environmental Management Plan
EMS	Environmental Management System
IFI	International Financial Institution
IRDS	Imereti Regional Development Strategy
ITDS	Imereti Tourism Development Strategy
MDF	Municipal Development Fund of Georgia
MoA	Ministry of Agriculture
MoENRP	Ministry of Environment and Natural Resources Protection of Georgia
MoIA	Ministry of Internal Affairs
MoCMP	Ministry of Culture and Monument Protection
MoJ	Ministry of Justice
MoESD	Ministry of Economic and Sustainable Development
NACHP	National Agency for Cultural Heritage Protection
PIU	Project Implementation Unit
PPE	Personal protective equipment
RDP	Regional Development Project
SECHSA	Strategic Environmental, Cultural Heritage and Social Assessment
WB	World Bank

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# EXECUTIVE SUMMARY

## E-1. INTRODUCTION

Following four years of rapid growth, backed by several reforms and increasing foreign direct investment (FDI) inflows, Georgia experienced a sharp economic downturn resulting from the twin shocks of the August 2008 conflict and the global financial crisis. As a result, the authorities launched a counter-cyclical fiscal stimulus program focusing on infrastructure, maintained their economic reform program backed by a strong public investment program, and realigned public expenditures to social and infrastructure investments. As economic recovery takes hold, driven by higher exports and private investment, the authorities are reducing the stimulus and implementing fiscal adjustments to safeguard sustainability. Although the recovery resulted in about 6.8 percent growth rate in 2011, there is an uncertainty about the pace of future growth due to global economic uncertainties. In response, the authorities are addressing macro-economic vulnerabilities through well-designed fiscal, monetary and debt management policies.

The Government refocused efforts in the past six years by launching several initiatives to attract private investors in selected regions (Tbilisi, Adjara) on various sectors and to develop and implement regional development strategies. In September 2012 Imereti Regional Development Strategy (IRDS) for years 2012 – 2017 has been approved by the government. According to priorities 4.10 and 4.11 defined in this document, healthcare, adventure, religious and discovery type of tourism have been named as important elements of the regional development. At present, draft Regional Development Strategy for years 2014 – 2021 has been prepared and will be approved soon. In this new strategic document tourism is once again declared to be one of the priorities (priority 5, goals 12 and 13).

Georgia, however, has not yet fully tapped its potential to promote sustainable tourism in promising regions, such as Imereti, or transform the economy through investment in tourism and agriculture supply chains for both export and import substitution. There is also a need for skills development in order to provide the skilled labor needed for a growing economy and increased productivity.

The Government of Georgia has asked the World Bank to support regional development in Kakheti and Imereti by applying a vertical programmatic approach. The proposed program of interventions will emphasize tourism and agro-processing as two key pillars and drivers of economic growth. In parallel, Imereti Tourism Development Strategy (ITDS) has been elaborated by THR Innovative Tourism Advisers under the contract with the Georgian National Tourism Agency (GNTA). This strategic document is developed with technical and financial support from the EU. ITDS has defined the sectors and clusters of tourism that will be promoted as a first priority and actions that should be implemented to achieve tourism development goals.

The Imereti Regional Development Project II (RDP II) financed by the WB is focused to support tourism sector and to create enable environment for the private sector to invest in Imereti. Imereti RDP II is seen as contributing to the ITDS.

Implementation of the Imereti RDP II requires development of a framework document that should be used to ensure proper management of this complex program and compliance of the implemented projects with the social and environmental safeguards. WB Safeguards Policies and Environmental Assessment Sourcebook provides a good basis for such framework document, but more country/region- and program-specific elaboration is required to develop an efficient planning tool matched with the specific features of the program and its social and natural environment. Strategic impacts related to the new development trends, cumulative and indirect effects, which usually are not addressed in site-specific Environmental Impacts Assessments (EIAs) and Environmental Management Plans (EMPs),

are important for establishing proper administrative structure and management arrangements. Analysis of strategic impacts of the tourism development in Imereti region cannot be limited to the frames of RDP II, as RDP II covers only part of activities, planned under the overall ITDS. To address the impacts related with the implementation of ITDS, the Strategic Environment, Cultural Heritage and Social Assessment (SECHSA) of the ITDS has been produced, with particular focus on the RDP II. The objective of the SECHSA report is to provide (i) general overview of the natural and physical environment in the project area, (ii) potential direct, indirect and cumulative impacts of the program as whole and main types of the project interventions on the environment, cultural heritage, and social strata of Imereti. The focus should be made on strategic issues and decisions rather than just the impacts of specific investments (iii) legal and regulatory framework applicable to mitigation of the potential risks associated with the project implementation, (iv) existing institutional set-up for coordinating, regulating, and enforcing policies and legislation pertaining management of environmental, cultural, and social aspects of the project implementation, (v) assessment of the sufficiency of the above systems in place and analysis of gaps and weaknesses, and (vi) recommendations on institutional arrangements for the project implementation.

Following the tasks for SECHSA Consultant, as they are stated in ToR, significant part of SECHSA is dedicated to the analysis of strategic impacts of the RDP II. However, it is understood that RDP II contributes to the implementation of ITDS as an overall strategy, including its action plan. Accordingly, analysis of strategic impacts given in SECHSA and its recommendations are not limited to the RDP II frames and should be viewed in a broader context of the regional development of Imereti and in conjunction with the overall concept of tourism development, as it is proposed by ITDS developed by Georgia National Tourism Administration (GNTA). At the same time, SECHSA includes recommendations for the development of detailed environmental and social assessment and impact mitigation documents for the specific investments under the project, which have been set forth in project Environmental Management Framework (EMF). EMF is a standing alone document completed earlier than SECHSA, although in consultation with the SECHSA consultant. The objective of reflecting main recommendations of EMF in SECHSA is to expand these principles beyond the frames of RDP II and to make it a good practice code applicable for other investments within ITDS context. In addition to EMF recommendations, SECHSA provides also screening criteria for selecting eligible private investment projects, which are not envisaged within the RDP II but are supposed to be supported by the Government under the ITDS context.

## **E-2. TECHNICAL AND ENVIRONMENTAL STANDARDS AND REGULATIONS**

The proposed RDP II program is being implemented in compliance with the Georgian legislation and environmental standards, as well as the WB's environmental and social safeguards policies. These regulations required screening of the project with the purpose of its environmental classification, and determination of the scope and extent of its environmental assessment. Review of the WB safeguards, as well as Georgian legislation related to environmental protection, cultural heritage, social protection, applicable design and construction standards and resettlement procedures have been conducted and the MDF policy framework documents have been analyzed. EMF and Resettlement Policy Framework (RPF) elaborated by MDF as standing alone documents and agreed with WB were proposed as a good practice samples to be applied for all projects to be implemented under the ITDS.

## **E-3. STAKEHOLDER ENGAGEMENT AND PUBLIC CONSULTATIONS**

Population of the Imereti region in general is the main beneficiary of the RDP II, as well as ITDS, as an overall program. Municipalities and businesses of the region, potential future investors and their prospective employees, NGOs active in the fields of sustainable development and preservation of the national's cultural heritage, and the Georgian Orthodox Church are also stakeholders of the project.

Municipal Development Fund of Georgia (MDF) is a designated implementing entity for RDP II and stakeholder as well. At a higher level - the national Government of Georgia is directly involved in designing of the project and establishing institutional set-up for its implementation because RDP II and ITDS are viewed as important elements and an integral part of the national strategy for regional development.

From the very initial stage of the project preparation, the top management and technical staff of the national line agencies as well as those of the regional and municipal governments have been directly involved in the consideration of all aspects of the proposed project. Involvement of the local communities residing in Imereti started at the stage of SECHSA, which included consultations on the project design and its implications for the natural environment, cultural heritage, and social conditions of the groups of population. Focus group meetings conducted under SECHSA process comprised discussions with the NGOs; consultations with the Church on various aspects of stimulating tourist visitation to the premises of religious institutions which represent heritage monuments of clerical architecture; In addition, project-specific meetings with the affected communities have been conducted during the preparation of Environmental Reviews (ERs) for RDP II subprojects.

The final draft of the SECHSA report will be disclosed and further public consultations and solicitation of feedback are planned upon nation-wide disclosure of the present report and will be used for its finalization. The representatives of key environment NGOs in Georgia, local and regional stakeholders, professionals of various academic fields, and elected local council members as well as executive council members, representing all municipalities in Imereti will be engaged in this nation-wide consultation process.

#### **E-4. ANALYSIS OF ALTERNATIVES**

The Imereti spatial economic analysis<sup>1</sup> (ISEA) and IRDS<sup>2</sup> have identified services including tourism, industry and trade as the main drivers of economic growth in the region.

Tourism, services and trade prioritized within IRDS, as well as agriculture, are not competitive sectors of economics. On the contrary, agriculture, trade and services are sectors supporting tourism and parallel development of these sectors is essential prerequisite for success. ESCH analysis of developing these sectors cannot be viewed as alternative analysis. Environmental and social implications of stimulated development of agriculture, communal and healthcare services, as indirect impacts of tourism development, are addressed in chapter 10 of SECHSA.

Industry also is not viewed in IRDS and ISEA as a sector competitive or incompatible with tourism development. However, it is clear that industrial zones and most of tourism clusters should be spatially separated. SECHSA (chapter 10), in line with the ITDS, recommends to develop only “soft” sectors of tourism (healthcare and wellness; soft nature; cultural tourism etc.) in “non-industrial” zones and use industrial zones as preferable for developing “hard” tourism activities, like motor-biking, paint-ball, extreme and adventure sports etc. Besides that, SECHSA reviews cumulative and/or inter-sectoral impacts of industry and tourism and recommends development of Regional Pollution Prevention Plan to minimize industry related pollution and its impact on tourism development.

The proposed tourism development vision for the region envisages developing Imereti as a high quality geo-tourism destination throughout the year through attracting domestic and international tourists; building on its wellness/spa tourism, cultural heritage and nature/adventure; and focusing on quality (tourist spending) rather than quantity (tourist arrivals).

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<sup>1</sup> Imereti spatial economic analysis was prepared in the framework of Project preparation to underpin its design.

<sup>2</sup> Imereti Regional Development Strategy has been prepared with technical and financial support from the EU and adopted by the government in September 2012. At present new strategy document is under the development and is expected to be approved soon.

ITDS provided harmonized scheme of spatial distribution of different tourism sectors and activities. Propose clusters and sectors are not competitive or incompatible. The tourism types, having severe environmental impacts, like trophy-tourism are not supported in ITDFS. SECHSA (chapter 10), in line with the ITDS, recommends to develop only “soft” sectors of tourism (healthcare and wellness; soft nature; cultural tourism etc.) in “non-industrial” zones and use industrial zones as preferable for developing “hard” tourism activities, like motor-biking, paint-ball, extreme and adventure sports etc.

### **Several Alternative strategies for the Project implementation have been proposed for RDP I and RDP II:**

Scenario 1 considers Vertical Provision of Investments and Integrated Program, comprising infrastructure development, construction and rehabilitation of tourism facilities (parkings, shops, café, information centers etc.), restoration/conservation of cultural heritage attractions, support for private investments in tourism and food processing. The program envisages parallel development of key centers of attraction.

Scenario 2 envisages Horizontal Management of Investments, as it was for several years applied by MDF in WB and ADB financed municipal development programs. Scenario 2 envisages horizontal provision of investments for municipal and tourist infrastructure across several regions and local-self governments (LSGs).

Scenario 3 considers that no special intervention is required from the Government side and the process should be let to go spontaneously, as it goes.

The alternative selected for the Project implementation is Scenario 1, which is based on the integrated geotourism development approach comprising multi-sectoral interventions, managed vertical investments, coordinated elaboration of tourist circuits and destination sites, targeted support to cost efficient and environment-friendly tourist packages, and protection of local communities and cultural heritage through promotion of responsible tourism.

Scenarios 2 and 3 are rejected due to their high risks to sustainability of economic development supported and/or induced by the project implementation as well as to the benefits for the local population. At the same time, these scenarios are likely to produce higher negative impacts on the natural environment, cultural heritage, and social conditions of local population.

## **E-5. IMERETI TOURISM DEVELOPMENT STRATEGY**

The overall development goal defined in ITDS for Imereti region is formulated as follows: “Become an international destination on its own, applying a sustainable yield driven strategy based on growing tourism demand and financial returns, enhancing the quality of visitor’s experience and improving population quality of life”

The assessment of the tourism sector’s attractiveness and the competitiveness of the destination have demonstrated that there are sectors in which Imereti should: Be Excellent (**priority 1** – Touring, Wellness, Cultural, Health care, Sports and adventure) or – **Be a Key Player** (**priority 2** - Wine and gastronomy, Soft nature, Meetings and incentives)

In order to concentrate and prioritize efforts, to stimulate cooperation and competition, as well as to make a territory more understandable to tourists, 4 clusters have been identified, described and prioritized



**Cluster 1. The heart of Imereti:** the hub with main touring attractions and tourism services; area to be settled with the highest priority in order to create an initial critical mass pulling the tourism development of the region.

**Cluster 2. Tskaltubo resort:** the spa area; it will feasibly gain the strength to be considered an independent cluster and be marketed as an integrated resort in the short-to-medium term.

**Cluster 3. The unexpected Imereti:** adventure/ rural destination, taking advantage of existing structures and landscape, the opportunity for locals is to develop it on the medium term.

**Cluster 4. The Imereti mountains:** family-oriented spa, leisure and natural experiences' area; it would require creating in the long term few other settlements like Sairme and Nunisi.

## E-6. RDP II DESIGN

RDP II being implemented with WB financing consists of two major components:

- Component 1: Infrastructure Investment
- Component 2: Institutional Development

### Component 1: Infrastructure Investment

Urban regeneration: An integrated approach is proposed for renewal of Tskaltubo city. This includes a) the rehabilitation of municipal infrastructure and utilities in the central area, b) conservation and upgrading of public spaces and cultural buildings, and c) conservation of public buildings with special architecture.

Tourism circuit development: Integrated approach to culture heritage site upgrading and improved management in the most attractive 5 cultural and natural heritage sites located along the main tourism circuit/route in Imereti. These include a) improved urban landscaping and public parking; b) construction of info kiosks, cafes and public toilets; and c) improving access roads and signage. The main tourism and culture heritage circuit has been identified, connecting the following cultural and natural heritage sites, which are targeted for upgrading: Gelati Church; Vani Museum; Ubisa Monastery; Katskhi Church and Katskhi Column.

The estimated cost of this component, including physical and price contingencies, is about US\$32.28 million, of which the World Bank will provide US\$26.9 million and the Recipient will provide US\$5.38 million counterpart funding

### Component 2: Institutional Development

Enhancing the institutional capacity and performance of the GNTA, the Agency for Culture Heritage Preservation of Georgia (ACHP), the Agency of Protected Areas (APA), and the MDF, which is the Project Implementing Entity for RDP II.

The estimated cost of this component, including physical and price contingencies, is about US\$3.72 million, of which the World Bank will provide US\$3.1 million, the Recipient will provide US\$0.62 million counterpart funding.

## E-7. METHODOLOGY

At the inception phase of SECHSA the project information as well as the relevant strategic and policy documents have been analyzed to understand clearly the policy, geographical and environmental

frames, conceptual design of the project and its components, legal and administrative frames. This initial analysis provided possibility to outline potential direct and indirect impacts of the project on cultural heritage, natural and social environment. Further deepened studies were focused on collection and analysis of baseline data regarding natural and social environment and cultural heritage within the zone of project impact, identification of most sensitive receptors, and analysis of potential impacts related to different scenarios of tourism development. Baseline data collection included extensive overview of available literature and resources of the National Statistics Office of Georgia as well as consultations with the professionals of various fields of expertise, representatives of several line entities of the central and local governments, and non-governmental organizations. The analytical framework chosen for the purpose of this SECHSA is based on the tourism growth scenarios relevant to the actual tourism development policy being implemented. Carrying capacity analysis method was chosen as a main discourse for further analysis of impacts.

SECHSA provides methodology for screening and selection of subprojects to be financed under the project and private business proposals to be stimulated by improving investment climate through provision of external infrastructural elements. **Eligibility Criteria** are provided to screen out proposals which are unacceptable due to their high risks for the natural environment, cultural heritage, and social conditions of the affected population. **Criteria for Selecting Preferable Projects** allow priority setting among eligible proposals based on their friendliness to the environment, including use of clean technologies, reviewable energy, elements of green architecture, promotion of nature tourism, etc. Methodological guidance is provided also for detailed assessment of the expected environmental and social impacts of the subprojects selected for the project funding, environmental management planning of such subprojects and developing monitoring schemes for tracking implementation of the prescribed mitigation measures.

## **E-8. ENVIRONMENTAL, CULTURAL HERITAGE AND SOCIAL BASELINE AND SENSITIVE RECEPTORS**

Imereti region occupies a central part in Georgia. It has clear natural boundaries isolating it from the east (Shida Kartli) with Likhi ridge, from the north (Racha, Kvemo Svaneti) with Khvamli and Racha-Imereti ridges, from the south with Ajara-Imereti ridge and from the west (Guria-Samegrelo) with Guria depression and Guria-Samegrelo administrative border.

### **Natural Environment**

Imereti region has humid subtropical climate, i.e. high air humidity, bulk atmospheric precipitations and not so wide range of temperature change. In the warm season of the year, the winds are of a monsoon nature. While humid west winds are dominant in summer, dry east and north-east winds dominate in winter. The mean annual velocity of winds is 4-5 m/sec. Four geomorphological regions may be identified in Imereti region:

Kolkheti Plain, 2. hilly piedmont of Guria-Imereti ridge, 3. high-mountainous zone of Imereti mountainous region, and 4. average-mountainous plateau of Imereti. The geology of Imereti region is presented by the rocks of almost all ages, starting from the Palaeozoic through Quaternary deposits. Almost all kinds of hazardous geological processes are frequent in Imereti region. Out of these processes, the landslides, bank washout, flooding, rockfalls, rock avalanches and areal erosion are worth mentioning and similarly important are the processes resulting from the human's engineering activities (cavings at mining locations, erosion, landslide and gravitational processes, etc.). In the accumulated rocks at the mining locations erosion is developed, mudflow currents are formed, etc. The risk of origination and activation of the above-listed hazardous geological processes is intensified by

8-9 point earthquakes. Imereti region is rich in surface water resources. Several major rivers and many smaller tributaries and watercourses are presented here. The major rivers are: Rioni, Kvirila, Dzirula, Chkherimela, Dzevrula, Khanistskali, Tsablara, Sulori, Tskaltsitela, Tskhenistskali.

The soil structure is favorable for agriculture.

Sensitivity of ecological receptors was estimated based on complex analysis of several criteria:

- Ecological value of the receptor (habitat supporting biodiversity; existence of red list species; recreational or aesthetic value of landscapes etc.)
- Existence of the receptor within the project impact zone
- Vulnerability of the receptor against project related direct, indirect, and cumulative impacts.

The area of project is lying within the 18 different landscapes (See map of Landscapes in Annex 1 to Chapter 8). These landscapes can be aggregated in 13 sub-types of landscapes, according to N. Beruchashvili map of landscapes. For sensitivity analysis all landscapes could be aggregated into three natural environmental complexes – 3 sensitive zones: i) High mountain open landscapes, with rhododendron thickets, and crooked-stem forest; ii) Middle mountain forest; and iii) Low mountain forest and open landscapes, and foothill forest.

### **Socio-Economic and Socio-Cultural Environment**

Imereti is one of the main historical, economic, cultural and educational regions of Georgia with area of 6.6 thousand sq. km (11 % of Georgia), population 700 thousand people (16 % of Georgian population).

Imereti is divided into two parts: Upper (Zemo) and Lower (Kvemo) Imereti. Imereti lies in the central part of Georgia in geographic terms. It is surrounded with distinctive natural borders: Racha-Lechkhumi and Lower Svaneti provinces (separated by Racha ridge) to the north, Inner (Shida) Kartli (separated by Likhi ridge) to the east, Samtskhe-Javakheti (separated by Adzhara-Imereti ridge) to the south and Guria and Samegrelo-Upper Svaneti (separated by r. Supsa and r. Tskhenistskali) to the west.

Imereti occupies a territory of approximately 6,552 km<sup>2</sup> (9.4 percent of Georgia area). Imereti consists of 12 administrative districts: Kutaisi (the Capital of the region), Tkibuli, Tskaltubo, Chiatura, Baghdati, Vani, Zestaponi, Terjola, Samtredia, Sachkhere, Kharagauli, Khoni. There are 542 settlements in the region of which: 10 cities (Kutaisi, Tkibuli, Tskaltubo, Chiatura, Baghdati, Vani, Zestaponi, Terjola, Samtredia, Sachkhere, and Khoni); 3 towns (Shorapani, Kulashi and Kharagauli); and 529 villages. The population of Imereti is about 703,485 (16 percent of Georgia population) at density 107 people/km<sup>2</sup>.

Imereti is considered a lagging region and has only 40 percent of the income in Tbilisi. The incidence of poverty in Imereti is 14 percent, which is slightly lower than the Georgia average of 16 percent. The unemployment rate is 11 percent, which is below Georgia's average of 16 percent and Tbilisi's rate of 30 percent. Such a relatively low unemployment rate results from the rural character of the region, with intensive participation of the population in agricultural self-employment and non-paid employment. The expectation is that Imereti's development is anticipated to draw in skilled and unskilled labor from Imereti region itself, as well as surrounding areas and Tbilisi.

Mining and heavy industry used to dominate the region and there are still traces of them (manganese, construction materials and steel production are still important industries). Today, Imereti is based more on service and agricultural economy than industrial. Imereti is the largest producer of meat, milk, and corn in the country. Agriculture contributes with 12 percent of the GDP of Imereti (versus 8 percent for Georgia as a whole). But like the case of the country as a whole, both these sectors are significantly overshadowed by services.

## E-9. ANTICIPATED IMPACTS AND RECOMMENDATION FOR THEIR MITIGATION

The following critical factors have been identified and mitigation strategies proposed as tier 1 actions:

### 1. Limited Natural Resources

In case of balneal resorts, the lack of mineral water resources as compared to the planned development capacities may become an issue limiting further development of the resort, or at least some specific activities associated with mineral water consumption..

**Mitigation:** SECHSA recommends that the resort development plan should be based on thorough assessment of the capacity of mineral water resources and hydrogeological features of the area.

**2. Infrastructure limitations:** In general, most critical possible impacts, related to exceeding of the carrying capacity of sites are pollution due to poor sanitation, lack of toilets and sewage systems at the sites of destination, lack of waste collection and disposal facilities, bad quality of local roads, deterioration of storm-water drainage systems, lack of electricity resulting in uncontrolled tree felling etc.

**Mitigation:** The issue is clearly recognized by the Government as major problem. The most part of these negative factors are addressed in the RDP II program subprojects and mentioned impacts will be mitigated through installing proper toilets, sewages, water supply systems, electricity, waste collection facilities and establishing efficient management systems. The same approach will be applied for developing tourism clusters and related destinations proposed in ITDS. The urgent issue to be resolved is construction of regional sanitary landfill for final disposal of wastes generated by tourists and local population.

**3. Uneven distribution of tourist flows and creation of peak flows at limited areas, which may result in local exceeding of carrying capacity:** Uncoordinated development of the regional tourist infrastructure may result in focusing the tourist flows within limited areas, around the most advanced sites of destination.

**Mitigation:** The ITDS considers integrated management and coordinated plan of rehabilitation of infrastructure and monuments in different parts of Imereti (different clusters comprise Kutaisi, Tskaltubo, Chiatura-Sachkhere area, Mountainous Imereti area etc.).

**4. Rapid growth of tourist visits in most fragile, pristine areas and natural heritage sites, which may result in local exceeding of carrying capacity.**

The magnitude and scale of impacts depend on the size and type of tourism development proposed, relative to the fragility of its proposed environment.

**Mitigation:**

SECHSA recommends diversification of the spatial distribution of tourism sectors and facilities: the sports and extreme types of tourism (like climbing, downhill biking, Canyoning, paintball, etc ) should be developed in environmentally less sensitive areas, like surroundings of Chiatura-Sachkhere industrial zone (cluster 3). Large hotels and SPA and healthcare facilities will be developed in traditional resort areas, like Tskaltubo, Sairme, Sulory, etc. For protection of sensitive environmental sites, like protected areas (Borjomi-Kharagauli National Park, Adjameti and Sataplia Managed Reserves, Gordi Canyon), it is recommended that only small boutique hotels are developed in areas adjacent to these sensitive sites, while the tourists accommodated in larger hotels located in urban areas (Kutaisi, Tskaltubo etc.) will have a chance to visit these environmentally sensitive destinations for short time through touring activities.

## **5. Rapid growth of tourist visits in holly sites and operational churches and monasteries.**

The carrying capacity of the operational churches and monasteries is not determined only by physical conditions and characteristics of the monuments and related infrastructure. The amount of tourists, movement of tourist flows and their activities should not affect the church services, routine life of the clergymen and prayers. As noted by the Georgian Orthodox Church representatives, *the clergymen should not become just a tour guides and/or part of attraction, but should have opportunity to conduct undisturbed routine church services.*

### **Mitigation:**

Obligatory procedure of consultations with the central and local representatives of Church should be established, to ensure harmonization of tourism activities with the normal day to day operations of monasteries. Admissible peak amount of tourists visiting churches and monasteries, sites and trails allowed for tourists, as well as time schedule for visits, dress-code and behavior norms should be agreed with the clergymen.

### **Tier 2 actions are aimed to address medium and long-term impacts:**

Tiered approach for remedying medium and long-term impacts does not mean that no immediate actions are considered in that regard. The specificity is that the immediate actions of tier 2 are focused on further in-depth assessment and evaluation and development of medium-term action plans to address medium and long-term impacts.

1. One of such proposed immediate actions is detailed elaboration of carrying capacity concepts, while developing new updated versions of the management plans for the protected areas located in Imereti region.

2. SECHSA recommends NACHP to assess in more details the expected change of spectrum and magnitude of potential impacts on cultural heritage, related to expected growth of tourist flows in long-term perspective. Adequate mitigation program and set of specific limitations could be elaborated based on the proposed in-depth assessment. Principles and methodology for estimation of carrying capacity similar to those proposed in the study “Sustainable Tourism Development in Kakheti through Cultural Heritage, 2012”, financed by WB could be applied for Imereti region as well.

3. SECHSA recommends initiating a comprehensive Regional Waste Management Plan (RWMP) related to waste management in Imereti region. The RWMP should cover issues of waste collection throughout the Imereti region, separation, transportation and final disposal. It should be stressed that not only wastes generated by tourism sector, but industrial waste and pollution has its negative impact on tourism development.

4. SECHSA recommends initiating a comprehensive Regional Pollution Prevention Plan (RPPP) related to management of industrial pollution in Imereti region. Industrial pollution is one of the important inter-sectoral impacts adversely affecting tourism development in Imereti.

5. Strategic assessment and planning is required also to estimate specific safety risks for tourists (particularly, environmental risks) and for planning emergency response and salvage operations. SECHSA recommends following specific risks to be analyzed and addressed in follow up strategic assessments and management plans: Geohazard risks, Forest fire risks, Risks of transmission diseases and Zoo-anthropogenic diseases, Risks related to uncontrolled contact with wild animals.

## **6. Selection of investment projects**

The RDP II does not include the component aimed on supporting private investments. However, within the context of the ITDS it is expected that the Government will support selected private investment projects by developing related infrastructure and facilitating fundraising. The environmental and social

impacts of the investment projects will depend on criteria applied by the Government during the project selection.

**Mitigation:** Success depends on informed site selection, sound design and operating guidelines which take into account the sensitivity and capacity of the resources which form the tourist attraction. Consequently, a major concern in planning other types of development and analyzing their impacts is to avoid foreclosing tourism development options by degrading resources especially well suited to it. Comprehensive environmental and land-use planning can identify options and alternatives over the long term and balance single and multiple use concepts. SECHSA provides criteria for selecting investment projects (see chapter 12). In particular, investment proposals (tourism facilities) considered under ITDS context or supporting sectors (e.g. food-processing plants) for protected areas and high sensitive areas are prohibited. Construction and operation of tourist or food processing facilities, which may change traditional features of the site and monument (historical, religious, aesthetical perception etc.) and lead to erosion of local way of life will be rejected. E.g. no casinos or beach-tourist facilities will be constructed near monasteries and historical monuments. The facilities planned for construction near the monasteries will be first discussed and agreed with the Georgian Orthodox Church.<sup>3</sup>

7. SECHSA recommends including awareness building programs for local population, tourists and investors aimed on protection of natural and cultural heritage. The awareness building programs could be coordinated by MoE, Agency of Protected Areas, National Tourism Agency and National Agency for Cultural Heritage Protection (NACHP), within the frames of their competence.

### **Impacts on Biophysical Environment**

Key possible impacts and mitigation measures to the biophysical environment may include:

- **Impact:** Loss of ecological resources and biodiversity in extremely sensitive areas due to greater access to remote destinations, increased tourist numbers, uncontrolled tourist behavior, introduced external species, and disturbance of habitats. **Mitigation:** As a short-term system of actions, proper instructions and *management plans* are required for *tourism operator companies*, to control the tourist's behavior and to exclude high impact tourism activities within the sensitive areas. In **long term perspective**, SECHSA recommends to conduct in-depth assessment *of correlations* between the *increase of number of visitors* and threshold of tolerable impacts. The results of these strategic assessments should be used for developing management plans for medium and long-term management purposes..
- **Impact:** Increased tourist flow and induced development could be related to the loss of ecological resources and biodiversity in sensitive sites adjacent to tourist circuits (see sensitive sites defined in chapter 8) and competition for natural resources.

#### **Mitigation:**

- Restrict unplanned development and illegal construction through improving regulatory basis and enforcement mechanisms; Prepare land use maps and integrated development plans for the areas of concern around the tourist clusters and circuits in Imereti region.
- Rehabilitate infrastructure and ensure power supply and, where possible, gas supply to minimize use of fire wood.
- Develop efficient system for combating forest fires at national and municipal level.
- Improve the efficiency of environmental inspectorate and clearly distinguish responsibilities of the MoE and MoENR in that regard. Ensure strict control on poaching, illegal woodcutting related to tourist activities, as well as induced development.
- Encourage implementation of energy saving facilities and renewable energy schemes for use on tourism facilities and residential areas, as well as for investment projects.

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<sup>3</sup> In some places in Georgia one may observe diversity of churches and religious facilities of different confessions. However, along the tourist circuits in Imereti region only Georgian Orthodox Church facilities are located.

- **Impact:** Induced development could be related to landscape and visual impacts caused by road construction, unplanned development, illegal construction, and inappropriate solid waste storage and disposal.  
**Mitigation:** Development of Master Plans and establishment of strict control on urban and rural design and construction, which is practiced in relation with the protected areas, should be expanded for all important tourist destinations, scenic landscapes, resort areas and recreational zones. Restrict unplanned development and illegal construction through improving regulatory basis and enforcement mechanisms.
  
- **Impact:** Deterioration of surface and groundwater quality due to inadequate wastewater treatment facilities and dumping of solid waste into surface water bodies.  
**Mitigation:** Eutrophication of sensitive lakes (e.g. Tkibuli lake) may occur even in case if the treatment facilities for the wastewater comply with common national standards. Requirements for the quality of discharged water in valuable lakes with the specific and fragile ecosystems should be stricter, than common standards. The simplest solution, however, is to restrict construction of hotels or residential houses, as well as any food processing plant at a distance less than 200m from the lake or stream inflowing into the lake. Strict control on compliance with the standard wastewater discharge requirements still should be valid for these facilities.

## **Social Impacts**

Tourism is often viewed as an engine of economic growth that can generate considerable amounts of foreign exchange for the host countries. As a result many poorer countries are putting emphasis on the promotion and development of this industry for future economic prospects. However, the economic impacts of tourism, particularly certain types of tourism are far from clear cut and many of the negative consequences are understated.

Indirect linkages between tourism and local cultures, businesses, resident populations and workforces are potential problems. Failure to recognize them can diminish project benefits, as well as inflict adverse socioeconomic impacts on the local population.

### **Impact:**

Tourists increase demands on local infrastructure- transportation, energy and water supply, wastewater collection and treatment, solid waste disposal, and healthcare facilities- and on the variety of public services that are usually the responsibility of local government.

### **Mitigation:**

In case of Imereti RDP II, MDF, which is the implementing agency, during the recent years has already implemented in Imereti region large scale and local municipal projects aimed on improvement of the municipal infrastructure (water supply and wastewater systems, local roads). MDF has the exhaustive information regarding the existing utilities and their deficiency region-wide. The investment program is designed in a way that it includes improvement of water supply and wastewater systems in all project destinations, where the systems are deficient. Rehabilitation of infrastructure is considered also as a support for private investments in tourism and food processing sector and this demonstrates clear understanding of MDF as the PIU for RDP II of importance of the issue. The same approach should be applicable for the overall frame defined by ITDS.

### **Impact:**

Assessments of tourism projects should include analysis of the projected distribution of costs and benefits. Whereas the benefits of tourism may be assumed to accrue to local residents, residents are

likely to incur more of the costs and may enjoy less of the benefits than visitors, immigrant workers or commercial intermediaries.

**Mitigation:**

Administration system regulating private investments in tourism and supporting businesses (food processing and supply; healthcare services etc.) should include mechanisms (legal, contractual, selection principles, conditions for supporting etc.) creating incentives for the private investors to employ local population, use local products and suppliers; The local labor force may need training in order to compete for jobs generated by the project and thus to participate fully in its benefits. Small business management, tourism management and similar training tools will be required. As the criteria for investment projects, SECHSA recommends to support those of the food processing proposal, which envisage production of ecologically pure food products from local sources and traditional technologies. This should be beneficial for tourists, as well as for producers and will also serve to minimize the revenue leakages. Marketing and advertising of high quality and ecologically pure products should be supported by the Government policy, as well as quality control mechanisms.

**Impact:**

As an indirect result of the planned tourism development, significant socioeconomic benefits can be expected to accrue, particularly in the rural areas. The greatest challenge is ensuring that economic benefits are shared equitably amongst local communities.

**Mitigation:** all the households, businesses and other stakeholders will receive their benefits equally and no preferences for selected households are practiced under the projects implemented within the frames of the ITDS. This is relevant for business selection process in programs supporting private investments, selection of private buildings for rehabilitation, provision of equal opportunities for employment etc. No discriminative selection practices will be allowed.

**Impact:** Developers are requiring the Government to improve the basic infrastructure before they move in. This diverts public money to upgrade public services away from where it is required most.

**Mitigation:** MDF has already implemented a lot of projects for improving municipal infrastructure in Imereti region and this program financed by different donors is ongoing. Additional financing for the infrastructure needed for developing tourist facilities will not affect this basic program of municipal infrastructure rehabilitation.

**Impact:** Implementation of the infrastructure improvement projects may lead to increase of tariffs. Differentiation of tariffs for water, sewerage, and other services may be necessary to avoid burdening local users unfairly.

**Mitigation:** no additional increase of tariffs related to tourism related infrastructure component is envisaged.

**Impact:** Construction of planned tourist facilities may cause displacement and involuntary resettlement. Construction of the proposed tourist facilities under RDP II does not require resettlement (only temporary impact on some small businesses is envisaged). However, the projects that will be implemented under the ITDS may impose resettlement impacts.

**Mitigation:** WB OP/BP 4.12 Safeguard Policy for Involuntary Resettlement will be applied to ensure full compensation of lost assets at the replacement cost, and additional rehabilitation of vulnerable and severely affected households. In order to reconcile the gaps between the Georgian legislation and WB requirements, MDF has elaborated Resettlement Policy Framework for RDP II. The RPF includes also compensations for the temporary impacts. SECHSA recommends the Government of Georgia to apply principles similar to those adopted in RPF for execution of resettlement related to the other projects under ITDS.



**Impact:** The influx of large numbers of foreign tourists into a local culture and the likely clash of contrasting life styles that may result can have impacts on local cultures; lead to change of traditional values. Stimulation of prostitution, drug proliferation, increase of criminality and transmission diseases is often associated with rapid development of tourism industry.

**Mitigation:** The proposed RDP II project, as well as ITDS strategy is focused on developing healthcare and wellness, cultural heritage, wine, eco – and agri-tourism sectors, for which the mentioned impacts are less severe. Large amounts of tourists will be concentrated only in traditional resort sites, like Tksaltubo and Sairme, which are adjusted to accommodation of significant amounts of tourists and have traditions of managing healthcare facilities. The motivation of tourists in this sector is taking care of their health, rather than amusement. In other clusters and tourism sectors, mostly small scale boutique hotels managed by local residents will be stimulated rather than large scale hotels owned by transnational companies.

**Impact:** Development of fast-food industry may affect local cousin and related small business. Changes to traditional lifestyles may result in negative social effects. For example, communities living in remote areas may find that they lose supplemental income from sources such as hunting, collection of fire wood, fishing, etc if access to these resources is restricted for tourism development.

**Mitigation:** The strategy proposed by ITDS aims restoration of traditional activities and lifestyle of old resorts (Tksaltubo, Sairme, Nunisi, Sulori). Besides that the ITDS is focused on developing cultural heritage, wine, national cousin and agri-tourism. Small scale boutique hotels and commercial and traditional food processing facilities managed by local residents will be stimulated rather than large scale hotels and large plants owned by transnational companies. This will support local small and medium size business, employment of local residents (mostly – family business) and minimization of leakages, support for popularization of local cousin, traditions. Development of supporting infrastructure will minimize the need for fire – wood. The project will not create new restricted zones.

**Impact:** Induced development may occur at the fringes of tourist areas, including migration to the better developed areas. Given the limited carrying capacity of the sites in terms of space and infrastructure, in addition to cultural differences, migration can become a potentially important problem.

**Mitigation:** The Government is planning development of strategy for sectoral ministries and local self-governments and some strategic plans and guidelines will be developed and implemented to improve spatial planning and to introduce integrated Masterplans.

## **Impacts on Cultural Heritage**

### **Impact**

RDP II will invest in the upgrade and development of infrastructure in the historical settlements as well as in the proximity to the cultural and natural heritage sites. Though limited restoration activities are planned in CH buildings or their immediate proximity, such interventions carry additional risks of damaging monuments in case the design and methodological approaches used are unfit for conservation of the historical and aesthetic value of these sites or if tourist visitation of these sites, increased as a result of the project interventions, is not managed in a sustainable manner. ITDS in broader context considers possibility of rehabilitating or restoring CH buildings. Cumulative impacts of developing various elements of infrastructure in and around historical settlements, in or around natural sites of recreational and aesthetic value also add to the potential risks of the project.

### **Mitigation**

All the designs within the project related to conservation-restoration of historical buildings, blocks and cultural heritage monuments should be managed by NACHP. The works should be designed in compliance with the national legislation and international best practices. NACHP will recommend PIUs specialist for supervising the works. NACHP will take part in acceptance of completed works related to restoration-rehabilitation of historical buildings. Infrastructure rehabilitation projects will be

supervised by MoCMP. Public and stakeholders will be consulted at the early stage of project development.

**Impact**

Activities such as tours of archaeological sites may conflict with local traditions and/or religious beliefs. Investments in new facilities, where sites are considered as sacred, as in the case of religious shrines, the impact is complex. It is important that such interventions be scientifically sound, and that they respond, as completely as possible, to patterns of social organization and existing social and cultural institutions. Traditions should be taken into account during operation of the tourist facilities.

**Mitigation**

All the designs within the project related to conservation-restoration of historical buildings, blocks and cultural heritage monuments are managed by NACHP. The PIUs and NACHP will consult local communities in project destinations regarding the design of facilities and planned activities. In case if there are some specific restrictions and limitations from the point of view of local traditions and religious opinions, this will be considered and adequately addressed in the projects developed under ITDS. Project staff should ensure that the cultural heritage of non-dominant cultures are accorded the same care as that of the dominant cultures. In such instances it is strongly advised that a team be formed to develop mitigation measures. The team should have an art or architectural historian knowledgeable about the particular cultural tradition, an architectural conservator, an anthropologist familiar with the population of the area, and a coordinator who would bring together the relevant government organizations, experts, and community leaders. Consultations with CH authorities (MoCMP, NACHP, Georgian Orthodox Church; Local Communities).

**Impact:** Influx of tourists may stimulate illegal trade with movable archaeological remains and activities of remain searchers.

**Mitigation:** Control mechanisms should be enhanced

**Impact:** Commercialization of traditional artisan industries can lead to loss of authenticity with negative results for the artisans and possibly for the buyers as well.

**Mitigation:** This issue could be a subject for further in-depth study and recommendations for obtaining and managing certain donor grants and Governmental subsidies on support of truly traditional artisan production (individuals or family business).

**Impact:** Shooting photos of wall paintings may result in damage due to photochemical reactions induced by flashing.

**Mitigation:** Shooting photos should be limited to in monasteries and especially near the wall paintings

# 1. INTRODUCTION

## 1.1 PROJECT CONTEXT

**A Post Conflict Country in Economic Recovery:** With a population of 4.48 million, Georgia is a resource rich lower middle-income country. In 2008-09, Georgia's economy was hit by the twin shocks of the August 2008 armed conflict, followed by the global economic crisis. Economic growth, which had been in excess of 9% between 2005 and mid-2008, fell sharply to 2.3% in 2008 and contracted by 3.8% in 2009. As a result of the conflict, Georgia found itself with thousands of new internally displaced persons (IDPs) and thousands more hurt from the loss of jobs and income. The authorities were faced with the dual challenges of mitigating the impact of the economic downturn in the short term, and facilitating recovery and preparing Georgia for a post-crisis growth in the medium term. Economic recovery took hold in 2010–11 as a result of the government's policy reform agenda. While the eurozone crisis dragged down growth in many other emerging economies in Eastern and Central Europe, the Georgian economy grew strongly by 7% in 2011<sup>4</sup>. Strong exports, tourism inflows and high levels of public investment were the main contributors to the pace of economic expansion.

At the aggregate level, the Government's reform aims to address two priorities – increasing employment and narrowing the current account deficit. This is to be achieved by promoting private investments in sectors, such as tourism, power and logistics, and by continue the focused public interventions in infrastructure, regional development, agriculture, and education. These efforts are all seen as key catalyst for accelerating job creation.

**Deepening the Environment for Private Sector Growth in the Regions:** The authorities continue to support the private sector to lead such economic growth and job creation efforts. Georgia's reforms in the past years has positioned the country to be one of the world's most competitive business environments—ranked 16th out of 183 countries in the IFC 2012 “Doing Business” Report. Georgia scores well in terms of business start-ups, tax processes, investor protection, access to credit, enforcement of contracts, registering property and issuing construction permits. To continue the gradual process of regaining private sector confidence after the twin shocks, the Government developed a regional development framework to focus its efforts in the past years on attracting private investors in secondary cities across various sectors, including tourism. There still remain, however, some physical and institutional capacity constraints to attract private investments in regions with high economic development potential.

Within the above-mentioned regional development framework, Georgia intends to fully tap its potential to promote sustainable tourism in promising regions, such as Kakheti and Imereti. In the framework of the Country Partnership Strategy Progress Report (CPS-PR) for FY10-FY13 presented to the Board in April 2011 (Report Number: 58287-GE), the Government asked the WB to support regional development by applying a programmatic approach. The first Project under the program, Regional Development Project (RDP- P126033), US\$ 60 million IBRD loan, was approved by the Board in March 20, 2012, focusing on Kakheti region, and is now under implementation. This Project is the second in a series of regional development operations being implemented under the CPS, focusing on Imereti region.

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<sup>4</sup> World Bank Country Brief for Georgia, 2012

**Figure 1.1 Project Area**



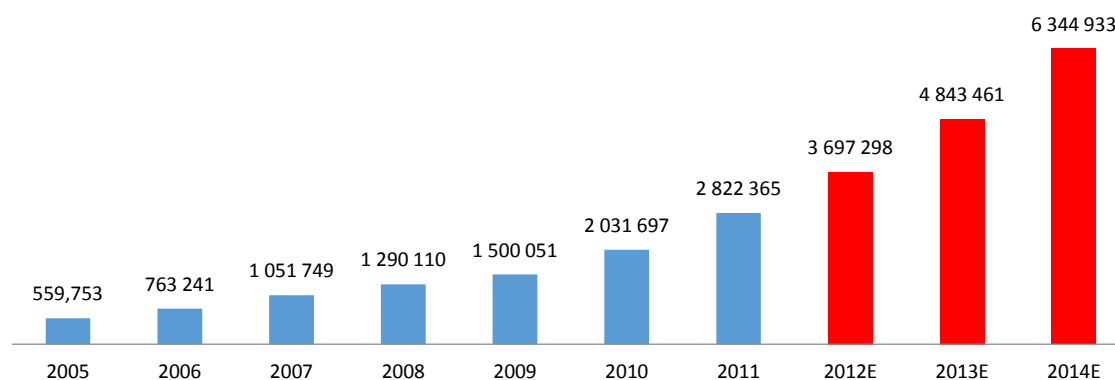
## 1.2 SECTORAL AND REGIONAL CONTEXT

**Georgia Regional Development Strategy<sup>5</sup>:** The Government of Georgia approved in June 25, 2010 (Government resolution no. 172), the State Strategy on Regional Development of Georgia for 2010-2017, prepared by the Ministry of Regional Development and Infrastructure (MRDI).

Georgia Regional Development Strategy: The objectives of the Government’s State Strategy on Regional Development for 2010-2017, approved in June 2010, are to create a favorable environment for regional socio-economic development and to improve living standards. These objectives are to be achieved through balanced socio-economic development policy, increased competitiveness, and greater socio-economic equality among the regions. Initiated regional development strategies in the country, including the WB support to the Kakheti Region, intend to stimulate job creation by reducing imbalances among and within regions, improving public services, and attracting increased volume of private sector investments, especially in tourism. In line with this strategic direction, the Government invested about US\$300 million between 2005-2011, in economic and physical revitalization of Tbilisi, Signagi, Mtskheta, Batumi and Kutaisi cities. Implemented projects focused on a complete revamp of municipal infrastructure and restoration of old buildings stock (most of which featured heritage values). According to the Georgia National Investment Agency, the number of tourists to Georgia increased from 560,000 in 2005 to 2.7 million in 2011, with a projection to reach about 6.2 million by 2014 (see Figure 1.1). Nonetheless, the Government recognized that restoration of buildings and municipal infrastructure alone was not sufficient condition to trigger and sustain local economic transformation. An integrated and demand-driven approach to regional development was seen as critical to spurring growth in secondary and historic cities.

<sup>5</sup> Georgia Regional Development Strategy (RDS): <http://www.mrdi.gov.ge/?page=laww&id=4&lang=2>

**Figure 1.2: Current and Projected Tourism Growth in Georgia**



Source: Georgia National Investment Authority

**Imereti Regional Context:** As part of the identification of this program, the government has launched in parallel to this assignment two supplemental strategies - one is *IRDS* by MRDI with support from the EU<sup>6</sup>, and the other (completed in August/September 2012) is *Imereti Tourism Development and Marketing Strategy* by GNTA. The *Imereti Tourism Development & Marketing Strategy* was prepared by the Government with the help of an international consulting firm to define the long term tourism development vision of Imereti and underpin this Project's design. In addition, *Imereti Spatial Economic Analysis* was prepared in the framework of Project preparation to underpin its design. These analyses will enrich the identification and preparation of the Project, especially the SECHSA.

Imereti occupies a territory of approximately 6,552 km<sup>2</sup> (9.4 percent of Georgia area). Imereti consists of 12 administrative districts: Kutaisi (the Capital of the region), Tkibuli, Tskaltubo, Chiatura, Baghdati, Vani, Zestaponi, Terjola, Samtredia, Sachkhere, Kharagauli, Khoni. There are 542 settlements in the region of which: 10 cities (Kutaisi, Tkibuli, Tskaltubo, Chiatura, Baghdati, Vani, Zestaponi, Terjola, Samtredia, Sachkhere, and Khoni); 3 towns (Shorapani, Kulashi and Kharagauli); and 529 villages. The population of Imereti is about 703,485 (16 percent of Georgia population) at density 107 people/km<sup>2</sup>.

Imereti is considered a lagging region; with the incidence of poverty standing at 14 percent, lower than the Georgian average of 16 percent. The unemployment rate is 11 percent, compared to the national average of 16 percent and that of Tbilisi's at 30 percent. Services, including tourism and retail, are the main driver of economic activities, contributing 73 percent of its total value added. While the bulk of services are represented by activities associated with tourism – given the numerous natural attractions of this region, this sector is highly underdeveloped. Agriculture constitutes 12 percent of the GDP of Imereti, versus 8 percent for Georgia as a whole.

Mining and heavy industry used to dominate the region and there are still traces of them (manganese, construction materials and steel production are still important industries). Today, Imereti is based more on service and agricultural economy than industrial. Imereti is the largest producer of meat, milk, and corn in the country. Agriculture contributes with 12 percent of the GDP of Imereti (versus 8 percent for Georgia as a whole). But like the case of the country as a whole, both these sectors are significantly overshadowed by services. The Imereti spatial economic analysis<sup>7</sup> and IRDS<sup>8</sup> have identified services

<sup>6</sup> For the moment of starting SECHSA IRDS was expected to be completed in 2013. However, the first version of Strategy (for years 2012 – 2017) has been adopted in September 2012. The new version of Strategy (years 2014 – 2021) has been completed in December 2014 and will be approved soon.

<sup>7</sup> Imereti spatial economic analysis was prepared in the framework of Project preparation to underpin its design.

<sup>8</sup> Imereti Regional Development Strategy is under preparation with technical and financial support from the EU.

including tourism, industry and trade as the main drivers of economic growth in the region. Services are today the main driver of economic activities, contributing 73 percent of its total value added. The bulk of services are represented by activities associated with tourism – given the numerous natural and cultural heritage attractions of this region.

The Government has been investing in Imereti for the past two years. Kutaisi, the region's capital and the 2nd largest city in Georgia after Tbilisi, has benefitted from substantial investment in urban regeneration. It is becoming Georgia's most significant administrative/government center after Tbilisi. In the fall of 2012, the Parliament of Georgia will be relocated from Tbilisi to Kutaisi, providing a major impetus for the city to reap the benefits from the significant presence of public administration. Some central government agencies, government regional buildings and other facilities are also being constructed in the downtown Kutaisi. The Government has also rehabilitated Kutaisi International Airport, which will open at the end of the 2012, bringing regular-fare and budget flights from within and outside Georgia. In addition, the Government has invested in the restoration of Sataplia and Prometheus caves, the Borjomi-Kharagauli National Park, and is currently partnering with the WB to expand the rehabilitation of the East-West highway to Imereti. All spa resorts in Tskaltubo have been privatized, with investors restoring the architecturally-significant buildings and the Government is upgrading and expand municipal infrastructure. The Government is also developing the Black Sea resorts of Batumi, Kobuleti and Anaklia and the ski resort of Upper Svaneti

**Tourism Development Potential:** The Imereti spatial economic analysis and IRDS have identified tourism, industry and trade as the main drivers of economic growth in the region. Imereti has huge tourism development potential. The region is home to 78 Churches, 13 Castles, 39 Archeological Monuments and 27 Museums. The most significant endowments cultural heritage patrimonies are: Bagrati cathedral, Gelati monastery, Ruins of the ancient town of Vani, Sataplia grotto, Katskhi pillar, and Motsameta monastery.

The region also has 3 protected areas, 12 unique caves and 9 spa resorts based on hot and cold spring water. There is also in close proximity to Imereti, the Borjomi Kharagauli National Park, which is the largest protected area in Europe.

**Key challenges and Tourism Development Strategy:** Government investment in Imereti was focused mainly in Kutaisi on development of the parliament and public administration, with little attention to Tskaltubo and its neighboring historical sites (Gelati Monastery, Vani Museum and surrounding ethnographic site, Ubisa Church, Katskhi Church, Katskhi Column Monastery, and Motsameta Monastery). Infrastructure and historical buildings in Tskaltubo are degenerating despite the city's historic prominence as a wellness destination based on hot springs and natural spas. Years of neglect after independence have turned a once vibrant wellness tourism destination into one characterized with dilapidated buildings, unreliable infrastructure, poor water supply and sanitation system, inefficient street lighting system, degraded urban roads and under-utilized 70 hectare central park with several spring water baths. Several old and architecturally-significant hotel buildings are now vacant or under-utilized. There is absence of tourism facilities, such as public parking, public toilets, cafes, restaurants and information centers.

The tourism development strategy further identifies key challenges, which may hinder tourism development and require investment attention, including:

- Poor physical conditions and under-utilization of Vani Museum and its surrounding ethnographic site;
- Limited hotel capacity (only 34 accommodation structures, mostly guest-houses and family-houses) and concentration of hotels in the capital city of Kutaisi;

- Limited number of food & beverage facilities (48 restaurants, 31 cafes and 15 bars);
- Limited sports & adventure offers;
- Lack of activities to promote the region as an attractive tourism destination;
- Lack of investor information, communications and cooperation among investors to attract private investment; and
- Inadequate skills for a services-based economy and limited proficiency in foreign languages.

As a result:

- Only 5 percent of visitors to Imereti (32,500 visitors) spend at least one night in Imereti, often in the capital city Kutaisi; and
- The vast majority of day visitors spend as little as US\$25/day

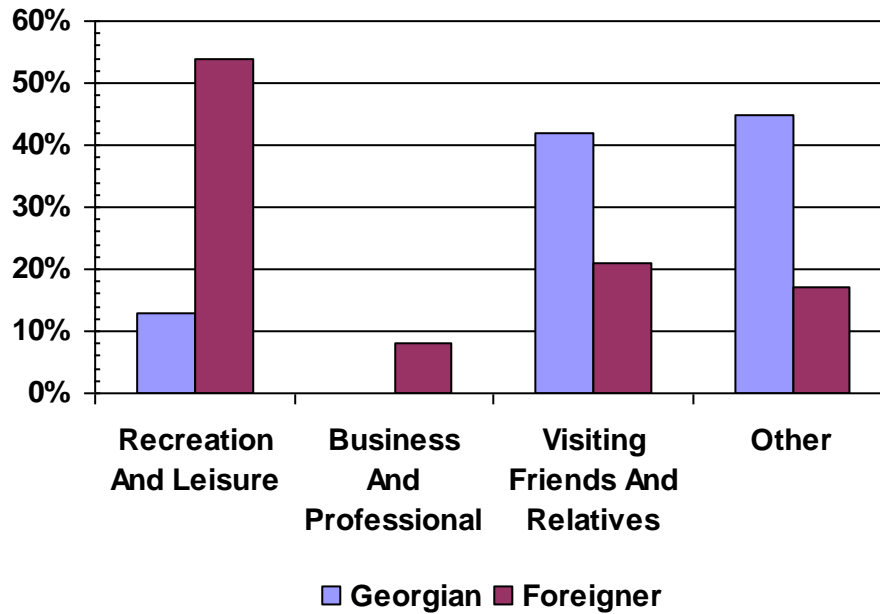
The government recognizes the need to enhance amenities and urban services to also support business tourism related to the relocation of some elements of the Government to Kutaisi. The goal is to attract private investments, promote public-private partnerships, revitalize local business activity, define a full-fledged regional tourism circuit, and foster two leisure travel clusters (wellness/nature and cultural heritage). The tourism development strategy proposes to develop Imereti, with Kutaisi, Tskaltubo and Vani at its core, as a high-quality, year-round wellness/nature and cultural heritage destination. Seeking to attract both domestic and international tourists in Imereti, the strategy proposes an integrated approach, using the concept of geotourism<sup>9</sup>, comprehensive urban renewal in Tskaltubo, rehabilitation and extension of Vani Museum and construction of tourism amenities at the neighboring historical sites. This complements the tourism development vision of other regions, such as in Kakheti (wine tourism, culture heritage and adventure), or in Adjara (sea sports, nature and recreation).

**Projected Tourism Growth in Imereti:** With the implementation of an integrated approach to tourism development in Imereti, and the operation of Kutaisi international airport, the tourism strategy projects that the annual number of visiting tourists is expected to increase from 740,000 (585,000 Georgian visitors and 155,000 foreign visitors) in 2010 to 1.20 million by 2016 and to 2.00 million by 2020. The number of beds in hotels, guest-houses and family-houses is projected to grow from 2,661 in 2010 (in 34 hotels and 34 guest and family houses) to about 3,193 in 2016—to serve an expected increase in number of tourists with at least one night stay from 32,500 in 2010 to 110,000 by 2016 and to 300,000 in 2020. The number of tourists with at least one night stay is projected to reach 300,000 by 2020. About 23 percent of visitors to Imereti are international (the UK, Netherlands, France, Italy and Israel), while 11 percent are regional (Ukraine, Armenia and Azerbaijan). Most tourists do report enjoying the region’s rich nature and cultural heritage and leave with very high level of satisfaction (8.5/10). Figure 1.2 shows the shares of visitors by purpose of visit.

**Figure 1.3: Purpose of visit to Imereti**

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<sup>9</sup> Geotourism is defined as “Tourism that sustains or enhances the geographical character of a place — its environment, heritage, aesthetics, culture, and the well-being of its residents.” According to the National Geographic, Center for Sustainable Destinations, Geotourism is sustainable tourism energized. It sustains, but it can also *enhance*—by means of restorative and constructive forms of tourism that fit the nature of the destination. Tourist revenue can help to restore historic districts, for instance, and support local craftspeople. It can help to preserve and develop local cuisines, based on distinctively local ingredients supplied by local farmers. It can help to retain traditional cultural celebrations and performing arts that would otherwise disappear. It can help to beautify ugly places and enrich poor places. It does those things best when focused on the distinctiveness of a place, avoiding the destructive pitfalls of undifferentiated global mass tourism.



Source: GNTA

### 1.3 PROPOSED DEVELOPMENT OBJECTIVE AND KEY RESULTS EXPECTED

The proposed for WB financing RDP II consists of two components: (1) infrastructure investments in urban regeneration of Tskaltubo and tourism circuit development, and (2) institutional development. The Project aims to achieve several objectives: (a) enhance Imereti’s tourism potential, (b) foster employment, and (c) foster private investment in the region, with emphasis on private tourism and hospitality infrastructure development schemes in the first place.

The Government believes that the Project shall allow better anchoring of the Imereti region to the Georgia-wide tourism circuits, to tap the hitherto untapped yet potentially significant tourism and hospitality industry potential which exist in the region. Imereti shall be reinvigorated as one of the key pillars of growth and of attraction in the broader Georgian context. The RDP II is all the more important in the general context of Georgia’s spatial planning vision espoused by the Government.

Careful examination of the needs and priorities has allowed the Georgian side to come up with the list of public measure which, when implemented, would have a significant positive multiplier effects, spilling over into the private sector investment facilitation and employment creation.

The proposed tourism development vision for the region envisages developing Imereti as a high quality geo-tourism destination throughout the year through attracting domestic and international tourists; building on its wellness/spa tourism, cultural heritage and nature/adventure; and focusing on quality (tourist spending) rather than quantity (tourist arrivals). Success of tourism will depend on the use of an integrated approach, using the geo-tourism and applying vertical approach to a comprehensive urban regeneration effort in key centers of attraction. These will attract private investments, revitalize local business activity, develop a full-fledged regional tourism circuit, and foster two leisure travel clusters: Cultural heritage and nature/adventure.

Development of the tourism vision and the proposed two leisure travel clusters (culture heritage and nature/adventure) will require, at a minimum: infrastructure improvement to attract private sector



investments; improved planning and organization (e.g. destination management organization and office); institutional strengthening and capacity building; association/cluster development; geotourism mapping and tour circuit development; improved visitor services, signage and interpretation; and marketing activities.

There are six sites/subprojects suggested by the Government for financing under the Project to supplement what the Government has already invested in. These can be grouped into two categories:

- **Urban Regeneration of Tskaltubo:** An integrated approach is proposed for urban renewal of Tskaltubo city. This includes a) rehabilitation of municipal infrastructure and utilities in the central area; b) upgrading of public spaces, parks, and construction of tourism amenities, and c) restoration of public buildings with vernacular architecture. The proposed activities will help improve livability and hospitality in a culturally-informed manner, enhance attractiveness for visitors, revitalize the urban nucleus, and attract increased volume of private sector investments around the medical and spa tourism cluster.
- **Tourism Circuits Development:** An integrated approach to site upgrading and improved management of the six most attractive cultural heritage sites in Imereti: including Gelati Monastery; Vani Museum and surrounding ethnographic site; the Ubisa Church; the Katskhi Church, the Katskhi Column Monastery, and the Motsameta Monastery. This implies a) improving urban landscaping and public parking; b) construction of information kiosks and public toilets; c) restoration of the Vani Museum and the supply of showcases and furniture; d) improving access roads; and e) preservation of selected cultural heritage sites.

**Project Beneficiaries:** The activities envisaged under the Project are expected to bring direct benefits to the residents and tourists of Imereti. The implementation of the Project is expected to improve the access, quality and reliability of public infrastructure; increase the volume of private sector investment in the region; and increase small and micro enterprises in renovated cultural heritage sites and cities. The Government will benefit from improved institutional capacity of selected agencies and improved capacity to operate and maintain assets.

**The key results expected from the Project are:**

**Infrastructure Services:**

- Increased number of hours per day of piped water services in Tskaltubo (from 8 hours/day to 18 hours/day).
- Improved energy efficiency of street lights by 30%.

**Tourism Economy:**

- Increased number of hotel beds in circuit route areas by 20 percent
- Increased revenues from tickets sold at Vani museum by 80 percent.

**Institutional Capacity:**

- Increased volume of private sector investment in Tskaltubo mobilized by the Tskaltubo destination management and development office.

Cost-Benefit analysis was prepared for the whole project, rather than for each component of subproject. The NPV, FIRR and EIRR were calculated for the next 20 years from 2012 up to 2031, including 4 years of project implementation period. For the economic analysis, financial costs were corrected and conversion factors were applied. Analysis considered 12% discount rate. Overall, it should be said that the implementation of the RDP II will yield in net economic benefits over and above the Project costs,

as well as the cost of complimentary investments in additional tourism enterprises to be financed by private investors.

## 1.4 OBJECTIVES OF THE SECHSA

Implementation of the Imereti RDP II requires development of framework document that should be used to ensure proper management of this complex program and compliance of the implemented projects with the social and environmental safeguards. WB Safeguards Policies and Sourcebook provides a good basis for such framework document, but more country/region- and program-specific elaboration is required to develop an efficient planning tool matched with the specific features of the program and its social and natural environment. To fit the purpose the SECHSA of the proposed RDP II has been conducted and this SECHSA report has been produced. The objective of the SECHSA report is to provide (i) general overview of the natural and physical environment in the project area, (ii) potential direct, indirect and cumulative impacts of the program as whole and main types of the project interventions on the environment, cultural heritage, and social strata of Imereti. The focus should be made on strategic issues and decisions rather than just the impacts of specific investments (iii) legal and regulatory framework applicable for mitigation of the potential risks associated with the project implementation, (iv) existing institutional set-up for coordinating, regulating, and enforcing policies and legislation pertaining management of environmental, cultural, and social aspects of the project implementation, (v) assessment of the sufficiency of the above systems in place and analysis of gaps and weaknesses, and (vi) recommendations on institutional arrangements for the project implementation.

Analysis of strategic impacts given in SECHSA and its recommendations are not limited to the RDP II frames and should be viewed in a broader context of the regional development of Imereti and in conjunction with the overall concept of tourism development, as it is proposed by Imereti Tourism Development and Marketing Strategy (ITDMS) developed by GNTA. At the same time, SECHSA includes recommendations for the development of detailed environmental and social assessment and impact mitigation documents for the specific investments under the project, which have been set forth in project Environmental Management Framework (EMF). EMF is a standing alone document completed earlier than SECHSA, although in consultation with the SECHSA consultant. The objective of reflecting main recommendations of EMF in SECHSA is to expand these principles beyond the frames of RDP II and to make it a good practice code applicable for other investments within ITDMS context. In addition to EMF recommendations, SECHSA provides also screening criteria for selecting eligible private investment projects, which are not envisaged within the RDP II but are supposed to be supported by the Government under the ITDMS context.

The assignment has been carried out in a participatory manner, including in-depth consultation with relevant line and administrative agencies of the Government, main types of beneficiary groups, communities expected to experience positive and possible negative impacts of the project implementation, academic circles, and NGOs.

## 1.5 STRUCTURE OF SECHSA DOCUMENT

**Chapter 1** of the SECHSA provides overall context and background information related to program and need of its implementation, as well as objectives of the present SECHSA report.

**Chapter 2** Contains review of the ITDS, as well as development activities and specific features of tourist's activities associated with the proposed clusters and tourism sectors.

**Chapter 3** describes details of each subcomponent of the RDP II program.

**Chapter 4** explains the tasks and objectives SECHSA, as it is understood by the Consultants, and how these objectives have been achieved.

**Chapter 5** provides description of current administrative structure and legal frame for program implementation.

**Chapter 6** describes Cultural Heritage Baseline for Imereti region

**Chapter 7** explains current situation and trends of tourism development in Imereti region.

**Chapter 8** describes Environmental Baseline in the project area.

**Chapter 9** describes social environment.

**Chapter 10** is related to analysis of project impacts and rational mitigation strategies. Environmental, socio-cultural and socio-economic impacts are summarized here and impact on Cultural Heritage is one of the key aspects considered. Paragraph 10.1 provides an overview of typical direct and indirect impacts related to project components and mitigation approaches applicable to these components. Paragraph 10.2 is focused on impacts of “macro level” – indirect and cumulative impacts related to induced development, increased influx of tourists, limitations of carrying capacity of tourist sites, opened access to remote and pristine areas etc.

**Chapter 11** provides analysis of alternatives.

**Chapter 12** summarizes recommendations for the project Proponents and MDF particularly in relation with Environmental, Cultural Heritage and Social management of the project. Paragraph 12.1 provides recommendations on administrative organization and capacity building issues. Paragraph 12.2 is structured as an Action Plan summarizing covenants and managerial actions to be implemented by MDF, as the project implementing agency. Paragraph 12.3 contains criteria and checklists for selecting investment subprojects. Paragraph 12.4 includes Environmental Management Framework as a guideline for particular subprojects to be implemented under RDP II.

**Chapter 13** is related to stakeholder analysis and consultation process. Paragraph 13.1 describes identified project stakeholders and suggests stakeholder engagement plan. Paragraph 13.2 describes consultations already conducted during the project preparation.

## 2. IMERETI TOURISM DEVELOPMENT STRATEGY

### 2.1 INTRODUCTION

As it has been mentioned in chapter 1 of SECHSA, Analysis of strategic impacts given in SECHSA and its recommendations are not limited to the RDP II frames and should be viewed in a broader context of the regional development of Imereti and in conjunction with the overall concept of tourism development, as it is proposed by Imereti Tourism Development and Marketing Strategy. This chapter of SECHSA (p. 2.2 and 2.3) represents review of the of the ITDS developed by GNTA. At the same time, SECHSA includes (see. chapter 10 ) analysis of indirect and cumulative impacts and recommendations, which should be considered under the overall context of tourism development, and to certain extent – reflected in the final version of the ITDS<sup>10</sup>.

RDP II should be considered within the frames of ITDS and particular subprojects included in RDP II comply with the overall “program”<sup>11</sup> being developed and implemented in conformity with the priorities defined in ITDS. RDP II is a part of this overall program. RDP II and related subprojects are described in chapter 3. There are other subprojects of the program beyond the RDP II, some of which are already implemented, while the others are at the different stage of development. There is no sense in providing detailed description of all of these particular projects. However, in p. 2.4 we present brief description of some of the subprojects. Certain aspects of these subprojects (design; implementation; public consultation process etc.) are of interest for SECHSA context, as they could be viewed as the cases for illustration and discussion of typical impacts related to the overall program.

### 2.2. DEVELOPMENT PRIORITIES SET FORTH IN ITDS

ITDS is being elaborated by THR Innovative Tourism Advisers under the contract with the Georgian National Tourism Agency (GNTA). This strategic document is developed with technical and financial support from the EU. After its finalization, the ITDS will define the sectors and clusters of tourism that will be promoted as a first priority and actions that should be implemented to achieve tourism development goals. Currently, draft version of the Tourism Development Strategy has been presented by GNTA.

The overall development goal defined in ITDS for Imereti region is formulated as follows: “Become an international destination on its own, applying a sustainable yield driven strategy based on growing tourism demand and financial returns, enhancing the quality of visitor’s experience and improving population quality of life”

When planning the development of the tourism in Imereti, a crucial issue refers to the definition of the sectors in which to compete, since Imereti should develop specific products, directed to customers with a specific motivation, distributed through specific intermediation channels and communicated in specialized media. Accordingly, the first strategic decision has been defining of the tourism sectors in

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<sup>10</sup> ITDS as a standing alone document will reflect only some of those recommendations given in SECHSA. In terms of implementation of the ITDS and administrative/managerial arrangements, the recommendations provided in SECHSA should be taken into account as much as possible. It is not easy to guarantee full implementation, as recommendations

<sup>11</sup> To be precise, the ITDS does not provide a detailed action plan or **program**, but presents analysis of the tourism development priorities for Imereti and only outlines certain set of potential projects.

which Imereti should compete. The assessment of their attractiveness and the competitiveness of the destination have demonstrated that there are sectors in which Imereti should:

**Be excellent (priority 1)**

Touring  
Wellness  
Cultural  
Health care  
Sports and adventure

**Be a key player (priority 2)**

Wine and gastronomy  
Soft nature  
Meetings and incentives

In order to concentrate and prioritize efforts, to stimulate cooperation and competition, as well as to make a territory more understandable to tourists, 4 clusters have been identified, described and prioritized

- The heart of Imereti: the hub with main touring attractions and tourism services; area to be settled with the highest priority in order to create an initial critical mass pulling the tourism development of the region.
- Tskaltubo resort: the spa area; it will feasibly gain the strength to be considered an independent cluster and be marketed as an integrated resort in the short-to-medium term.
- The unexpected Imereti: adventure/ rural destination, taking advantage of existing structures and landscape, there is an opportunity for locals to develop it on the medium term.
- The Imereti mountains: family-oriented spa, leisure and natural experiences' area; it would require creating in the long term few other settlements like Sairme and Nunisi.

Finally with the aim of enhancing the competitiveness and achieve the desired vision: a scheme of 20 programs has been identified to facilitate the tourism development in the region.

**Infrastructure Improvement**

- Air accessibility
- Road accessibility
- Public/private transport
- Itineraries' improvement

**Attractions Improvement**

- Imereti experiences system
- Management plan of key sites

**Human Resources Enhancement**

- Integrated staff training
- Management skills
- Benchmarking trips
- Imeretian's hospitality scheme

**Enterprises Enhancement**

- Increase of lodging capacity
- Upgrade of lodging offer
- Quality labels outline
- Eco framework

**Support Sector Improvement**

- Financial incentives scheme
- Investors attraction

**Organization Improvement**

- DMO/DMCs creation
- Cluster's competitiveness plans
- Sector's marketing clubs
- Tourism intelligence

A tourist Cluster is the geographical concentration of homogenous types of attractions and interconnected complementary services. For tourism development purposes it is critical to define clusters, in order to concentrate and prioritize efforts, stimulate cooperation and competition, create critical mass to make the investments profitable and make a territory more understandable to tourists. Thus, various factors have been taken into account:

- the characteristics of the territory,
- the socio-economic features of the districts,
- the existing resources and attractions
- the potential opportunities
- the services' offer

▪ etc.

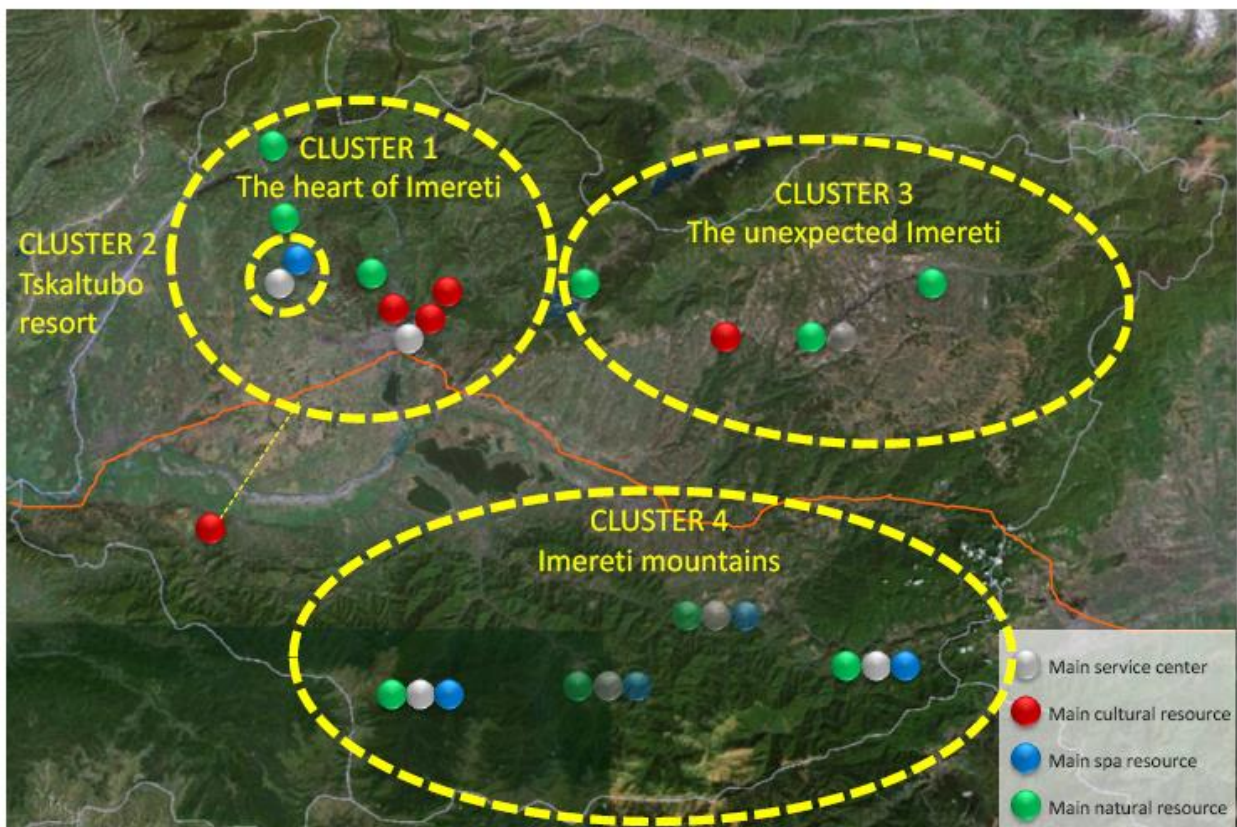
**Cluster 1. The heart of Imereti:** the hub with main touring attractions and tourism services; area to be settled with the highest priority in order to create an initial critical mass pulling the tourism development of the region.

**Cluster 2. Tskaltubo resort:** the spa area; it will feasibly gain the strength to be considered an independent cluster and be marketed as an integrated resort in the short-to-medium term.

**Cluster 3. The unexpected Imereti:** adventure/ rural destination, taking advantage of existing structures and landscape, the opportunity for locals is to develop it on the medium term.

**Cluster 4. The Imereti mountains:** family-oriented spa, leisure and natural experiences' area; it would require creating in the long term few other settlements like Sairme and Nunisi.

**Map of Imereti's clusters**



Source: THR

**Fig. 2.1 Proposed Tourism Clusters**

### 2.2.1 CLUSTER 1. THE HEART OF IMERETI

For all those seeking to obtain a broad vision of what Imereti is, exploring “The heart of Imereti” would be the best alternative.

The underlying idea of this cluster is to give tourists the chance to discover Georgia through Imereti, allowing them to see, visit and know a little bit of everything, in order to get a wide perspective of the region, but also of the Georgian country.

This cluster is the only one considering Kutaisi itself as a specific resource. Furthermore, it is not especially focused in any type of resources, but it is characterized by having a mix of them.

An initial proposal of possible baseline for the cluster, to make it understand to tourists could be “Discover Imereti and Georgia!”.

## Main Resources of the Cluster

### Kutaisi

The second city of Georgia works as basis to explore *The heart of Imereti*. Here tourists will be able to find hotels, restaurant, services, etc and enjoy the elegant and tree lined streets, the parks and synagogues.

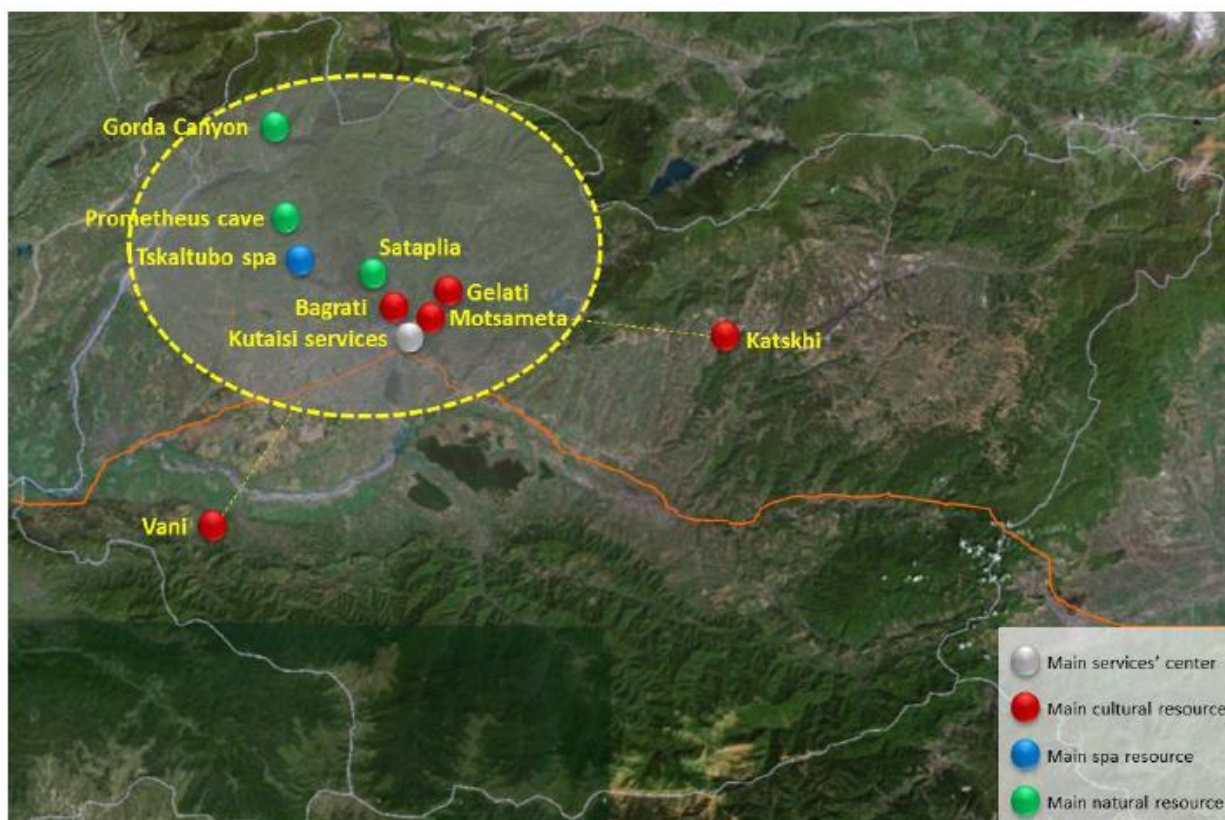


Fig. 2.2 Map of the cluster 1

### Churches and monasteries

The two UNESCO sites, Bagrati cathedral and Gelati monastery, as well as other churches like Ghvtsmshobeli, St. Kirile, St. George, Sameba, Matskhovari, Mtavarangelozi and Amaghleba are located very close to Kutaisi and they are all included in this cluster

### Vani site

This archaeological site is famous for its strong linkage to the Golden Fleece and the Old Kolchheti. Even though it's located at 40 km from Kutaisi, it has been considered a resource of this cluster due to its strong relation to the rest of cultural attractions near Kutaisi

### Caves

Both Sataplia karst cave and Prometheus cave are near Kutaisi. The first is of special interest because of its karst cave and the dinosaurs' foot-prints discovered there. The second is one of the most beautiful and interesting caves in Europe, characterized by its picturesque landscapes.

### Protected areas

Sataplia Natural reserve, already mentioned, and Ajameti Protected Area. The last is 15 km from Kutaisi and has extremely well preserved original subtropical forests. Tkibuli Reserve, known by its lake is another natural resource taken into account.

### **Canyon**

Gorda Canyon is located in Khoni district and is thought to be a strong future tourist attraction, including a visitor center, exhibition hall, cafeteria and panoramic suspension bridge

### **Tskaltubo**

Resort famous for its unique mineral waters with medical and curative properties. It represents the only spa resource in cluster 1 and has great potential for some concrete tourism sectors such as wellness

### **Tourism Sectors Having Prospects within this Cluster**

- Touring
- Sports & Adventure (soft)
- Wellness
- Soft nature (relax)
- Culture (soft & hard)
- Meetings & incentives

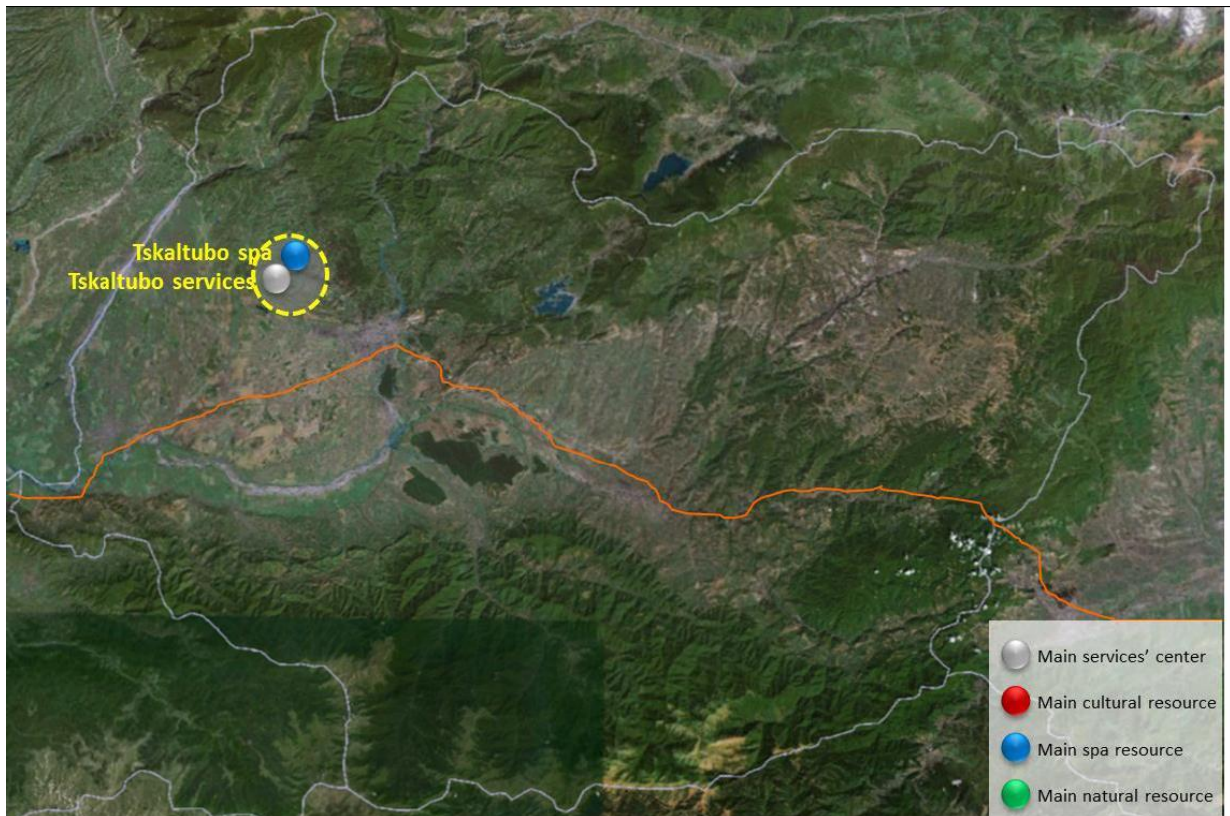
### **2.2.2 CLUSTER 2. TSKALTUBO RESORT**

Imereti has some special characteristics that can make it unique for developing some specific tourist activities. This is the case of Tksaltubo resort: the main focus of the second cluster. The expectations about this resource near Kutaisi are so positive that the spa city itself has been considered to be an individual cluster, even though it has been also taken into account when defining the first cluster.

The huge diversity of treatments and activities could reach a strong loyal demand, whose main travel motivation is relaxing, escaping or simply undergoing the special treatments of the center. The potential demand of this cluster may not be the same as the one identified for “The heart of Imereti”. The reason is that they will not consider visiting the spa a complementary activity for their trip, but that this will effectively be their main reason for travelling.

An initial proposal of possible baseline for the cluster, to make it understandable to tourists could be: “**The leading wellness and health care destination**”.





**Fig. 2.3. Map of the cluster 2**

## **Main Resources of the Cluster**

### **Tskaltubo**

This spa town is located 7 km from Kutaisi and 250 km from Tbilisi. Its unique mineral waters are known for having rather stable physical-chemical properties. The natural temperature of the water is 33-35°, which makes it possible its usage without pre-heating.

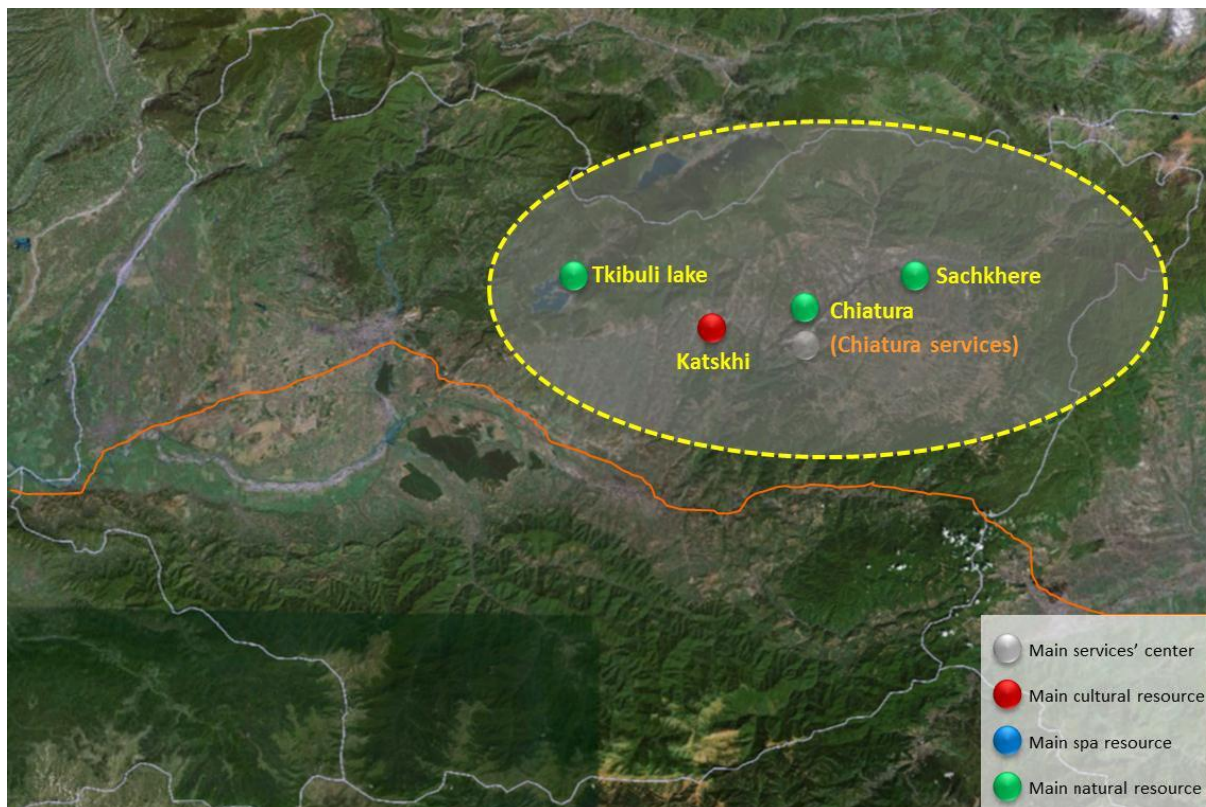
Tskaltubo was especially famous during the Soviet period, when the spa town was one of the most important destinations for undergoing treatments and relaxing. A lot of infrastructure is so, already available.

### **Tourism Sectors Having Prospects within this Cluster**

- Healthcare
- Wellness
- Meetings & incentives

## **2.2.3 CLUSTER 3. THE UNEXPECTED IMERETI**

This cluster is everything but what traditional tourists will expect from Imereti. Here the adventurous and natural factors win more weight than in any other cluster of the region. The cluster comprises a wide extension of eastern Imereti, including Chiatura and Sachkhere.



**Fig. 2.4. Map of the cluster 3**

### **Main Resources of the Cluster**

#### **Katskhi pillar**

Located near the town of Chiatura, this unique church is built on the plateau of a 40 meter high cliff is one of the most impressive things to visit in the area.

The church can only be reached by climbing a set of hanging stairs, which makes the experience much more exciting for visitors.

#### **Mghvimevi monastery**

This monastery is partly carved into the side of a cliff. The façade of the main temple is decorated with crosses and engravings.

Painted frescos from the 13th and 16th century are still visible and the front door is a unique masterpiece of wood carving

#### **Chiatura industrial area**

The industries and mine equipment of the town of Chiatura may be an “unexpected” resource in order to develop a specific type of cultural tourism dedicated to the so-called industrial archaeology. But mostly, there will be the opportunity of reconditioning the existing structures, cable cars, superstructures, etc. in order to be used for adventure sports purposes

#### **Koreti Church (Church of the Christ)**

Small church on the top of a hill in the countryside, built in the 10th century. Inside there are some well-kept frescoes with original type of painting in terms of colors.

The church is surrounded by a nice typical cemetery with fence-rounded graves.

## Rural wine cellars

In Sachkhere can be found wine cellar located in a rural environment. They are typically composed of a hut with a wine press (some have being used for various centuries) and some underground kvevries. The surrounding natural landscape is impressive

## Tourism Sectors Having Prospects within this Cluster

- Sports & Adventure (soft)
- Soft nature (relax)
- Culture (soft & hard)

### 2.2.4 CLUSTER 4. THE IMERETI MOUNTAINS

“Imereti mountains” is the result of a combination of two ingredients: spa and nature. This cluster is an intermediate point between Tskaltubo resort and The unexpected Imereti, offering the possibility of discovering these two types of resources at the same time. Spending some days relaxing in a spa and practicing some low effort activities in the park is the ideal plan that this cluster proposes to tourists.

The Borjomi-Kharagauli National Park represents the most important natural area of southern Imereti, whereas Sairme and Nunisi are the most important spa resources of this cluster at present. Great investments have been dedicated to develop the resorts, with positive results, nevertheless still their tourist offer can be improved in terms of development of experiences, innovative services, transport connections, etc.

An initial proposal of possible baseline to position the cluster could be: “All year round sports & wellness”.



Fig. 2.5. Map of the cluster 4

## Main Resources of the Cluster

This cluster considered embraces the southernmost part of Imereti. This area is characterized by its soft mountainous relief and its extensive forests, home of rare species of flora and fauna, which makes the area being perfect scenery for those visitors wishing to discover the natural Imereti. The existence of mineral water springs is also a very important and abundant resource of the cluster, intensifying the visitors' experience

### **Borjomi-Kharagauli National Park**

Borjomi is one of the largest parks in Europe with impressive and diverse landscapes and lots of possible activities for tourists.

Even though the park is very extensive, it has been considered a resource as a whole given its great potential for tourism. The improvement of current services and activities offered, or the introduction of new ones, will help to make it become a strong point for southern Imereti's tourism.

### **Sairme**

This is together with Tskaltubo, one of the two most important spas of Imereti. Sairme water has got unique healing properties and it is used for curing many diseases including: diseases of nervous system, cardio vascular system, endocrine system and bone-joint system.

Currently, there are two new hotels at tourists' disposal in Sairme and the resort has been recently renovated

### **Nunisi**

This town is located in the easternmost part of Borjomi-Kharagauli National Park and it is in fact, one of the main entrances to it for visitors

### **Tourism Sectors Having Prospects within this Cluster**

- Sports & Adventure (soft)
- Wellness
- Soft nature (relax)
- Meetings & incentives

## **2.3. SPECIFIC ACTIVITIES AND DEVELOPMENT TRENDS RELATED TO TOURISM SECTORS AND CLUSTERS**

Understanding of the typical routine activities associated with the specific tourism sectors, as well as clusters and sites, where these activities are planned to be implemented, are important first of all for determining the spectrum of direct environmental and social impacts of the development strategy, and only to certain extent - for analysis of some of the cumulative and indirect impacts.

The development program and actions aimed on promotion and supporting these clusters and sectors of tourism are of core importance for understanding the overall picture of the expected development trends and related strategic environmental and social impacts (induced development; changes of socio-economic, demographic and cultural patterns; cumulative impacts of different economic sectors and development programs; etc.)

### 2.3.1 DEVELOPMENT OF SUPPORTING INFRASTRUCTURE

#### Transport Infrastructure

One of the main components of the development program stipulated in the ITDS is improvement of existing and development of the new transport infrastructure to ensure safe, convenient and cost efficient transportation of tourists. Planned development of transport infrastructure related to Imereti Region includes:

- Opening of the **new airport** infrastructure of Kutaisi
- Concluding the **highway to Tbilisi**, in order to reduce the time of travel by car and public buses transportation from the main domestic tourism source area.
- Enhancing **the road from Adjara and the Back Sea coast**, in order to facilitate the access of leisure tourists spending vacations on the sea, Business tourists, congress participants and their accompanying persons, encouraging them to visit the highlights of Imereti and to spend one night here.
- Enhancing some **internal roads**, in terms of pavement and signalization, in specific: the road to Vani, The unsealed path to the Gorda canyon, improve sectors of the road to Katskhi Pillar, Ubisa, Borjomi-Kharagauli National Park etc.

#### Water and Energy Supply Infrastructure

The ITDS do not focus specifically on need of improvement of the water and energy supply infrastructure. However, it is obvious that this infrastructure should be upgraded and developed in conformity with the tourism development plans in order to accommodate forecasted increase of tourist flows. Actually, in main tourist destinations, like Kutaisi, Tskaltubo etc. the program of rehabilitation of the water and energy supply infrastructure is ongoing. These programs should be completed and complemented by the similar smaller scale programs targeted on supporting private investments in tourist infrastructure (large and small boutique hotels, entertainment and food facilities etc.).

#### Sanitation and Waste Management.

The ITDS mentions the need of developing contemporary sewage system, waste disposal and recycling plants in Imereti. The lack of wastewater and waste management system is a serious problem that needs to be addressed urgently and development of appropriate facilities – wastewater treatment plants, solid waste disposal and recycling facilities, facilities for disposal of hazardous waste – is one of the key issues for supporting tourism development in Imereti.

#### Tourism Infrastructure

Promotion of the tourism sectors and clusters, as it is described in the ITDS, will require development diverse tourist infrastructure – different scale hotels, entertainment centers, service centers etc. The ITDS makes focus on the need for increasing of lodging capacity and facilities for services through upgrading of existing facilities. However, it is obvious that planned increase of tourist flows will require development of new tourist facilities and the Government has intention to support this process by developing supporting infrastructure (roads; water and energy supply; sanitation etc.) and thus encouraging private investors to invest in tourism sector.

### 2.3.2 SUPPORTING SECTORS

Increase of tourist flows should be supported by adequate development of the other sectors:

- **Agriculture and food processing and supply**
- **Transport** (besides the developing roads and transport infrastructure, municipal and private transport companies will need to increase their activities. ITDS suggests several particular ideas, like: Creating Imereti tourist bus fleet and routes; Developing alternative transportation means, especially to tourist sites, such as: train, car rental; motor rental; bike rental

- **Wellness, Healthcare, entertainment and other services**

Below we provide summary matrix, reflecting the planned development of certain tourism sectors within the clusters and geographic areas of Imereti region and related specific activities and planned development actions.

Tourism sectors	Clusters and Resources	Specific Activities Related to Development and Operation of Clusters and Resources	General Development Activities Focused on Supporting Infrastructure and Sectors
<p><b>Touring</b> The variety of cultural, natural and spa resources in Kutaisi and its surroundings make touring a very attractive sector for this cluster: - General and thematic tours - Packaged tours and individual travelers</p> <p>One example of this potential is the possibility of creating cultural tours in the surroundings of Kutaisi. Visitors will be able this way to discover the numerous heritage monuments near the city, taking advantage of the proximity between them.</p>	<p><b>Cluster 1. The heart of Imereti</b> <b>Kutaisi, Churches and monasteries</b> (UNESCO sites, Bagrati cathedral and Gelati monastery, as well as other churches like Ghvtismshobeli, St. Kirile, St. George, Sameba, Matskhovari, Mtavarangelozi and Amaghleba); <b>Vani archaeological site</b>; <b>Caves</b> (Sataplia karst cave and Prometheus cave); <b>Protected areas</b> (Sataplia Natural reserve, and Ajameti Protected Area; Tkibuli Reserve and lake); <b>Gorda Canyon; Tskaltubo</b></p>	<p><b>Development of destination-specific resources:</b> - Rehabilitation of historical and architectural monuments, museums and sites; - Development of sightseeing infrastructure and routes within the natural landscapes – caves, national parks, lakes; development of SPA and wellness facilities)</p> <p><b>Development of the local facilities of the general tourism Infrastructure in all destinations of the tours</b> (parking; information centers; café; toilets etc.)</p> <p><b>Touring activity</b> mostly considers organized transportation of the small groups of tourists to the destination sites, observation of the cultural heritage monuments and natural sightseeing, enjoying relaxation in SPA destinations; shopping; participation in some traditional activities or cultural events (professional or folk-concerts; festivals, wedding-parties or traditional wine ceremonies and feast; religious celebration etc.)</p>	<p><b>Transport Infrastructure</b> Opening of the airport infrastructure of Kutaisi Concluding the highway to Tbilisi. Enhancing the road from Adjara and the Black Sea coast Enhancing some internal roads to the touring destinations <b>Water and Energy Supply Infrastructure in all destinations of the tours;</b></p> <p><b>Sanitation and Waste Management Infrastructure in all destinations of the tours;</b></p> <p><b>Transport services</b></p> <p><b>Lodging infrastructure and services (small boutique hotels and larger hotel complexes)</b></p> <p><b>Agriculture, food processing, food supply</b></p>
<p><b>Sports &amp; Adventure (soft)</b> The different protected natural areas near Kutaisi, as well as its variety of landscapes which include the Rioni river, caves and forests, among others, are the ideal scenery for developing sports or activities such as: - Hiking - Trekking - Biking - Canyoning - Escalade - Caving - Horse riding A lot of combinations of these activities could be offered to special interest tourists.</p> <p>The Chiatura area is a location that have very good conditions to develop a destination specialized for all kind of active, extreme and adventure sports: climbing, downhill biking, Canyoning, paintball, etc</p> <p>Borjomi National Park offers a great variety of landscapes to experience southern Imereti through very different activities such as: - Hiking - Trekking - Biking - Horse riding This way, tourists will be able not only to try some of these activities but to practice many of them depending on their motivations.</p>	<p><b>Cluster 1. The heart of Imereti</b> <b>Kutaisi, Caves</b> (Sataplia karst cave and Prometheus cave); <b>Protected areas</b> (Sataplia Natural reserve, and Ajameti Protected Area; Tkibuli Reserve and lake); <b>Gorda Canyon; Tskaltubo</b></p> <p><b>Cluster 3. The Unexpected Imereti</b> <b>Chiatura industrial area; Katshki pillar,</b></p> <p><b>Cluster 4. The Imereti Mountains</b> <b>Borjomi-Kharagauli National Park, Nunisi</b></p>	<p><b>Development of destination-specific resources</b> - Development of sightseeing infrastructure and routes within the natural landscapes – caves, national parks, lakes (horse-riding, hiking, trekking and biking routes) - Development of sports and adventure resources, facilities and services (horse and bike renting centers; camps; huts )</p> <p><b>Development of the local facilities of the general tourism Infrastructure in all destinations of the tours</b> (parking; information centers; café; toilets etc.)</p> <p><b>Sports &amp; Adventure activity</b> mostly considers: - organized transportation of the small groups of tourists to the destination sites; - training and practicing specific sport-activities (hiking, biking, canyoning, escalade, caving, horse-riding etc) in small groups</p>	<p><b>Transport Infrastructure</b> Opening of the airport infrastructure of Kutaisi Concluding the highway to Tbilisi. Enhancing the road from Adjara and the Black Sea coast Enhancing some internal roads to the touring destinations <b>Water and Energy Supply Infrastructure in all destinations of the tours;</b></p> <p><b>Sanitation and Waste Management Infrastructure in all destinations of the tours;</b></p> <p><b>Transport services</b></p> <p><b>Lodging infrastructure and services (small boutique hotels and larger hotel complexes)</b></p> <p><b>Agriculture, food processing, food supply</b></p>
<p><b>Wellness</b> This sector is specially focused on spa resources. The role played by Tsklatubo in cluster 1 is very important for this sector.</p>	<p><b>Tskaltubo Resort</b> <b>Cluster 1. The heart of Imereti</b></p>	<p><b>Development of destination-specific resources:</b> - Rehabilitation of existing balneal and lodging facilities and construction of modern SPA facilities; - Development of supporting facilities for sport and leisure: parks, rest sites; tennis-courts, other sport facilities)</p>	<p><b>Transport Infrastructure</b> Opening of the airport infrastructure of Kutaisi Concluding the highway to Tbilisi. Enhancing the road from Adjara and the Black Sea coast Enhancing some internal roads to the touring destinations</p>

<p>Tourists could also enjoy Imereti spending one night or even just some hours in Tskaltubo spa for relaxing with a wellness treatment. Although this is not their main travel motivation, this is easy to combine with the rest of the trip and would complete their experience in Imereti</p> <p>Tourists coming to Tskaltubo could enjoy a wide array of treatments for relaxing and escaping from daily routine and stress. Visitors could spend a long weekend with spa massages, baths or even unique treatments of the area, always surrounded by impressive nature.</p> <p>The presence of Sairme and other spa resources in southern Imereti are ideal for aiming to the wellness sector</p>	<p><b>Cluster 2. Tskaltubo Resort</b></p> <p><b>Cluster 4. The Imereti Mountains</b> Sairme, Nunisi</p>	<p><b>Development of the local facilities of the general tourism Infrastructure in all destinations of the tours</b> (parking; information centers; café; toilets etc.)</p> <p><b>Wellness related activity</b> could be limited to short-term (1 or 2 days) relaxation procedures practiced by the tourists as only a part of their touring program or a medium-term activities (1 or 2 weeks) specifically aimed on wellness. Anyway, the character of the activities envisages simultaneous presence of a large amount of tourists in a site of destination. Usual activities include: SPA procedures Soft sport activities Participation in some traditional activities or cultural events (professional or folk-concerts; festivals; theatres, shows etc.) Short-term touring</p>	<p><b>Water and Energy Supply Infrastructure in all destinations of the tours;</b></p> <p><b>Sanitation and Waste Management Infrastructure in all destinations of the tours;</b></p> <p><b>Transport services</b></p> <p><b>Lodging infrastructure and services (small boutique hotels and larger hotel complexes)</b></p> <p><b>Agriculture, food processing, food supply</b></p>
<p><b>Health care</b> The resort’s characteristics make it possible to treat some health problems such as circulatory, nervous, muscular and skin diseases. Speleotherapy is also offered, using caves environment to benefit pulmonary diseases. People who will undergo these treatments could be those who want to maintain good health or those who need some special treatment because of more serious health problems.</p>	<p><b>Cluster 2. Tskaltubo Resort</b></p>	<p><b>Development of destination-specific resources</b> Rehabilitation of existing balneal and lodging facilities and construction of modern SPA facilities; Development of well organized general medical services; Development of supporting facilities for sport and leisure: parks, rest sites; tennis-courts, other sport facilities)</p> <p><b>Development of the local facilities of the general tourism Infrastructure in all destinations of the tours</b> (parking; information centers; café; toilets etc.)</p> <p><b>Healthcare and Wellness related activity</b> could be limited to medium-term activities (1 or 2 weeks) aimed generally on wellness or more specific and long-term healthcare program requiring 1 or 2 month. Anyway, the character of the activities envisages simultaneous presence of a large amount of tourists in a site of destination. Usual activities include: Healthcare and SPA procedures Soft sport activities Participation in some traditional activities or cultural events (professional or folk-concerts; festivals; theatres, shows etc.) Short-term touring</p>	<p><b>Transport Infrastructure</b> Opening of the airport infrastructure of Kutaisi Concluding the highway to Tbilisi. Enhancing the road from Adjara and the Black Sea coast Enhancing some internal roads to the touring destinations <b>Water and Energy Supply Infrastructure in all destinations of the tours;</b></p> <p><b>Sanitation and Waste Management Infrastructure in all destinations of the tours;</b></p> <p><b>Transport services</b></p> <p><b>Lodging infrastructure and services (small boutique hotels and larger hotel complexes)</b></p> <p><b>Agriculture, food processing, food supply</b></p>
<p><b>Soft nature (relax)</b> Protected areas like Sataplia or Ajameti make possible the development of relaxed activities like walking, bird watching, nature photography or visiting the caves. Tkibuli lake is also the perfect place for spending a fishing day.</p> <p>Visitors will have the possibility of discovering the natural areas of Imereti not only practicing relaxed sports but also through pic-nic in the park or even camping there. Softer ways of enjoying landscape are also available in this cluster. Thus, tourists will have the chance of walking the surroundings of Chiatura and Sachkhere, discovering by themselves the unexpected Imereti</p> <p>A relaxed discovery of fauna and flora is another option in Southern mountains. Borjomi-Kharagauli National Park plays again a key role for this sector.</p>	<p><b>Cluster 1. The heart of Imereti</b> <b>Protected areas</b> (Sataplia Natural reserve, and Ajameti Protected Area; Tkibuli Reserve and lake); <b>Gorda Canyon;</b></p> <p><b>Cluster 3. The Unexpected Imereti</b> <b>Katshki pillar, Chiatura - Sachkhere area;</b></p> <p><b>Cluster 4. The Imereti Mountains</b> <b>Borjomi-Kharagauli National Park, Nunisi</b></p>	<p><b>Development of destination-specific resources</b> (development of sightseeing infrastructure and routes within the natural landscapes – caves, national parks, lakes; development of SPA and wellness facilities)</p> <p><b>Development of the local facilities of the general tourism Infrastructure in all destinations of the tours</b> (parking; information centers; café; toilets etc.)</p> <p><b>Touring activity</b> mostly considers organized transportation of the small groups of tourists to the destination sites to spent there at least several days. The character of the activities envisages simultaneous presence of a some medium amount of tourists at the site of destination. Typical activities: observation of the natural sightseeing, spectrum of more specific activities: bird-watching; , nature photography, fishing, walking, rowing, pic-nics etc.</p>	<p><b>Transport Infrastructure</b> Opening of the airport infrastructure of Kutaisi Concluding the highway to Tbilisi. Enhancing the road from Adjara and the Black Sea coast Enhancing some internal roads to the touring destinations <b>Water and Energy Supply Infrastructure in all destinations of the tours;</b></p> <p><b>Sanitation and Waste Management Infrastructure in all destinations of the tours;</b></p> <p><b>Transport services</b></p> <p><b>Lodging infrastructure and services (small boutique hotels and larger hotel complexes)</b></p> <p><b>Agriculture, food processing, food supply</b></p>



<p><b>Culture (soft &amp; hard)</b> The variety of cultural resources in the surroundings of Kutaisi is a key factor for developing both soft and hard cultural tourism. Tourists wishing to discover the cultural side of Imereti will enjoy visiting the numerous churches and monasteries around the city or having an archaeological experience in Vani. Wine tastings with local producers and enjoying a dinner with typical food of the region and local people will also be memorable activities</p>	<p><b>Cluster 1. The heart of Imereti</b> <b>Kutaisi, Churches and monasteries</b> (UNESCO sites, Bagrati cathedral and Gelati monastery, as well as other churches like Ghvtsmshobeli, St. Kirile, St. George, Sameba, Matskhovari, Mtavarangelozhi and Amaghleba); <b>Vani archaeological site; Gorda Canyon; Tskaltubo</b></p> <p><b>Cluster 3. The Unexpected Imereti</b> <b>Katshki pillar, Mghvimevi monastery, Koreti Church; Rural wine cellars</b></p>	<p><b>Development of destination-specific resources</b> (rehabilitation of historical and architectural monuments, museums and sites; development of sightseeing infrastructure and routes within the natural landscapes – caves, national parks, lakes; development of SPA and wellness facilities)</p> <p><b>Development of the local facilities of the general tourism Infrastructure in all destinations of the tours</b> (parking; information centers; café; toilets etc.)</p> <p><b>Culture (soft &amp; hard) tourism</b> mostly considers concentration of larger groups of tourists in one destination center (like Kutaisi or Tskaltubo) and organized transportation of the small groups of tourists to the destination sites for observation of the cultural heritage monuments and participation in some traditional activities or cultural events (professional or folk-concerts; festivals, wedding-parties or traditional wine ceremonies and feast; religious celebration etc.)</p>	<p><b>Transport Infrastructure</b> Opening of the airport infrastructure of Kutaisi Concluding the highway to Tbilisi. Enhancing the road from Adjara and the Black Sea coast Enhancing some internal roads to the touring destinations <b>Water and Energy Supply Infrastructure in all destinations of the tours;</b></p> <p><b>Sanitation and Waste Management Infrastructure in all destinations of the tours;</b></p> <p><b>Transport services</b></p> <p><b>Lodging infrastructure and services (small boutique hotels and larger hotel complexes)</b></p> <p><b>Agriculture, food processing, food supply</b></p>
<p><b>Meetings &amp; incentives</b> The proximity between Kutaisi and Tbilisi is a very important factor for the development of tourism of meetings and incentives in this area. These tourists will have time for working but also for knowing the region. Special cultural tours, wellness treatments in Tskaltubo and practicing some sport in natural environments are some of the possibilities. The relaxed environment of Tskaltubo and the number of hotels in this area are an interesting attractive point for those professionals seeking some days of calm and peace for its employees and professionals.</p> <p>Sairme resort is provided with different hotels that could make meetings and incentives tourism sector a great opportunity for this cluster. The idea of developing more centers with conference rooms and other services should be taken into account for this sector too.</p>	<p><b>Cluster 1. The heart of Imereti</b> <b>Kutaisi, Tskaltubo</b></p> <p><b>Cluster 2. Tskaltubo Resort</b></p> <p><b>Cluster 4. The Imereti Mountains</b> <b>Borjomi-Kharagauli National Park</b></p>	<p><b>Development of specific resources:</b> Lodging infrastructure and services - small boutique hotels and larger hotel complexes – equipped with the specific facilities and providing services for organizing meetings, conferences, workshops, trainings etc. Communication infrastructure (internet; satellite TV etc.) Development of sightseeing infrastructure and routes within the natural landscapes – caves, national parks, lakes; Development of SPA and wellness facilities, entertainment, parks and recreation zones <b>Development of the local facilities of the general tourism Infrastructure in all destinations of the tours</b> (parking; information centers; café; toilets etc.)</p> <p><b>Meetings &amp; incentives</b> mostly considers organized transportation of the special small groups of persons, united by common professional or educational interests, to the destination sites and organization of meetings, conferences, workshops, trainings etc.</p> <p>Secondary activities may include short tours to cultural heritage or natural valuable sites, wellness activities using local SPA and sport facilities, relaxation and soft nature tourism activities, entertainment etc.</p>	<p><b>Transport Infrastructure</b> Opening of the airport infrastructure of Kutaisi Concluding the highway to Tbilisi. Enhancing the road from Adjara and the Black Sea coast Enhancing some internal roads to the touring destinations <b>Water and Energy Supply Infrastructure in all destinations of the tours;</b></p> <p><b>Sanitation and Waste Management Infrastructure in all destinations of the tours;</b></p> <p><b>Transport services</b></p> <p><b>Lodging infrastructure and services (small boutique hotels and larger hotel complexes)</b></p> <p><b>Agriculture, food processing, food supply</b></p>

## 2.4 SOME PARTICULAR SUBPROJECTS PLANNED OR DEVELOPED UNDER THE ITDS IMPORTANT FOR SECHSA

Many projects, which are not part of the RDP II but could be considered within the context of the ITDS, are at the different stage of development: Kutaisi airport design has been completed and construction is ongoing; Motsameta church has been rehabilitated. Recently reconstruction of the Bagrati Cathedral, being in UNESCO list of cultural heritage, has been completed; Sataplia and Prometheus caves have been reconstructed. The Government has plans on reconstruction of the Dadiani Palace and tourism infrastructure in Gorda Park and canyon, as well as plans for developing resort areas in Sairme, Nunisi, Sulori etc. Most of these projects have similar features as the RDP II subprojects and there is no sense in reviewing each of these projects separately. However, some of the planned or implemented projects have specific features and are of interest for highlighting more general problems important for SECHSA. Below we provide very brief description of some of such projects, while the specific problems related to these projects will be reviewed in relevant chapters of SECHSA (mainly chapter 10).

### 2.4.1 GORDI PALACE AND CANYON

Gordi is a natural park site, which includes very unique gorge, ruins and old palace and large park. The project proposed Protected Areas Agency has five distinctive components:

Access roads to the site Khoni need be rehabilitated. There is also a good suggestion to rehabilitate a faster road connection from Tskhaltubo (which may cut the trip time by 1h and connects two spots in the tourism circuit in a more comfortable and efficient way). This may also require rehabilitation/reconstruction of a small bridge over the river.

Visitors and information center including public parking and toilettes. The parking and access roads should be paved with gravel or concrete blocks inside which grass can grow, and asphalt should be avoided;

Reconstruction of Dadiani palace inside the park and use it as ethnographic museum, meeting room and restaurant and a few lodging rooms. The project envisages also construction of large new building of modern architectural style as an extension of the old palace.

Landscape works in the park, including pedestrian pathways and picnic areas. Plants and trees should be typical of the forest, and require very low maintenance.

Construction of a sky walk-way over the gorge.

**Extensive intervention within the protected natural landscape and combination of the modern architecture with the existing historical architectural forms is a specific feature of the project important for SECHSA.**



**Fig. 2.6 Gorda – Canyon and Dadiani Palace**

## 2.4.2 BAGRATI CATHEDRAL CHURCH

The Cathedral of the Dormition, or the Kutaisi Cathedral, more commonly known as Bagrati Cathedral, is the 11th-century cathedral church in the city of Kutaisi, the region of Imereti, Georgia. The cathedral, now in ruins, is regarded as a masterpiece in the history of medieval Georgian architecture.

A distinct landmark in the scenery of central Kutaisi, the cathedral rests upon the top of Uk'imerioni Hill. It was built in the early years of the 11th century, during the reign of King Bagrat III due to which it was called "Bagrati" Cathedral, i.e., Bagrat's cathedral. An inscription on the north wall reveals that the floor was laid in "chronicon 223", i.e., 1003. In 1692, it was devastated in an explosion by the Ottoman troops, which had invaded the Kingdom of Imereti. The incident caused the cupola and ceiling to collapse leaving the cathedral in its present state.

In 1994, the Bagrati Cathedral, together with the Gelati Monastery, was included in the UNESCO World Heritage Site list as a single entity. In 2001, the cathedral was restored to the Georgian Orthodox Church. It is now of limited use for worship services, but attracts many pilgrims and tourists. It is also frequently used as a symbol of the whole city of Kutaisi, being one of its main tourist attractions.

Recently reconstruction of the Cathedral has been completed. **The methodology and approaches applied for reconstruction, as well as lack of public consultations and consensus among the cultural heritage protection specialists is the specific aspect of this project important for SECHSA.**



Fig. 2.7 Bagrati Cathedral before reconstruction



Fig. 2.8 Bagrati Cathedral at the late stages of reconstruction

### 2.4.3 SATAPLIA AND PROMETHEUS CAVES

Sataplia protected area is a wonderful monument of nature. It is located very close to Kutaisi, on Sataplia Mountain, with total area of 354 hectares. It has mountains and hills and is almost covered by the Colchis Forest. There are numerous grotto caves, although the most interesting one is Sataplia Cave as well called Prometheus Cave which is one of the richest caves of Europe. It is characterized by the variety of underground rivers and beautiful landscapes. The cave is rich with stalactites, stalagmites and mineral rock curtains. The long of walking route for tourists is 1060 m and the route by boats on underground lake of 280 m. As well Sataplia is famous for such unique objects as over 200 footprints from dinosaurs, located on the stones in two rows. Due to this fact experts think that Sataplia is the one of the significant monuments in the former Soviet Union. To the north of Sataplia cave there is a flowering meadow on the cliff with a number of bee colonies. This was the reason for naming this area Sataplia - "the places of honey".

Recently reconstruction of the caves have been completed and this enables to significantly increase the amount of visitors. **The specific environmental features of caves are interesting in terms of analysis of factors determining carrying capacity of the destination and tourism related environmental impacts.**



Fig. 2.9 Sataplia and Prometheus caves

## 3. PROJECT DESIGN

### 3.1 INTRODUCTION

This section gives concise description of the particular projects designed and proposed for financing under the RDP II program (chapters 2.1 and 2.2). More detailed description of these projects and related impact analysis is provided in the project specific Environmental Reviews (ER) and EMPs.

General approach to urban transformation applied by the Government for the regional development projects in Imereti envisages integration of conservation-restoration of historical buildings and cultural heritage monuments and rehabilitation of urban infrastructure, improvement and landscaping of parks, public sites etc. Designed conservation-restoration subprojects are based on the approved international methodology for rehabilitation of historic urban heritage, preserving its main character, urban structure, building materials, techniques and etc. The outcome of this subcomponent will be enhancement of attractiveness of the historical sites for tourists. At the same time, tourism development objectives cannot be achieved without improvement of overall image of urban landscapes, general urban infrastructure and related services.

### 3.2 OVERVIEW OF THE RDP II COMPONENTS

RDP II being implemented with WB financing consists of two major components:

- Component 1: Infrastructure Investment
- Component 2: Institutional Development

#### **Component 1: Infrastructure Investment (IDA: US\$26.46 million; Recipient: US\$6.62 million)**

Provision of financial resources to local self-governments (LSGs) to carry out Investment Subprojects for the following activities:

**Urban regeneration:** An integrated approach is proposed for renewal of Tskaltubo city. This includes a) the rehabilitation of municipal infrastructure and utilities in the central area, b) conservation and upgrading of public spaces and cultural buildings, and c) conservation of public buildings with special architecture. The proposed conservation and upgrading activities will help improve livability and hospitality in a culturally-informed manner, enhance attractiveness for visitors, revitalize the urban nuclei, and attract increased volume of private sector investments in Tskaltubo through provision of complementary public infrastructure that will enhance the viability of their investments.

**Tourism Circuits Development:** An integrated approach to cultural heritage site upgrading and improved management in the most attractive six cultural heritage sites located along the main tourism circuit/route in Imereti, including Gelati Monastery; Vani Museum and surrounding ethnographic site; Ubisa Church; Katskhi Church, Katskhi Column Monastery, and Motsameta Monastery. This includes a) improving urban landscaping and public parking; b) construction of info kiosks, cafes and public toilets; c) restoration of Vani museum; and d) improving access roads and water supply.

The proposed route will present a rich experience of wellness-oriented destinations, culture, nature, high quality organic food, ecotourism, and adventure tourism, thus increasing the average stay and expenditure of tourists. The improvement of access roads is intended to upgrade and enhance the safety for all users at dangerous spots, and will not include widening or promoting significant increase in traffic, but will also facilitate trading and commuting for local residents, with significant benefits for the local economy.

The estimated cost of this component, including physical and price contingencies, is about US\$ 33.08 million, of which IDA will provide US\$ 26.46 million and the Recipient will provide US\$ 6.62 million counterpart funding.

## Subprojects Included in Component 1 of the RDP II

**Table 3.1 Conservation-Restoration and Infrastructure Projects under component 1.1.2**

<i>#</i>	<i>name</i>	<i>location</i>	<i>Infrastructure components</i>	<i>Conservation-restoration components</i>
1	Tskaltubo	Tskaltubo city, Tskaltubo Municipality	<ul style="list-style-type: none"> <li>- Rehabilitation of water supply and sewerage system in central part of Tskaltubo and Tsivi Lake</li> <li>- Rehabilitation of 5.1km of urban road and storm-water drainage system in Tskaltubo city</li> <li>- Rehabilitation of street lightings in Tskaltubo city including the central park and Lake Tsivi area</li> <li>- Upgrading the central park's and Lake Tsivi (irrigation and storm-water channel systems, access roads, pedestrian and bicycle lanes, landscaping, recreational area, and installing new seats)</li> <li>- Construction of small size tourism-related structures in the central park and around Lake Tsivil, e.g., Tskaltubo destination office, parking, playgrounds, fountains, pergolas, pools, cafes, restaurants and public toilets)</li> </ul>	<ul style="list-style-type: none"> <li>- Restoration of 4 existing buildings (the city hall, the elected council building, old railway station and cinema), and 12 small size pedestrian bridges in the central park of Tskaltubo;</li> </ul>
2	Vani Museum	Vani town, Vani Municipality	<ul style="list-style-type: none"> <li>- Rehabilitation of the existing building</li> <li>- Arrangement of new exhibition areas, laboratories and storage areas equipped with modern technologies</li> <li>- Rehabilitation of the Water Supply and Waste-water System in Vani Muzeum</li> </ul>	Preservation Measures for Vani Museum Cultural Heritage Site;
3	Gelati monastery	v. Gelati, Tkibuli Municipality	<p>the Project will support the establishment of a tourism facility outside the core of the World Heritage Site, in its buffer zone:</p> <ul style="list-style-type: none"> <li>- Tourism infrastructure: parking, information center, café, souvenirs shop, medical assistance, WC, administration</li> <li>- Rehabilitation of the Water Supply and Waste-water System</li> </ul>	<p>Preservation Measures for Gelati Monastery Cultural Heritage Site:</p> <p>Project will also support limited conservation works to roofs, facades, walls, pathways, to ensure safety of visitors and a pleasant experience.</p>



4	Katskhi monastery and Katskhi Column	v. Katskhi, Chiatura Municipality	<p><b>Creation of the information center “Katskhi Gate”:</b> coffee shop/snack, toilet, parking; Entry parking area for bus stop; walking trail, view point, camp area;</p> <p><b>Infrastructure components:</b>  Utilities: Water supply and sewage system (local treatment plant);  Electricity connection;  Improvement of local road and bus parking</p>	<p>Preservation Measures for Katskhi Monastery Cultural Heritage Site:</p> <p>Monastery conservation and rehabilitation  Replacement of the existing sheet metal roof with the clay tile roof;  Restoration of the south and west facades of the new monastery building northward to the monastery;  Restoration of the bell tower;  Replacement of the monastery ports.</p>
5	Ubisa monastery	v. Ubisa, Kharagauli Municipality	<p>Arrangement of: parking on the adjacent territory, public information center, toilets</p> <p>Installation of the stone wall instead of the iron-mesh fencing at the Southern side of the monastery;  Rehabilitation of the access roads and Water Supply System of the Ubisa Monastery</p>	<p>Preservation Measures for Ubisa Monastery Cultural Heritage Site:</p> <p>Monastery conservation and rehabilitation;  Restoring of depreciated outlet stones from the north side of the temple and processing of joints with high mark lime mortar;  Replacing of limestone facing setting and restoring of shirimi stones of socle.  Basic conservation works of pathways, wooden structures, and walls</p>
6	Motsameta monastery		<p>The Project will support the establishment of a tourism facility outside the cultural heritage core site of Motsameta, in its buffer zone, as defined by Georgian laws, integrated with the context, with minimized visual impact on the landscape.</p>	

## Component 2: Institutional Development (IDA: US\$ 3.54 million; Recipient: US\$ 0.88 million)

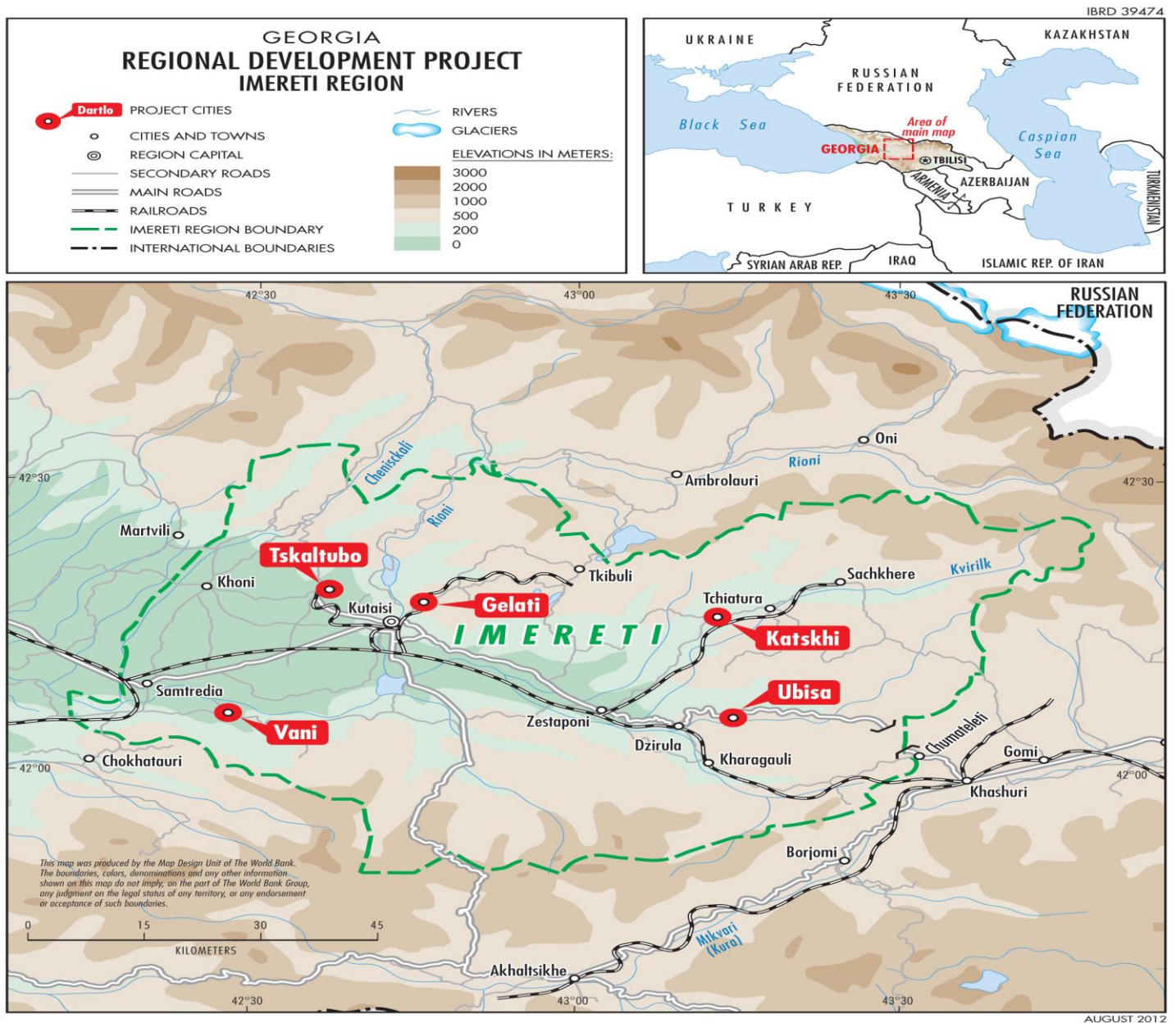
Enhancing the institutional capacity and performance of the GNTA, the NACHP, the National Museum, the Project Implementing Entity (MDF), and other local and regional entities to carry out the following activities:

- Establishment of Tskaltubo destination management and development office.
- Geo-tourism development and promotion.
- Preparation of visitors’ management plans.
- Development of skilled workforce and capacity building.
- Monitoring and evaluating performance.
- Providing construction supervision support.

The above mentioned proposed activities will aim at achieving the following objectives: (a) sustainable site management plan, including monitoring of the carrying capacity of each cultural heritage site; (b) sustainable destination management organization and promotion that balances between environment conditions and financial returns; and (c) institutional capacity to monitor tourism performance indicators, including exit surveys and tourism satisfaction beyond the project.

The estimated cost of this component, including physical and price contingencies, is about US\$ 4.42 million, of which IDA will provide US\$ 3.54 million, the Recipient will provide US\$ 0.88 million counterpart funding.

**Fig. 3.1 Tourist Circuits**



### 3.3 INVESTMENT SUBPROJECTS UNDER RDP II

#### 3.3.1 TSKALTUBO URBAN REGENERATION SUBPROJECT

Tskaltubo city was constructed during the Soviet era around the theme of medical tourism and a spa resorts located in a very large central park. The current population of the city is about 16,500 inhabitants; with substantial increase of visitors during the tourism season. All public and private buildings in the central park have a distinguished Stalin architectural style. The private buildings were sold to private sector investors. It is important to conserve the facades of all building following special style, the government decided to conserve all building facades using state budget (i.e., outside of the WB financing) as a matching grant incentive for the private sector, rather than a subsidy. The proposed project will finance conservation of the public buildings in the central park with special architecture, e.g., administrative buildings, railway station, music school, etc.).

The municipal infrastructure, road network inside and around the central park, water channels, water supply and sewerage system, park landscaping, sport facilities, outdoor lightings, are also priority for rehabilitation to improve the living conditions of residents, provide reliable public infrastructure services to private sector development and better reposition the city as a medical spa tourism destination.

The proposed project will finance following subprojects in Tskaltubo:

##### 3.3.1.1 Restoration of Existing Buildings and Small Size Pedestrian Bridges in central part of Tskaltubo

- Rehabilitation of Sakrebulo building - the project envisages facing of existing building's façade with brick; back façade will be plastered. The doors/windows will be wholly replaced and will be made of wood. The roof will be replaced as well. After rehabilitation the building will acquire the significant place among beautifully renewed buildings of Tskaltubo Town;
- Rehabilitation of Gamgeoba building - the building has the quadrangular shape with the inner yard. The project envisages façade replacement, structural addition of the third floor and a dome above the portal. In the center of the dome will be arranged the Clock. The roof of the building will be arranged with non-staining tin and the front façade will be covered with tile.
- Rehabilitation of Railway Station building – building was constructed in the 30-ies of the past century. Its original architectural style is well preserved. The building is interesting from architectural-artistic viewpoint. Conservation of all decorative forms will be indispensably taken into consideration during the building rehabilitation process. The project envisages the following reconstruction works: cleaning of the façade stone finish and replacement of the damaged stonework; restoration of the wooden door-windows; arrangement of the new roofing with sheet metal; arrangement of the interior floors; finishing of the outdoor terraces and stairway with natural stone; installation of the street lamps;
- Arrangement of the railway station square and fountain – the project envisages arranging of the round-shaped fountain and a square in front of the railway station. At the square will be placed the benches and various kind of plants will be planted, paths will be arranged as well;
- Rehabilitation of the Cinema – the Cinema is located in the central park. The project envisages cleaning of façade and facing with tinted glass, arranging of the glass railing on staircases, facing of the basin with natural slabs of basalt;
- Rehabilitation of ten (10) pedestrian bridges with total length of around 127 m (bridges are located across the canals of the central park) – restoring decorative details and strengthening the structures.



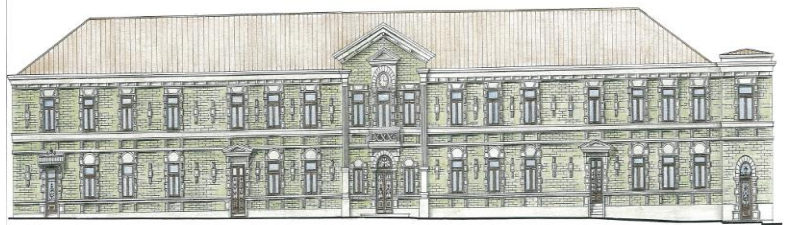
**Fig. 3.2. Existing building of “Gamgeoba”**



**Fig. 3.3. Architectural Design for Rehabilitation**



**Fig. 3.4. Existing Building of Sakrebulo**



**Fig. 3.5. Architectural Design for Rehabilitation**



**Fig. 3.6. Existing Building of Railway Station**



**Fig. 3.7. Architectural Design for Rehabilitation**

### **3.3.1.2 Construction of Destination Management Office and Construction of Tourism-related Small Size Structures on Central Park and Lake "Tsivi" Territories in Tskaltubo**

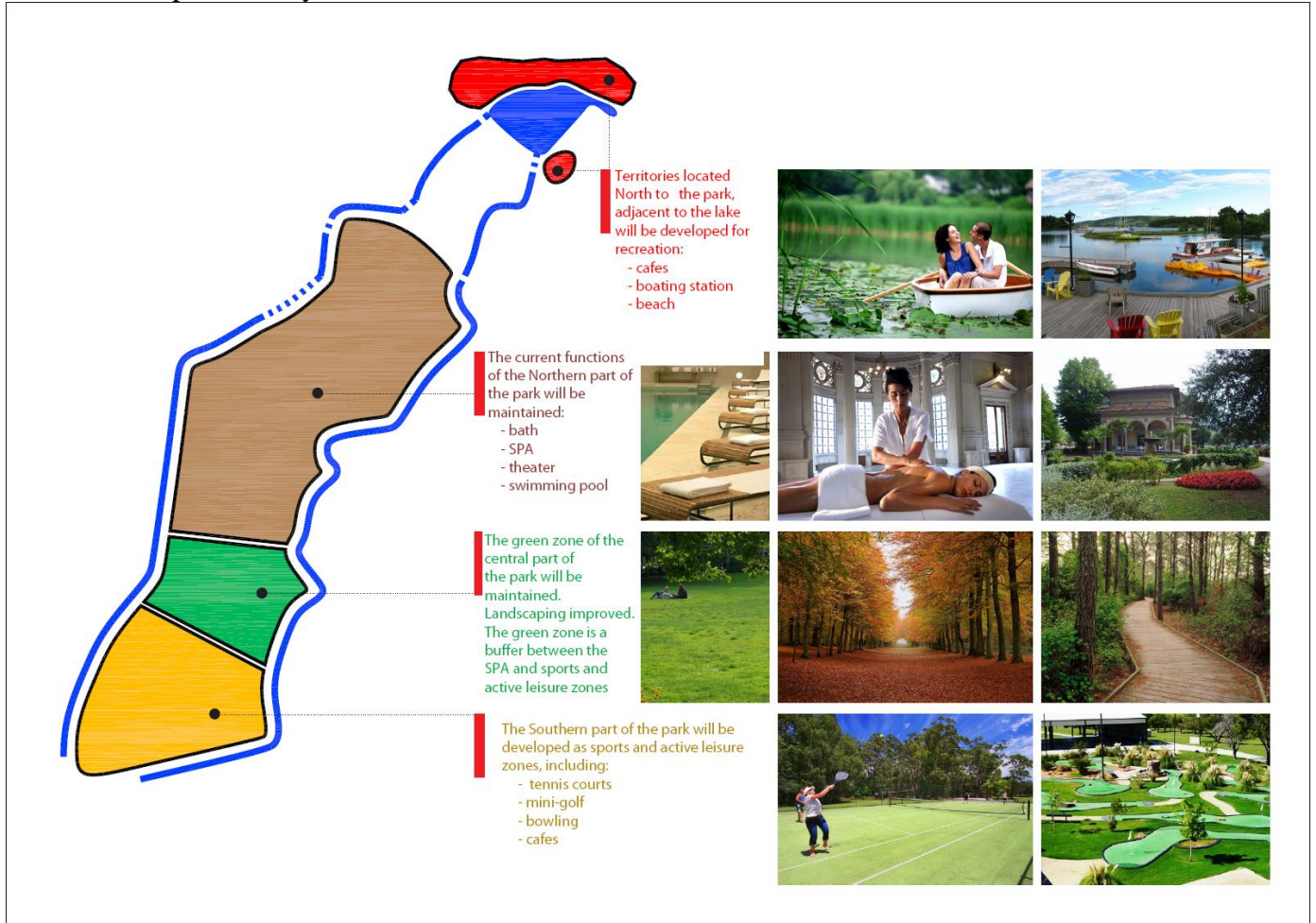
- Construction of Resort Tskaltubo Management Office – the building in the vicinity of #7 Rustaveli Str., in Tskaltubo Town. The building is a three-storey structure with attic. At the second and third floors there are envisaged to be arranged the “French” balconies with decorative wooden railing. At the main and back façade of the building the project envisages arranging of round shaped colons of concrete. The windows of the first floor are arched with brick arches. The mentioned project corresponds well to the nearby buildings and landscape;
- Arrangement of flowerpots and flowerbeds “pixel” – the project envisages arrangement of reinforced concrete quadratic flowerpots and paths. Plants will be placed in the flowerpots, trees will be planted;
- Arrangement of 3D garden – the park is designed for children. The project envisages arrangement of reinforced concrete circular flowerpots, where various species of plants will be placed. The project also envisages installation of slabs;
- Arrangement of Central Park and Lake "Tsivi" territories with tourist signs and restriction barriers;
- Construction of the 3 decorative fountains (two quadrangular and one circular), which are interlinked by small connecting canals. Two fountains will be arranged with pergola;
- Construction of tennis courts - the project envisages construction of 4 tennis courts. 2 with artificial and 2 with natural surface;
- Construction of 2 open cafés;
- Construction of public toilets;
- Construction of the Passages #1 and #2 - in bad weather, it is very complicated for the pedestrians to walk. The passage is a wood structure, roofed with the metal plates; there are recreation facilities arranged inside the structure. These facilities are overhanging on the channel, which creates a more pleasant environment;
- Construction of Café - it is located in the North part of the Lake and represents in-situ reinforced concrete structure of the following sizes 39.9 m length and 14 m width;
- Construction of Café-peer - represents in-situ reinforced concrete structure that is located in the North part of “Tsivi” Lake. It is entered the lake and ends up with the triangular platform, sides are equilateral of 14 m. There are to be arranged the boards and steel railing;
- Construction of boat peer - it will be arranged in “Tsivi” Lake at the right bank of the lake. It is in-situ reinforced concrete structure of 18 m length and 3.6 m width. Along the bank there is to be arranged as well the reinforced concrete pier platforms of 23.2 length and 3 m width. The pier will be faced with plank;
- Construction of kids fountain playground;
- Construction of public toilet and shower;
- Construction of pedestrian bridges #1 and #2 - the bridges 18.6 lengths and 2.5 width are identical and represent the metal structure with in-situ reinforced concrete abutments;
- Arrangement of four bicycle parking.

### **3.3.1.3 Rehabilitation of Water Supply and Sewerage System in central part of Tskaltubo**

- Rehabilitation of the water supply system – only small part of system supplying water to the Central Park and Tsivi lake area will be rehabilitated. Small water pumping station will be constructed (32

m<sup>3</sup>/hr) and 14 water meters will be installed. Total length of water pipes is 700 m. This will benefit mainly Central park and Tsivi Lake visitors: about 2,000 persons/day;

- Rehabilitation of the wastewater system – new collectors will be built along the existing collectors which be connected to existing wastewater network of the town. Total length of the collectors is about 13 km. This will benefit whole population of the central part of the town and visitors: about 6,000 persons/day.



**Fig. 3.8. Rehabilitation of the Central Park and Lake territory**

### 3.3.1.4 Rehabilitation of Road Pavement and Stormwater Drain System of Circle Road in Tskaltubo

- Rehabilitation of the asphalt pavement on the 5.1 km circle route;
- Rehabilitation of the storm-water drainage system on the whole circle route;
- Rehabilitation of two bridges (#7 and #12) – these bridges are of traffic significance.

### 3.3.1.5 Rehabilitation of Roads, Foot Paths and Stormwater Drain System of Central Park and Lake "Tsivi" in Tskaltubo

- Rehabilitation of the park storm-water system (underground pipe network, which drains storm-water from central park area). The pipes transport and emit the storm-water to the Tskaltubo River, at the same location where the two natural channels rejoin the river, near the town entry road;

- Sub-project envisages rehabilitation of the paths of park (18,076 m length), drainage of “Tsivi” Lake perimeter (of 114 m length), drainage of the central part of the Park (of 6,994 m length) and arranging of the bicycle and pedestrian paths (of 2,131 m length). The works include restoring of the path paving, repairs of the drainage and arranging of the bicycle path.

### **3.3.1.6 Arrangement of Irrigation System and Landscaping of Central Park and Lake "Tsivi" Territory in Tskaltubo**

- Arrangement of green (plant) labyrinth;
- Planting trees and flowers on alley leading to Bath # 6 and circular square near Bath # 6;
- Planting trees and flowers in active zone;
- Planting trees and flowers on central alley and squares #1 and #2;
- Greening of the decorative pools;
- Greening of the “pixel” square;
- Landscaping, irrigation and arrangement of dendrology.

### **3.3.1.7 Rehabilitation of Lake "Tsivi" and Water Channels In Tskaltubo**

- Reconstruction of hydro-site #1 (right);
- Reconstruction of hydro-site #2 (left);
- Cleaning of the Lake;
- Rehabilitation of the channels on the left bank of the Lake;
- Rehabilitation of the channels on the right bank of the Lake;
- Reinforcement of the existing bridge portal.

### **3.3.1.8 Rehabilitation of Outdoor Lightings of Circle Road, Central Park and Lake "Tsivi" Territory in Tskaltubo**

- Installation of street lighting on the town entrance and circle route – 330 lighting posts will be installed on concrete basements and to reduce theft and increase safety, electricity will be supplied by underground cables.
- Rehabilitation of the Central Park lighting system (in total 1034 lights will be installed):
  - park will be illuminated by decorative lights – in the active zones there will 6-7 m high posts that will be located 20-25 m apart;
  - in the passive zones the 1 m high dim lights will be installed;
  - Tennis courts will be illuminated from above;
  - “Pixels” will be illuminated from underground;
  - Bicycle paths and pedestrian pathways also will be illuminated.
- Installation of the lighting system on the territory adjacent to the Tsivi Lake (in total 84 lights will be installed):
  - On territory adjacent to the lake pathways will be illuminated by decorative lights;
  - Parking area will be illuminated;
  - Bridges will be illuminated by special lights installed underwater.
  - In all cases new energy efficient lamps will be used that would cut the electricity consumption by 35-40%.

### 3.3.2 REHABILITATION AND EXPANSION OF VANI ARCHAEOLOGICAL MUZEUM

The Vani museum area is located in West Georgia, Imereti Region, Town Vani. It is located 270 km west from Tbilisi. Access to site is possible via Tbilisi-Kutaisi-Vani Highway.

Evidence of bronze plates and hand-crafted gold jewelry suggest that Vani stood as one of the most important trade centers in the 6th and 4th centuries B.C between the Colchis Kingdom and the Greek states. Vani's location stands atop a vantage point monitoring the old trading routes in the Rioni Lowlands that connected commerce flowing through India, the Caspian Sea, and ending at the Black Sea. A Colchis temple in Vani was the focal point in the 3rd century for the ancient Colchis religion until the city's ultimate destruction during the 1st century B.C. Current archeological interest in Vani stems from its role in Greek mythology as the location of the "Golden Fleece," which the Argonauts look for.

The overall concept of Vani site development comprises reconstruction of Vani Museum, as well as rehabilitation of facilities and reorganization of the archaeological zone, making it open and attractive for tourist's observation. However, within the frames of RDP II only reconstruction of museum and rehabilitation of the water supply system is planned.

Currently, the space of the existing museum is limiting access of expected flows of tourists and the quality of the museum facilities and premises is not adequate to ensure safe storage of artifacts and to provide good services for the interested tourists. The proposed subproject envisages rehabilitation of Vani archeological museum, as well as arrangement of subsidiary infrastructure. The existing museum building will be rehabilitated and restored. In Vani, the Project will support the restoration and expansion of a unique museum, including state-of-the-art technologies to present the main features of the site. More specifically, the sub-project envisages implementation of the following:

- Rehabilitation of the communications existed outside of the territory (red lines);
- Improvement of territory and landscaping;
- Rehabilitation of museum building;
- Arrangement of external water-wastewater and storm-water drainage network;
- Internal wastewater, cold and hot water piping;
- HVAC supply and installation;
- Arrangement of electrical system;
- Installation of fire alarm system;
- Installation of video surveillance system;
- Installation of Security alarm system;
- Conference hall sounding system;
- Arrangement of fire extinguishing system;
- Internal telephone station and computer network;
- Lighting of façade and yard;
- Supply and installation of elevator.

Rehabilitation of Vani archeological museum includes extension of existing Vani Archaeological Museum building. New design of museum is distinctive contemporary but does not neglect the existing and its history. Few deliberate interventions into existing structure transform the appearance but perpetuate the heritage.

It should be noted, that Vani's attractiveness could be based not only on the museum alone, but also on its archaeological site, which is currently in very poor conditions. The archeological site needs substantial



investment for fencing, lighting, pathways, signage, etc. However, development of the archeological site into tourist attraction requires comprehensive, multidisciplinary approach, that will take long time and archeological site development works can be carried out as Phase II under the project. The Project will also finance limited upgrading and interpretation works in the nearby archaeological area, in order to present a full a story for visitors, incentivize a longer stay, and raise the chances for increased average expenditures in the nearby town of Vani. The beneficiaries will be visitors (tourists international and domestic) and town residents and businesses involved in and serving the tourism industry. The estimated number of international and domestic visitors (tourists, schools, students, adults groups, individuals, other visitors) – according to the museum statistics, there were 2,798 visitors in 2010 and 5,215 visitors in 2012. It is expected that number of visitors will reach 15,645 by 2016.

Overall, Vani is known worldwide, associated with the myth of the Golden Fleece, and the museum and archeological area could become one of the centers of the tourism destination in Georgia and in particular, in Imereti.

### **Rehabilitation of the Water Supply and Was-water System in Vani Muzeum**

Designing works for rehabilitation of water supply system of the town Vani are in progress. The RDP II component envisages connection with general Vani water supply system and provision of Vani Archaeological Museum with potable water. The project provides connection of the existing water conduit network from Chanturia street by means of the polyethylene pipe  $d=110$  mm; Volume of water to be delivered will equal to  $q=0.5\div 1.5$  l/sec. The pump will be operated periodically and it will deliver water to the design stainless steel reservoir – cistern of  $30\text{ m}^3$  capacity. The project provides organization of heat insulation for the reservoir. According to the project the reservoir will be arranged on the elevated place located near the museum. In the pumping station two pressure rising pumps stipulated by the project will be installed: one – working and the other –reserve, power provision of which will be realized from the power source located at a distance of 200m.

The museum current has a sewerage collector; there are also wells and sewerage collectors at the dining hall and the house of archaeologists. At the initial stage the project envisages cleaning and rehabilitation of the existing sewerage wells, and restoration and replacement of the pipes  $d=150$  mm'  $L=100$  meter. Arrangement of new collector by the use of the corrugated polyethylene wastewater pipe  $d=150$  mm. Length 550 meter, which will deliver sewerage water by gravity, to the module-block treatment facilities for cleaning of technological-fecal water; The treated water will be discharged in river Chishura.

The treatment plant will be located near the bank of the river Chishura, at the upper marks of the zone of flooding, on the free land plot owned by the state. The capacity of the treatment plant will equal to  $2\text{ m}^3/24$  hr and thus sufficient for cleaning sewerage water from the Vani archaeological museum, the dining hall and house of archaeologists located near the museum.



**Fig. 3.9. Rehabilitation of Vani Muzeum**

### 3.3.3 INTEGRATED REVITALIZATION OF CULTURAL HERITAGE SITE IN GELATI MONASTERY SUBPROJECT

Construction of the Gelati Monastery was conceived in 1106 during the rule of King David IV (1089 – 1125 A.D) and completed before the rule of Queen Tamar (1213 A.D) during the rule of King David’s son, Demetré. King David IV, in particular, founded the Church of the Virgin in 1106 before the Church of St. George and the Church of St. Nicholas (both added later during the 13th century). The monastery stood during a period of solid military and economic success in medieval Georgia. However, Turkish invaders destroyed the church in 1510 A.D, early restoration then began around the early 16th century, and it wasn’t until the 18th century that Gelati was completely restored. The monastery lost its Episcopal power after Russia annexed Georgia in the 19th century. In 1994, UNESCO added Gelati into the list of World Heritage Sites, and later to the list of World Heritage in Danger. Also the World Monument Fund also added Gelati to its list of 100 Most Endangered Sites in 2008

Certain conservation/rehabilitation works on Gelati monastery are planned and managed by the NACHP. The RDP II comprises mostly tourism infrastructure development and water supply/wastewater rehabilitation components. However, Project will also support limited conservation works to roofs, facades, walls, pathways, to ensure safety of visitors and a pleasant experience.

Integrated Revitalization of Cultural Heritage Site in Gelati Monastery Sub-Project envisages undertaking of the following works:

- Construction of Visitors’ center;
- Arrangement of the Heating, ventilating and air conditioning (HVAC) systems;
- Arrangement of electricity supply system;
- Arrangement of internal water and sewerage systems;
- Procurement of the equipment for cafeteria;
- Procurement of the furniture;
- Construction of water treatment facilities;
- Construction of water supply main (2500m);
- Construction of Sewerage main (3000m);
- Construction of Sewerage treatment plant.

### 3.3.3.1 Construction of Tourism Infrastructure in Gelati

There is to be constructed the center of visitors for Gelati Monastery Complex.

The building is located at 55 meter distance from the monastery entry, along the access road. The area of the structural addition makes up 431.11 sq. m.

It represents one-storey building which includes as follows:

- Information space
- Room for guides, cash desk
- Exhibition space
- Souvenir Shop
- Administration
- Medical assistance
- WC
- Café

The facade of the building is faced with natural and quarry-stone. (Similar to Gelati Monastery and Fence); Columns of the façade and walls of the hand-made products’ desks will be plastered with decorative plastering and painted with high quality paint (dark grey).

Greenery will be planted on the flat roof.

The facades of the building will be lit with halogen lights with narrow opening angle, it will be installed into the façade flatness.

The nearby site of the building will be faced with 2 types of natural stone slabs.

At the auto-parking will be placed 14 cars, 3 micro and two big buses. In overloaded days the additional cars will be placed along the road.

At the roads will be arranged street lighting pillars of 0.5 m height. The auto-parking will be lit with street lighting pillars of 9 m height with metal-halogen lamps.

In front of the building will be arranged the open terrace of Café with the covered umbrellas.



**Fig.3.10. Visitor's Center**



**Fig.3.11. Visitor's Center**

### 3.3.3.2 Rehabilitation of the Water Supply System in Gelati

“Dokhora Spring” of  $q=1.5-3$  l/sec capacity is within 2500 meter from the Gelati Monastery Complex. Intake of the source needs thorough rehabilitation, cleaning and concrete works, which should provide adequate, full receipt of water. Water should not leak from the water intake. From the catchment structure of the water intake, water will flow by gravity to the water treatment structure, located on the former farm territory. The capacity of the water treatment structure is  $Q=40$  m<sup>3</sup>/24hr. After treatment, water will flow via gravity penstock of total length  $L=2.5$  km  $d=75$  mm – to the stainless steel reservoir located/arranged on the elevated spot. It will provide delivery of water by self-flow to the water reservoir  $V= 50$  m<sup>3</sup>, then water will be delivered to the consumers. This provides water pressure and water delivery to the consumers of the complex.

Bactericidal neutralization of water in the places such as the café, parking and wet points will be realized by the use of chloride lime.

It should be stated that demand for water will be high, since at the complex, periodically peak number of beneficiaries use to be.

Considering number of visitors to the monastery complex, it is most urgent to organize the sewage systems of water consumers of the monastery complex. It will include the canalization network, the central outlet collector, structure for treatment of sewerage water of  $q=12$  m<sup>3</sup>/24hr capacity and outlet of treated water to the river Tskaltsitela (see Drawings) and specifications of building and assembling materials and equipment necessary for the provision of building.

Total length of the sewage collectors is up to 3 kilometers.



Fig. 3.12. Map of the Gelaty Monastery

### 3.3.4 INTEGRATED REVITALIZATION OF CULTURAL HERITAGE SITE IN KATSKHI MONASTERY AND KATSKHI COLUMN SUBPROJECT

The Katskhi column is a natural limestone monolith located at the village of Katskhi in western Georgian region of Imereti, near the town of Chiatura. It is approximately 40 meters (130 ft) high, and overlooks the small river valley of Katskhura, a right affluent of the Kvirila. The Katskhi column complex, in its current state, consists of a church (currently named in honor of Maximus the Confessor), a crypt (burial vault), three hermit cells, a wine-cellar, and a curtain wall on the uneven top surface of the column. At the base of the column are the newly built church of Simeon Stylites and ruins of an old wall and belfry.

The Katskhi Monastery of Nativity of the Savior, more commonly known as the Katskhi Monastery is a medieval monastery in Georgia, located in the village of Katskhi near the town of Chiatura. It was built at the behest of the Baguashi family in the period of 988–1014. The church building is noted for a hexagonal design and rich ornamentation. Closed down by the Soviet government in 1924, the monastery was revived in 1990 and is now operated by the Eparchy of Sachkhere and Chiatura of the Georgian Orthodox Church.

**Main Concept of the project:** develop area around “Katskhi Column and Katskhi Monastery” as outdoor heritage park.

Project envisages rehabilitation of the following:

- Rehabilitation and expansion of the existing Monastery building near to Column:
  - Repairs to the walls;
  - Repairs to the windows, roof and floors;
  - Arrangement of open terrace.
- Arrangement of the visitor’s center;
- Arrangement of the computer network;
- Arrangement of the HVAC systems;
- Replacement of Column’s existing metal stairs, sewerage system and cable;
- Arrangement of the parking spaces;
- Arrangement of public toilets, which all of them has a treatment plants;
- Arrangement of the water supply system (Katskhi Column 600m and Katskhi Church 2,500m);
- Arrangement of the sewerage system (Katskhi Column 1850m and Katskhi Church 950m);
- Arrangement of the access road (Katskhi Column 1150m and Katskhi Church 140m).

#### 3.3.4.1 Tourism Infrastructure around the Katskhi Monastery and Katskhi Column

##### **Katskhi Monastery**

The present subproject envisages arrangement of tourist infrastructure in the Monastery adjacent area in the Village Katskhi of Chiatura District. The design is prepared by the organization employed by the NACHP, against the background of the design-planning assignment and is based on the topographical survey and dimensions of the existing buildings. The presented documentation should provide for the:

- Rehabilitation of the monastery adjacent wall fence;
- Rehabilitation of the buildings’ facades existing inside the same wall fence;
- Arrangement of parking spaces on the opposite side of the wall fence;
- Arrangement of the computer network;
- Arrangement of the HVAC systems;
- Improvement and refurbishment of the outer perimeter of the monastery;
- Improvement of the monastery territory: arrangement of the benches and the existing cemetery;

- Replacement of the existing sheet metal roof of the auxiliary facility with the clay tile roof;
- Restoration of the south and west facades of the new monastery building northward to the monastery;
- Correction of the monastery yard terraces (with ground excavation westward and restoration of walling);
- Restoration of the bell tower;
- Arrangement of the blind area;
- Replacement of the monastery ports;
- Replacement of the metal doors of the monastery with wooden doors;
- Arrangement of the monastery roofing with colored copper;
- Restoration of the wall fence;
- Activation of the bells;
- Restoration of the interior to its original shape

The infrastructural site is a skeleton-type building, which is faced with the natural quarry stone and roofed with the clay tile. It is located at the opposite side of the monastery, at the preliminarily determined location along the motor road. According to the design, the building will accommodate the information-touristic bureau, the open terrace, the spring, public toilettes, it may also have room for several computers equipped with internet.

The master plan provides for the parking lot in front of the infrastructural site, this parking will run lengthwise the infrastructural site and provide for parking and maneuvering. The parking lot may be paved with the natural stone; the space of the parking lot can be increased by redesigning of the configuration of the bus parking lot adjacent lawn. The pedestrian path follows lengthwise the motor road area. The infrastructural site territory ends on the west side by the comfortable terrace with the safety railings.

The project also provides for the rehabilitation of the fence and one-storey building existing along the wall fence of the monastery, rehabilitation of the south and west facades of the new monastery building northward to the monastery according to the presented drawings, as well as improvement of the small architectural forms and arrangement of the graves existing in the monastery territory and replacement of the existing sheet metal roof of the auxiliary facility with the clay tile roof.

Project included rehabilitation of the sections of access roads connecting the main roads with the Katskhi Church area.



**Fig.3.13. Existing wall**



**Fig.3.14. Design of new wall**



**Fig.3.15. Tourist center and parking**



**Fig.3.16. Map of Katskhi Church and infrastructure**



### **Katskhi Column**

Overall project comprises certain works on the column: conservation of old historical remnants and rehabilitation of the small church constructed some 20 years ago, supplementing it with some additional structures needed for church and for improving living conditions of hermits. The RDP II includes only the components of the project, which are related to the development of tourist infrastructure facilities around the Katskhi column:

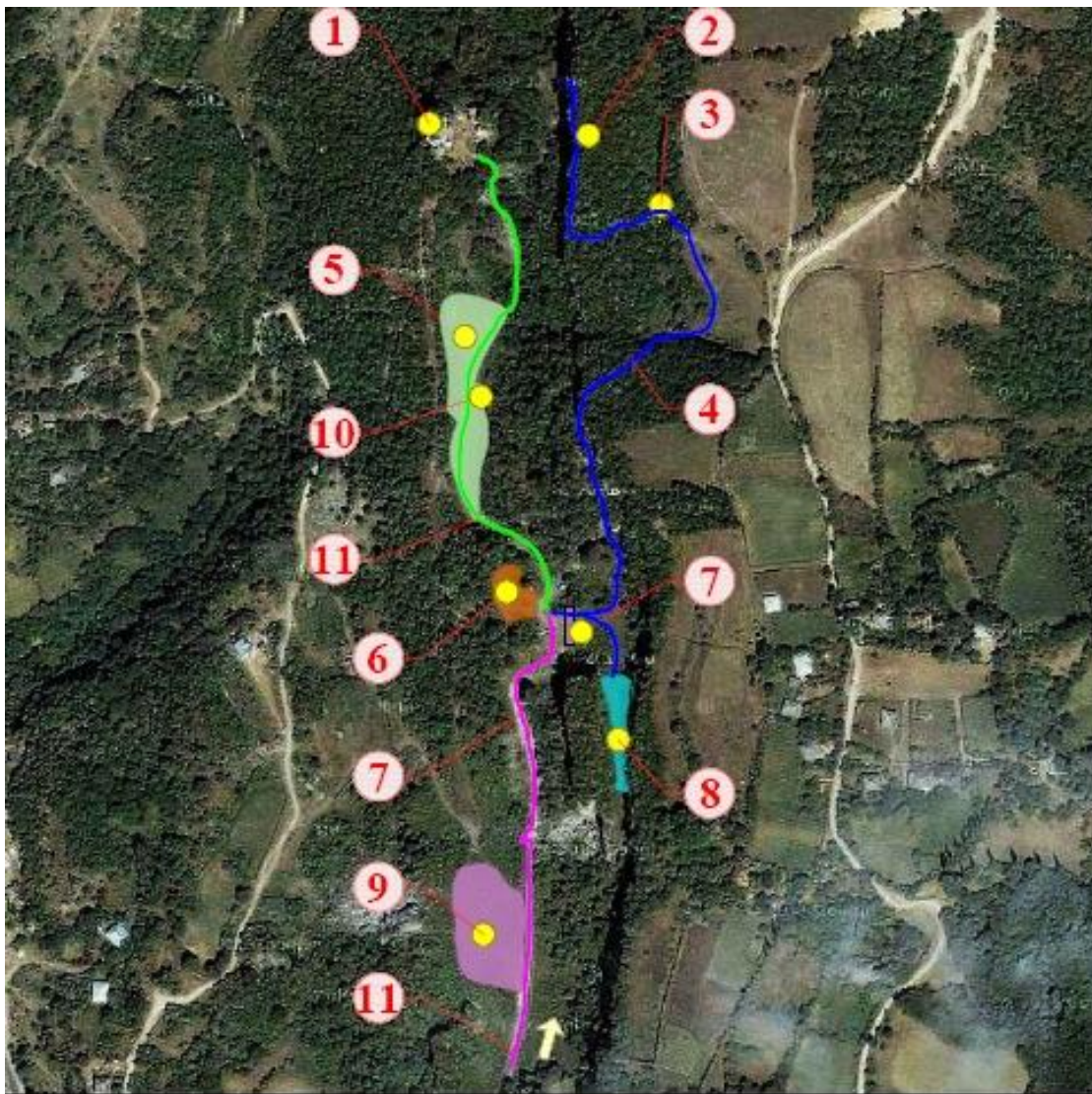
- Construction of public service center, including information center, café, toilets, open terraces, storage premises, sunshade pavilions or pergolas
- Construction of two independent parking sites: one for busses and the other for light vehicles
- Arrangement of two panoramic view points near the Katskhi Column
- Arrangement of trails connecting different infrastructure and sites, stairs and hand-rails in unsafe sections of the paths
- Information desks and signs, benches and umbrellas for resting, waste bins,



**Fig.3.17. Katskhi Column**



**Fig.3.18. Future look of the Katskhi Column infrastructure**



შენიშვნა/LEGEND

1. კაცხის სტოპი
- Katskhi column**
2. პანორამული პარკები
- Panoramic View**
3. შესანახი პარკი
4. სტოპი
5. საინჟინერო პარკი
6. სტოპი-პარკი, რომელიც კაცხის სტოპის სანარკვევო ტერიტორიაზეა
7. ავტოსადგომი მუნიციპალიტეტის ტერიტორიაზე
8. მუნიციპალიტეტის ავტოსადგომი (სამხრეთი ტერიტორია)
9. ავტოსადგომი ავტოსადგომის ტერიტორიაზე, სანარკვევო სან. ტერიტორია
10. სანარკვევო ტერიტორია
11. შესანახი საინჟინერო პარკი
12. პარკი მუნიციპალიტეტის ტერიტორიაზე

Fig.3.19 Map of Katskhi Column and infrastructure

### **3.3.4.2 Rehabilitation of the Water Supply System within the area of Katskhi Monastery and Katskhi Column**

#### **Katskhi Monastery**

There are two springs located at 2.2-2.5 km from the monastery, there are water intakes – catchments arranged on both of them and for their rehabilitation the project envisages concrete works. Two independent pipelines will be arranged from these two springs to the pump station. The abovementioned steel pipelines will supply water to the design pump station, while the pump station will supply water to the monastery complex and its adjacent consumers through the pressure polyethylene pipeline.

Through the independent pipeline, the abovementioned design pump station also supplies water to the water consumers residing in the Katskhi Column adjacent area. Through the distribution network the water is supplied to the shop, café and toilets.

The sewage collector coming out of the monastery toilets, shop and café will be connected to the 150+800 meter long  $d=150$  mm design collector made of corrugated polyethylene sewer pipe.

#### **Katskhi Column**

Two springs are located at 500-600 meter distance from the spring, with the debit of 0.5 l/sec each, i.e. with the total debit of 1 l/sec. The monastery located in the Katskhi Column adjacent area will be supplied with water from one spring with the debit of 0.5 liters, it will be carried out through the design pipeline from the pump located by the design pump station; for the consumers residing in the Katskhi Column adjacent area – through the pressure polyethylene pipeline water will be supplied to the design reservoir with the capacity of  $V=50$  m<sup>3</sup> – steel tank.

### **3.3.5. INTEGRATED REVITALIZATION OF CULTURAL HERITAGE SITE IN UBISA MONASTERY SUBPROJECT**

Ubisa is a medieval monastic complex in Georgia, particularly in the region Imereti, near Kharagauli. The monastic complex of Ubisa comprises a 9th-century St. George's Monastery founded by St. Gregory of Khandzta, a 4-floor tower (AD 1141), fragments of a 12th-century defensive wall and several other buildings and structures. The monastery houses a unique cycle of murals from the late 14th century made by Damiane apparently influenced by art from the Byzantine Palaiologan period (1261-1453). The monastery is also known for its honey made by the monks.

The Project will support the establishment of a tourism facility outside the core of site, in its buffer zone, as defined by Georgian laws, integrated with the context, with minimized visual impact on the landscape. The project will also support basic conservation works of pathways, wooden structures, and walls, to ensure safety of visitors and a pleasant experience.

#### **3.3.5.1 Rehabilitation of the Ubisa Monastery and Construction of Tourism Infrastructure around the Monastery**

##### **Rehabilitation of the Ubisa Monastery**

The temple mainly is built with shirimi quadras and is dated with IX-XIV centuries. The project envisages conducting of minor rehabilitation works:

- Restoring of depreciated outlet stones from the north side of the temple and processing of joints with high mark lime mortar.

- Replacing of limestone facing setting that later was built into the north-western addition to the structures with shirimi quadras and restoring of shirimi stones of socle.
- Removing of the concrete mass at the northern part of the **ambōn** in the temple interior and replacing with the stone slabs, removing in some sections of the slabs.
- It is desired the arch from the western part of the gates to be restored with shirimi quadras and at that stone setting to be removed that was built in later.
- The project envisages as well restoring of the gates' fronton with shirimi stones.
- The depreciated wooden staircase and doors existing in the temple to the east of the temple is to be replaced with the hard breed material.
- Local injection, removing of bio-cover, spraying etc.



**Fig. 3.20. Ubisa Monastery**

### **Construction of Tourism Infrastructure around the Monastery**

The project envisages development of following infrastructure facilities around the Monastery:

- Arrangement of parking on the adjacent territory
- Arrangement of public information service center
- Arrangement of toilets
- Installation of the stone wall instead of the iron-mesh fencing at the Southern side of the monastery
- Construction of the visitors' center;
- Arrangement of tourist and information bureau;
- Arrangement of the souvenir shop;
- Arrangement of the open terrace;
- Arrangement of the public toilets;



**Fig. 3.21 Parking area and information service center**

### 3.3.5.2 Rehabilitation of the Water Supply System of the Ubisa Monastery

#### **Water Supply**

Existing water supply system of the monastery is totally depreciated. The spring, which is the source for the existing water supply system dries in summer and generally the debit of this spring does not meet the minimal requirements of water consumers. At 1.5 km distance from the monastery there exists the spring, from which water could be provided to the consumers by gravity. These springs have two outlets. According to observation of the locals the springs are stable as they have not noted turbidity. The water debit is not reduced and amounts to 0.1 and 0.15 l/sc i.e. total amount of both springs' water, output will amount to 0.25 l/sc.

Design envisages that the new water intake catchment structure will be arranged. From the designed new water intake water will be supplied to non-corrosive steel water reservoir-tank of  $V=25m^3$ . Water will be chlorinated periodically with the liquid chlorine (lime-chloride solution). From the reservoir with the separate branch through the polyethylene pipe of  $d=40$  mm;  $L=150$ meter, water is supplied to water distribution system.

#### **Sewerage**

Wastewater from the monastery and tourist facilities will be conducted through crimped polyethylene pipes of sewage to the collectors and directed to the wastewater treatment plant.

At the public land located near the Dzirula riverbank (the top marks of the flood zone) Compact Waste Water Treatment Plant of the Block type will be arranged. Treated water will be discharged in Dzirula river. Water discharge rates of Dzirula river exceeds treated sewage charge several times and great speed of the river water provides oxygen restoration on a very small distance. The above mentioned meets the standards and ecological requirements.

### 3.3.5.3 Rehabilitation of the Access Roads to the Ubisa Monastery

The access road connecting Ubisa monastery with the main E-60 highway of Georgia is of 580m – it starts from the km 171 of the highway and leads to the monastery. The asphalt pavement of the road is severely damaged and in fact arrangement of new pavement is required. According to the design the access road and pavement will be paved by asphalt. Traffic signs that are missing currently, will be also installed.

### 3.3.6. INTEGRATED REVITALIZATION OF CULTURAL HERITAGE SITE IN MOTSAMETA MONASTERY SUBPROJECT

Motsameta. The Motsameta is a small and very beautiful monastery with round turrets crowned with peaked tent-shaped domes. The monastery is standing above the rough Rioni River and is buried in coastal vegetation. In a small monastery hall on an eminence there is a big rectangular ark with the hallows of the pious princes canonized by Georgian Church. Motsameta attracts crowds of tourists with an ancient superstition: if one crawls three times under the ark and makes a wish while touching the hallows, the princes David and Konstantin will grant it. The Tsar Bagrat III reconstructed the church in the 10th century. The building was reconstructed again in the 19th century.

The Project will support the establishment of a tourism facility outside the cultural heritage core site of Motsameta, in its buffer zone, as defined by Georgian laws, integrated with the context, with minimized visual impact on the landscape.

The estimated cost of this component, including physical and price contingencies, is about US\$34.26 million, of which IDA will provide US\$27.41 million and the Recipient will provide US\$6.85 million counterpart funding. The Swedish International Development Agency (SIDA) is considering providing US\$5-6.00 million of parallel financing to this sub-component, in support of wastewater management system in Tskaltubo, subject to finalizing the Administration Agreement between SIDA and WB.

Investment Subprojects shall be selected in accordance with the selection criteria set forth in the Operations Manual. When presenting an Investment Subproject Financing to the WB for approval, the MDF shall furnish to the WB an Investment SAR, in form satisfactory to the WB, which includes: (i) the description of the proposed Investment Subproject and the respective expenditures proposed to be financed out of the proceeds of the Loan; (ii) the related EA, site-specific EMP and/or RAP, as the case may be, in form and substance satisfactory to the WB; (iii) technical, financial and economic analysis of the proposed Investment Subproject; and (iv) the proposed terms and conditions of the Investment Subproject Financing to be used for the Investment Subprojects.

For the purposes of Component 1 of the Project, the MDF shall: (a) prior to the issuance of the bidding documents for the works contract for each Investment Subproject, prepare and submit to the WB for its approval: (i) the draft bidding documents; and (ii) the draft contract for said works to ensure that the provisions of the site-specific EMP are adequately included in said contract; and (b) prior to the commencement of the works, ensure that the owners and users of the land or buildings where said works are to be implemented are fully compensated in accordance with the provisions of the RAP(s).

## 4. METHODOLOGY AND STRUCTURE OF THE DOCUMENT

### 4.1 REGIONAL, SECTORAL AND PROGRAMMATIC FEATURES OF SECHSA

The proposed tourism development vision for the region envisages developing Imereti as a high quality geo-tourism destination throughout the year through attracting domestic and international tourists; building on its wellness/spa tourism, cultural heritage and nature/adventure; and focusing on quality (tourist spending) rather than quantity (tourist arrivals). Success of tourism will depend on the use of an integrated approach, using the geo-tourism and applying vertical approach to a comprehensive urban regeneration effort in key centers of attraction. Overall ITDS has been Project II financed by the WB is considered within the context of this overall strategy. The Project constitutes is multi-component program and integrates particular subprojects to be implemented in different tourist sites. Development objective of the Project is to improve infrastructure services and institutional capacity to support the development of tourism-based economy and cultural heritage circuits in the Imereti region.

Development and implementation of the proposed complex program for Imereti Region requires preparation of framework document that should be used first, as a tool for strategic decision making and further, for proper management of developed regional program and compliance of the implemented subprojects with the social and environmental safeguards. To fit the purpose preparation of the SECHSA of the proposed RDP has been requested by the WB.

Analysis of strategic impacts given in SECHSA and its recommendations are not limited to the RDP II frames and should be viewed in a broader context of the regional development of Imereti and in conjunction with the overall concept of tourism development, as it is proposed by ITDS developed by GNTA.

According to the ToR, SECHSA of the RTDP for Imereti Region should comprise (i) general overview of the natural and physical environment in the project area, (ii) potential direct, indirect and cumulative impacts of the main types of the project interventions on the environment, cultural heritage, and social strata of Imereti, (iii) legal and regulatory framework applicable for mitigation of the potential risks associated with the project implementation, (iv) existing institutional set-up for coordinating, regulating, and enforcing policies and legislation pertaining management of environmental, cultural, and social aspects of the project implementation, (v) assessment of the sufficiency of the above systems in place and analysis of gaps and weaknesses, and (vi) recommendations for the development of detailed environmental and social assessment and impact mitigation documents for the specific investments under the project in the format of an Environmental Management Framework, as well as (vii) recommendations on institutional arrangements for the project implementation.

In general, according to WB Sourcebook, Strategic Environmental Assessments (SEA) are used for regional programs consisting of multiple projects (in this case SEA are often referred as **Regional Environmental Assessments - REA**) or for sector-wide programs, development policies and plans (relevant SEA referred as **Sectoral Environmental Assessment**).

Regional EAs are desirable when a number of development activities are planned or proposed for a relatively localized geographic area. They serve a number of useful purposes, for example:



- definition of study areas in terms which make environmental sense;
- selection of sustainable development patterns from alternatives in a region under development pressure, or being programmed for development for the first time;
- identification of cumulative impacts of different activities and design or implementation schedule changes and other measures to avoid or mitigate them;
- identification of environmental interactions or conflicting demands on resources among projects in which the impacts of one project may reduce the benefits of another, and of measures to avoid such a result;
- formulation of criteria for environmentally sustainable development in the region, including treatment of environmentally sensitive areas and resources, site selection criteria, design criteria, region-specific measures to mitigate adverse impacts, and land-use planning guidelines;
- examination of policy alternatives and institutional elements needed for achieving sustainable development in the region.

Like regional EAs, a sectoral EA can be used to examine the *cumulative impacts of multiple projects* planned in the same sector. Sectoral EAs usually address the mixture of projects proposed for the next few years. They may address several large - category A projects together, or a number of small projects that may not warrant EAs individually. When applied in this way, sectoral EAs have a comparable relationship to project-specific EAs. They can, in some cases, substitute for project-specific EAs, by producing *guidelines and criteria* for the design and implementation of projects in the sector. More often, they will result in identification of the major environmental issues in the sector and development of a data base, enabling project-specific EAs to proceed more expeditiously. A variant of this application, often called a *“Programmatic EA”*, is the use of a sectoral EA to assess the impacts of a sector-wide program. These are programs that will be replicated at a variety of locations, and for which the impacts are more or less the same at any location. A programmatic EA may include among its outputs *guidelines* for conduct of the activity and *site-specific questions* which must be answered before initiating the activity.

The other purposes of sectoral EAs are somewhat different: review of the environmental impacts of sector investment alternatives.

As it is clear from the frame of the proposed investment program outlined in this chapter and from its detailed description provided in chapter 3, the program has combined features of Regional Development project (development of multiple projects in Imereti Region, comprising infrastructure rehabilitation and cultural heritage restoration) and of Sectoral Program (integrated development of tourism sector in Imereti region in conformity with ITDS). Accordingly, the SECHSA related to this investment program should have features of Regional EA, as well as of Sectoral EA with elements of “Programmatic EA”.

This specific character of SECHSA is adequately reflected in the ToR for current assignment. On one hand, the focus is made on the analysis of strategic impacts of the development program, which goes beyond the frame of project specific impacts of each particular sub-project. These type of impacts reflect effects of strategic development decisions, or have a character of indirect and cumulative effects of implemented multiple subprojects. Analysis of overall development trends or strategic effects of the program at “macro level” (like, induced development, open access to new areas etc.) are important for strategic decision making during the analysis of alternatives. On the other hand, the ToR clearly defines the tasks, which have features of Programmatic EA. In particular, some of the main tasks of the SECHSA report are formulated in the ToR as follows:

- (ii) potential direct, indirect and cumulative impacts of the main types of the project interventions on the environment, cultural heritage, and social strata of Imereti,
- vi) recommendations for the development of detailed environmental and social assessment and impact mitigation documents for the specific investments under the project in the format of an Environmental Management Framework;
- (vii) recommendations on institutional arrangements for the project implementation.

To fit these objectives and tasks, it is required - general description of natural, social and CH socio-cultural environment in the region, identification of the receptors most sensitive against general (mostly indirect and cumulative) impacts associated with tourism development, and to overview particular subprojects planned under the RDP II and a set of related typical impacts. This does not imply a project-specific impact analysis required for individual subprojects. However, the impact analysis is not limited to the indirect and cumulative impacts or other impacts at macro level, but provides a summary of typical *direct impacts*, related to certain “category or type of subprojects”. Analysis of typical impacts common to similar subprojects, as well as understanding of indirect impacts, is necessary to formulate rational screening criteria for investment project selection and provide management frame or guidelines for implementing particular subprojects<sup>12</sup>. EMF is a standing alone document completed earlier than SECHSA, although in consultation with the SECHSA Consultant. The aim of these consultations was to agree upon the main principles with the SECHSA team. EMF will translate these principles into technical guidance for developing subproject-specific EMPs and ERs and for day-to-day application in the course of the project implementation. In case of SECHSA, the objective of reflecting these recommendations is to expand the agreed principles beyond the frames of RDP II and to make it a good practice code applicable for other investments within ITDMS context. In addition to EMF recommendations, SECHSA provides also screening criteria for selecting eligible private investment projects, which are not envisaged within the RDP II but are supposed to be supported by the Government under the ITDMS context.

## 4.2 METHODOLOGY

### 4.2.1 INCEPTION /SCOPING PHASE

Project information and strategic and policy documents provided by MDF have been analyzed at the initial stage to understand clearly the policy, geographical and environmental frames, conceptual design of the project and its components, legal and administrative frames. This initial analysis gave us possibility to outline potential direct and indirect impacts of the program on cultural heritage, natural and social environment. Further deepened studies were focused on collection and analysis of baseline data regarding natural and social environment and cultural heritage within the zone of project impact, identification of most sensitive receptors, analysis of potential impacts related to different scenarios of tourism development.

First drafts and later final version of the ITDS has been provided by GNTA.

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<sup>12</sup> Provision of framework document or guidelines is especially important, as most of the small projects under the program are expected to be of B category and do not require project-specific EIAs.

## 4.2.2 BASELINE STUDIES

Chapter 6 – Cultural Heritage Baseline and Chapter 7 – Tourism Potential sections have been drafted by CH Consultant based on her professional knowledge and information gained from main stakeholders (the NACHP; The Department for Cultural Heritage Strategy, Coordination and Permissions of the MoCMP; Georgian National Tourism Agency etc.). Introduction related to the historical context of Imereti region and brief description of project sites and cultural heritage monuments is given in the main body of the text. In attachment to chapter 6 brief description of each affected site is provided in a form of checklists. The checklists contain information on name of the monument, age, function, historical or cultural significance, current condition, vulnerability and information on protection zone. This information is sufficient for analysis of potential direct and indirect impacts. Statistical data on existing and forecasted tourist flows, tourist facilities in Imereti, number of visitors in protected areas and at Cultural Heritage sites have been collected and presented in chapter 7. This is valuable information enabling to assess impacts related to increased tourist flows.

The section related to Environmental Baseline have been drafted by Environmental Consultant based on extensive consultations with universities, academicians and environmental experts, in particular dr.A.Kandaurov (ecology, fauna, protected areas); M.Kimeridze (ecology, flora), G.Sopadze (soils and landscapes), M.Gaprindashvili (geology, geohazard risks), B.Ukleba (hydrology), T.Kepuladze (waste management, pollution), NGOs “Orchis”, “Campester”, “Ecovision”, “WEG” etc. Valuable information on existing and planned protected areas in Imereti region has been provided by the Agency of Protected Areas of MoE. Information on baseline contamination was provided by the Environmental Agency (MoE).

Based on analysis of the information collected, environmental receptors sensitive against the project impacts have been identified. As the sensitive environmental zones have been defined those fragments of valuable and fragile environmental receptors, which fall within the spatial frames of the project related impacts. Spatial zones of impacts are determined by the Tourism Clusters proposed in ITDS. Based on these assumptions, several sensitive zones have been identified, mapped and brief summary of tourism clusters and related environmental receptors is provided in supplemented table (p.8.4 of chapter 8).

Data available from the National Statistics Office of Georgia, socio-economic and cost-benefit assessments conducted by WB appraisal team and Economic Consultant for current project, and information provided by the Social services of Imereti region Governor and local municipalities was used for describing socio-economic profile of Imereti region. In-depth social assessment of the project impact on poverty and most vulnerable groups will be conducted by WB. The social data provided in the chapter 8 gives an overall picture, describes economic, employment, educational profile of population, energy and water supply, condition of other infrastructure facilities.

## 4.2.3 THE ANALYTICAL FRAMEWORK

The analytical framework finally chosen for the purpose of this SEA is based on the tourism clusters and tourism sectors development scenarios relevant to the ITDS.

The tourism sectors proposed for each particular cluster and related development trends (planned and indirectly induced), as well as specific form of tourist activities have been analyzed to define the type of expected environmental and social impacts and impact zones. Spatial patterns related to each cluster and impact zones for each cluster/sector have been analyzed to identify most sensitive environmental and social receptors under the impact and most significant out of the expected impacts. Type of development and

tourism activities and specific features of receptors determine the spectrum of expected direct and indirect impacts. Planned and expected induced development trends, existing industrial activities and pollution sources have been analyzed to identify cumulative impacts.

Carrying capacity concept was chosen as a main discourse for further analysis of impacts.

Effects of developing different tourist clusters and sectors have been compared as alternatives, as well as different Management concepts (vertical versus horizontal).

#### **4.2.4 CARRYING CAPACITY CONCEPT AS A DISCOURSE FOR ANALYZING TOURISM DEVELOPMENT IMPACTS. TIERED APPROACH FOR MANAGEMENT ARRANGEMENTS AND PLANNING.**

The features of the natural and socio-cultural environment, which are important resources for tourism, attract people because of aesthetic, recreational or educational/scientific value. However, many of the same features are particularly sensitive to disturbance by human activities. Negative impacts resulting from inadequately planned and uncontrolled tourism development can easily damage the very environments on which the success of the project depended. This in turn may severely reduce project benefits.

In other words, without careful attention to the balance between the volume and type of tourist activity and the sensitivities and carrying capacities of the resources being developed, tourism projects can be not only environmentally harmful but also economically self-defeating. Accordingly, for the purpose of analysis of tourist impacts we tried to apply certain concepts like, carrying capacity or limits of acceptable change. At the same time, we recognize that these conceptions are useful only to the extent they focus discussion and discourse, but not as a practical tool for numerical estimations of limits of visitors.

"Tourism Carrying Capacity" is defined by the World Tourism Organisation as "The maximum number of people that may visit a tourist destination at the same time, without causing destruction of the physical, economic, socio-cultural environment and an unacceptable decrease in the quality of visitors' satisfaction". This definition picks up general idea that capacity is the point at which a destination or attraction starts experiencing adverse as a result of the number of visitors. In general, this concept is applicable for environmental receptors (protected areas, sensitive habitats), cultural heritage sites (historical buildings, monuments) or local social environment at the destination sites. According to this concept, the managerial actions aimed on mitigation of tourist impacts should be either aimed on increasing the carrying capacity of the site or, in case if it is deemed impossible, to control the amount of visitors under the threshold.

Carrying Capacity of the tourist destination site is determined by specific features of sensitivity against the corresponding tourist activities. E.g. caves are specifically sensitive to microclimate changes related to tourist flows. Bat colonies inhabiting caves are sensitive to noise and light caused disturbance, while aquatic fauna to the contamination and possible changes of hydrological regime. Carrying capacity of the cultural heritage sites<sup>13</sup> is determined by physical fragility of the structures (buildings; paintings; remains etc.), as well as sensitivity of the site in terms of existing religious or traditional practices, which could be affected by the tourist flows etc.

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13 Carrying Capacity concept for analysis of impacts on cultural heritage is reviewed to certain extent in the Report "CONSULTANCY SERVICE FOR SUSTAINABLE TOURISM DEVELOPMENT IN KAKHETI THROUGH CULTURAL HERITAGE prepared in August 10 of 2012 by SITI for RDP I. However, the issue requires further detalization.

Carrying capacity is not fixed. It depends on many different factors and develops with time and the growth of tourism and can be affected by management techniques and controls. Roughly, carrying capacity could be viewed as a range of thresholds. Each discrete level in this range is determined by specific combination of factors and corresponds to certain development period. Adequate managerial actions may neutralize the factors determining first level threshold and increase the carrying capacity of the system. However, with the growth of a tourist flow at the next stage of development, new limitations could be faced, determined by the other set of factors. Such vision allows applying tiered approach for management arrangements and planning, through identification of required immediate measures, medium-term actions and long-term plans or programs.

The planning should be based on identification of the most critical factors affecting current situation and determining the lowest threshold of carrying capacity in the range. Immediate arrangements should be focused on mitigation of these critical factors. Medium- and long- term measures could be planned to address factors that are supposed to limit carrying capacity at the next stage of development (some years later, in the context of tourism development). In general, the factors critically affecting the current situation could be identified to the extent required for planning efficient mitigation measures, while the medium and long-term scenarios could be less clear and in this case optimal solution could be planning of future in-depth studies, rather than proposing detailed mitigation measures.

Based on above described approach, we have focused our efforts on identification of the major factors limiting the carrying capacity of the tourist destination sites at present and proposed relevant mitigation strategy.

#### 4.2.5 CRITERIA FOR SELECTING INVESTMENT PROJECTS

SECHSA (Chapter 12) provides criteria for selecting investment projects, which are viewed as a part of development activities supported by the Government under the overall ITDS context (tourist facilities within the major clusters and food processing facilities in Region). The criteria are grouped in two categories: **a) Eligibility Criteria** and **b) Criteria for Selecting Preferable Projects**

**Eligibility criteria** are applied to reject unacceptable projects at the early stage of selection. This includes two types of restrictions:

**Restricted sites:** no investment projects are allowed within the protected areas, high sensitive ecological areas, general and individual zones of protection for CH monuments, sanitary protection zone for water supply headworks.

**Restricted types of activities:** Plants or facilities entailing significant pollution (large hotel complexes or food processing plants with significant emissions and discharges) are deemed as ineligible. Tourist or food processing facilities, which may change traditional features of the site and monument (historical, religious, aesthetical perception etc.) and lead to erosion of local way of life will be rejected. E.g. construction and operation of casinos or beach-tourist facilities near monasteries and historical monuments will be deemed as unacceptable and such proposals will be considered as ineligible. The facilities planned for construction near the monasteries will be first discussed and agreed with the Georgian Orthodox Church

**Criteria for Selecting Preferable Projects** are used together with the other – economic, social and other factors, for selecting most beneficial and sustainable projects. Environmental, cultural heritage and social

criteria are focused on revealing the projects most beneficial in terms of job creation, stimulation of local businesses and less harmful for cultural heritage, natural and social environment. Proposed ranking is aimed to distinguish the projects, which have negligible negative impacts on environment, from the projects having tangible but tolerable and manageable impacts and projects, which have unacceptable impacts (e.g. destruction of local valuable habitat or population of endangered species; destruction of cemetery or other valuable sites etc.). In case of unacceptable impacts the proposed project should be reshaped or modified in order to be eligible (e.g. change site etc.).

#### **4.2.6 APPROACH USED FOR CULTURAL HERITAGE IMPACT ASSESSMENT AND MITIGATION PLANNING**

There are two sets of criteria: criteria to determine whether there is any effect at all on the property, either beneficial or adverse; and criteria to determine whether there is an adverse effect on the property. An effect occurs if the proposed project or action will in any way alter the characteristics of the property that qualify it for inclusion in the National Register of Historic Places. An adverse effect occurs if the proposed project or action may diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association.

Adverse effects include, but are not limited to:

1. Physical destruction, damage, or alteration of all or part of the property;
2. Isolation of the property from or alteration of the character of the property's setting when that character contributes to the property's qualification for the National Register;
3. introduction of visual, audible, or atmospheric elements that are out of character with the property or alter its setting;
4. Neglect of a property resulting in its deterioration or destruction; and
5. Transfer, lease or sale of the property.

There are exceptions to the above criteria of adverse effect when the historic or archaeological property is of value only for its potential contribution to research and such research is conducted in accordance with applicable professional standards and guidelines.

One of the key factors in assessing whether a proposed project or action will have an effect or an adverse effect is the focus on the characteristics of the property that qualify it for the National Register. Eligibility of a particular property was based on its contribution to a theme or historical context. It may be eligible on the basis of architecture, engineering, ethnic heritage, art, agriculture, invention, or several other categories of significant themes. To properly assess potential project impacts, it is essential to review the data on each property for the identified characteristics that qualified it for the National Register. Remember that to have an effect, the proposed project or action must cause changes in that particular characteristic.

Sometimes proposed project or action changes the area surrounding the actual building or structure, but does not alter the structure. Boundaries of sites as described on the National Register often coincide with property boundaries of the parcel of land, usually as a matter of convenience. Again, the criterion regarding changes to setting applies in cases of isolation of character when that character contributes to the property's qualifications to be on the National Register. If the project being evaluated will produce physical changes near an eligible site, it is first necessary to examine how much of the surrounding setting actually contributes to the specific characteristics that qualify the property for the National Register. If the proposed

project or action will produce changes within an area that actually do not contribute to the value of the resource, then a no-effect or no-adverse-effect determination is appropriate.

Results of the investigation of project effect will be one of three conclusions: no effect, no adverse effect, or adverse effect.

The first investigation is usually of alternatives that would avoid or reduce the impact while still accomplishing the goals of the company and State agency. In a narrow sense alternatives may be considered as variations of technical design, site of deployment etc. In a broad sense it means review of different principle solutions, intended to achieve the same goals.

Other mitigation measures may include the following:

- Limiting the magnitude of the project
- Modifying the design
- Rehabilitation of an historic property
- Preservation and maintenance operations for historic properties
- Documentation of buildings or structures that must be destroyed or substantially altered
- Relocation of historic properties
- Salvage of archaeological or architectural information and materials

In some cases, no alternatives and mitigation is feasible, and the proposed project's benefits in relation to the significance of the historic resource justify destruction of the resource as an acceptable loss. In most cases, however, measures to mitigate impacts are agreed upon. Some examples follow.

- Specific design measures will be agreed upon to minimize impacts.
- If it is agreed to destroy an historic buildings or structure, the usual procedure is to fully document the resource through stringent, acceptable documentation requirements.
- Many times historic buildings can be moved to locations where preservation can be maintained for future generations.
- In cases involving archaeological resources, data can be recovered prior to construction activities, or an archaeologist will observe construction activities and recover data if any artifacts are discovered.
- for the discovery of burials, the area is normally excavated and the remains are moved.

## 5. LEGAL AND ADMINISTRATIVE SYSTEM IN GEORGIA FOR SOCIAL, ENVIRONMENTAL AND CULTURAL HERITAGE PROTECTION

### 5.1 CULTURAL HERITAGE PROTECTION AND SPATIAL PLANNING

#### 5.1.1 ADMINISTRATIVE SYSTEM

Protection of cultural heritage, protection of environment and the spatial planning issues are implemented by the Government of Georgia (GoG), the MoCMP, MoENRP, the Ministry of Justice (MoJ), the Ministry of Economy and Sustainable Development (MoESD), the local government bodies as well as other bodies of public and private law, and on the territory of the autonomous republics – respective ministries and departments. In the field of cultural heritage protection the national and local government bodies implement their authority according to the national legislation and according to the provisions of the constitutional Agreement Between the State of Georgia and Autocephalous Orthodox Church of Georgia” (art. 7, 8 and 9).

In the field of spatial planning the main decision making body is local government, which elaborates and approves the different spatial planning documents and issues construction permits. In the field of cultural and natural heritage the administrative system is rather centralized. The management is implemented by the central government bodies and the participation of local government is limited only to the assistance, when such is required by the central administration.

#### **The Cabinet of Ministers**

The competence of the Cabinet of Ministers of Georgia is limited to the designation of **cultural heritage protected zones in the country** on the basis of a proposal put forward by the Minister of Culture and Monuments Protection. Exclusively on the territory of Tbilisi, the Cabinet of Ministers is also entitled the right of the inscription and removal of the properties in the List of Cultural Heritage Properties and in the Register of Cultural Heritage Listed Properties.

#### **The Ministry of Culture and Monuments Protection (MoCMP)**

The Ministry oversees the cultural heritage protection in the country, sets up and implements the state policy for cultural heritage, leads and coordinates the identification, inventory, maintenance and monitoring as well as promotion of cultural heritage, enacts rules and procedures for these activities, supervises the conservation and rehabilitation of movable and immovable monuments and archaeological sites, sets up the protection zones and regulations and presents to the Cabinet of Ministers for adoption.

Within the Ministry the two structural units have regard to the cultural heritage protection and spatial planning:

- **The Department for Cultural Heritage Strategy, Coordination and Permissions.** The main tasks of the department are: support and implementation of measures for identification, preservation and promotion of tangible and intangible cultural heritage on the



territory of Georgia; inventory, expertise and registration of cultural heritage properties and creation of unified cultural heritage database in the country; ensuring of cultural heritage preservation; elaboration of methodology for the study and maintenance of cultural heritage; overseeing the archaeological and conservation works on monuments, as well as construction works in cultural heritage protection zones; cooperation with relevant administrative, judiciary and customs authorities with an aim to control the infringement of the cultural heritage legislation and ensure adequate response to the crime committed against cultural heritage.

- **The Cultural Heritage Protection Council**

The Council is a structural unit of the MoCMP, which advises the Minister on the inscription and removal of properties in/from the Register of Cultural Heritage Listed Properties, on assigning/changing the category to a listed property and methodological issues related to works on listed properties. The Council also advises on the draft spatial planning documents, the protection status to the historic settlements, enforcement of cultural heritage protection zones and administrative-legal acts to be issued by the Minister in scopes of these zones. The decision of the Council is not binding to the Minister; therefore he/she has the right to act according to his/her own considerations.

In 2008 as a result of the institutional reform implemented within the MoCMP, **the NACHP** has been created as an entity of public law, to which significant part of the functions related to cultural heritage were delegated.

### **The National Agency for Cultural Heritage Preservation (NACHP)**

The NACHP is an entity of public law subordinated to the MoCMP. The Agency was established on the basis of the thirteen state Museum Reserves and entrusted to carry out the protection, maintenance, inventory, research, conservation and rehabilitation of cultural heritage and to advice MoCMP on the heritage policy issues. The Agency is responsible for management and monitoring of national monuments and World Heritage Sites in the country and for granting permits for conservation and rehabilitation project for these monuments. The Agency is also responsible for protection the inventory and promotion of movable and immovable cultural heritage objects, scientific research, consulting and expertise in the field of cultural heritage.

It is obvious that there is a degree of overlapping between the functions of the Agency and the Department at the MoCMP. At the legislative level the process of division of responsibilities is not yet accomplished.

### **Museum-Reserves**

The Georgian legislation defines Museum-Reserves as the entities of public law subordinated to the MoCMP. The Museum-Reserves are kind of a regional administrative units which manage the state owned monuments and archaeological properties within the borders of their administration.

The state administration of cultural heritage inherited the Soviet model of Museum-Reserve as a regional cultural heritage administration unit. Up to the present the thirteen state Museum-Reserves exist in the country, although their legal status has changed over time. Before 2005 their post-Soviet status was not defined. In 2005-2008 they have functioned as formally autonomous public entities subordinated to the MoCMP. Since 2008 the Museum-Reserves are being transformed as structural units of the NACHP although the process is not yet completed at the legislative level.

### **The Ministry of Justice (MoJ)**

The functions of the MoJ regarding the cultural and natural heritage are limited to the activities of its subordinate entities of public law – the National Archive and the National Agency of Public Register.

- The **National Archive** maintains the documents of cultural heritage value which may as well be registered as cultural heritage listed properties by the MoCMP and ensures their inventory, identification and rehabilitation.
- The **National Agency of Public Register** is authorized to register the title to ownership for all immovable assets and among them cultural heritage monuments as well. The registration document issued by the Agency does not provide information whether the property is listed as cultural heritage monument, i.e. the data from the Register of Cultural Heritage Listed Properties maintained by the MoCMP is not integrated in the digital database of the MoJ. This may in practice cause the problems when changing ownership of cultural heritage monuments. The new owner may not be timely informed of the status of his/her property and respectively of the rights and responsibilities linked with the status.

### **The Ministry of Environment and Natural Resources Protection (MoENRP)**

The MoENRP is the chief coordinating authority in the field of natural heritage protection. The MoENRP defines the state policy, strategies and priorities for environmental protection, etc. The MoENRP manages the territories of environmental value, which apart from valuable natural resources contain historic monuments and sites. More importantly, according to environmental legislation the World Natural Heritage sites and Protected Landscapes are part of the legislative system of the nature protection, therefore they fall under the direct management of the MoENRP. Thus the MoENRP is involved in the protection of cultural heritage, although this is not its direct competence and MoENRP has no decision making power.

The Agency of Protected Areas is an entity of public law established by the MoENRP for the implementation of management of protected areas. The legislation distinguishes the following types of protected areas: Strict Nature Reserve, National Park, Natural Monument, Managed Nature Reserve and Protected Landscape. Protected landscape as usual comprises at the same time the valuable natural features and cultural heritage and management schemes for such protected areas inherently require efficient intersectoral coordination between MoCMP and MoENRP. Efficient cooperation considers clear separation of responsibilities and development of complementary management schemes to ensure protection of natural and cultural resources. At present such schemes are not yet implemented and distribution of responsibilities is not clear. However, coordinated efforts in that direction are made by two Ministries in relation with the Tusheti Protected Landscapes in Kakheti region and discussions are held regarding similar schemes to be applied for the proposed David Gareji protected landscape (Sagarejo district of Kakheti region).

### **The Ministry of Economy and Sustainable Development (MoESD)**

MoESD is a state body related to both cultural and natural heritage management. The main task of the MoESD is to support and ensure sustainable development of the country. Among other issues, the MoESD deals with the alienation of state possessions including historic monuments and protected areas; urbanization and construction issues and development of tourism. The Department for Urbanization and Construction, the Privatization Department and the National Tourism Agency of Georgia are structural and subordinated units of the MoESD in charge of the above issues. The MoESD compulsorily consults with the MoCMP when alienating, leasing or transferring the right of use of state owned monuments and

heritage sites, developing the strategies for cultural tourism or undertaking other strategic actions which may have an impact on cultural heritage.

### **The local Self-Government**

The respective state institutions of the autonomous republics and the self-government bodies implement their authority in accordance to the Georgian legislation and the functions delegated to them by the national authorities. They ensure the identification, inventory and maintenance of cultural heritage within their administrative borders and provide information to the MoCMP of Georgia.

According to the Organic Law on Code on Self-Government adopted in 2014 competence of the Municipal Authorities includes protection and development of local identity and cultural heritage, maintenance, reconstruction and rehabilitation of the local cultural monuments. Ajara Cultural Heritage Protection Agency (Legal Entity of Public Law within Ministry of Education, Culture and Sport of Ajara AR) is granted by the right to issue work permits on cultural heritage monuments within the Ajara AR on the basis of the Government decree (#386, 21.12.2010). However, the tight local budgets do not allow local governments to implement initiatives related to cultural heritage. The local budget is directed to rehabilitation of basic communal infrastructure and the social issues which are the priority. In such circumstances, to implement heritage related projects local governments depend on grants, private investments and exclusive transfers from the state budget. Such dependence reduces the autonomy of local government in decision-making on cultural heritage, and makes them ineffective to implement even the basic maintenance works on listed properties, to inventory and study local heritage resources and run public awareness campaigns to promote cultural heritage. All these in turn affect the state of conservation of heritage objects and alienate local population towards cultural heritage.

Ownership is another important aspect that prevents the local self-government bodies from management of cultural heritage resources. According to the Organic Law the land of cultural and natural monuments and protected areas remains in state ownership and is managed by the MoESD. The local governments are not authorized to manage or directly benefit from these recourses, unless the property is transferred to their ownership, which is a lengthy and complicated process.

### **5.1.2 LEGAL SYSTEM**

The issues of spatial planning, environmental protection and cultural heritage are regulated by different legislative and subordinate legal acts. The protection of cultural heritage is implemented on the basis of national legal system and international conventions and charters ratified by Georgia. The Constitution, which is the supreme law of the country, declares cultural heritage protection and preservation a duty of every citizen of Georgia and the subject to relevant state legislation (art. 34).

The major laws aimed on protection of cultural heritage and regulating spatial planning and development projects are the laws of Georgia on:

- Cultural Heritage, 2007
- on Spatial Organization and Principles of Town planning, 2005
- on Museums, 2001
- on Environmental Impact Permits, 2008
- on the Control of Technical Threats, April 2010

Other important laws and regulations related to cultural and natural heritage and spatial planning are given in the table 5.1.

**Table 5.1. Georgian national laws related to/having a major impact on cultural heritage protection**

<b>Field of Regulation</b>	<b>Title of the Law</b>
Movable Heritage	<ul style="list-style-type: none"> <li>▪ The Law on the Import and Export of Cultural Goods, 2001 (last amendment 2014)</li> <li>▪ The Law on Museums, 2001 (last amendment 2013)</li> <li>▪ The Law on Culture, 1997 (last amendment 2013)</li> </ul>
Relationship of the State and the Church	<ul style="list-style-type: none"> <li>▪ The Concordat – Constitutional Agreement between the State and the Autocephalous Orthodox Church of Georgia, 2002</li> </ul>
Penalties for violation of cultural heritage legislation	<ul style="list-style-type: none"> <li>▪ The Administrative Infringement Code, 1994 (amendment related to cultural heritage, 2007 introducing stricter fines for violation of monuments protection regimes and regulations in protected zones)</li> <li>▪ The Criminal Code, 1999 (amendment related to cultural heritage, 2007, introducing new chapter on the crime against cultural heritage with respective provisions)</li> </ul>
Financial policy for cultural heritage	<ul style="list-style-type: none"> <li>▪ The Tax Code, 2010 (amendment related to cultural heritage, 2008, VAT exemption for the World Heritage, national and religious monuments)</li> <li>▪ The Law on Local Tariffs, 1998 (amendment related to cultural heritage, 2007, introducing temporary local rehabilitation tax for specially designated areas max 1.5 GEL per sq/m of the building and respective provisions)</li> <li>▪ The Law on State Excise Duty, 1998 (amendment related to cultural heritage, 2007)</li> <li>▪ The Budgetary Code of Georgia, 2009</li> </ul>
Privatization and land management	<ul style="list-style-type: none"> <li>▪ The Law on State Property, 2010</li> <li>▪ The Law on Recognition of Title to the Land Plots Possessed (Used) by Individuals and Public Entities under the Public Law, 2007 (last amendment 2008)</li> <li>▪ The Law on Ownership of Agricultural Land, 1996</li> </ul>
Licensing and permissions	<ul style="list-style-type: none"> <li>▪ The Law on Licenses and Permits, 2005 (amendment related to cultural heritage, 2007)</li> <li>▪</li> </ul>
Natural heritage and environment	<ul style="list-style-type: none"> <li>▪ The law on Protection of Soil, 1994</li> <li>▪ The law on the System of Protected Areas, 1996</li> <li>▪ The law on the Protection of Environment, 1996</li> <li>▪ The law on the Status of Protected areas, 2007</li> <li>▪ The law on Environmental Impact Permission, 2007</li> <li>▪ The law on Ecological Expertise, 2007</li> <li>▪</li> </ul>
Competences of self-government bodies	<ul style="list-style-type: none"> <li>▪ The Organic Law on Self Government, 2014</li> </ul>

Despite the implemented reforms the legislation in the fields of cultural heritage and spatial planning needs further improvement. Many issues, such as the legal status of the Historic- Cultural Reference Plan remain to be clarified, furthermore there is a degree of overlapping between the functions of different bodies, such as of NACHP and the Department at the MoCMP (see in the sections below).

The Georgian Parliament has ratified and signed most important international and European treaties in the field of cultural heritage protection. The list of which is given in the table 5.2.

*Table 5.2: the international treaties on cultural heritage protection ratified or approved by Georgia*

<b>Ratification/signature</b>	<b>Title of the Convention</b>
<b>A. Cultural Heritage</b>	
1993 ratification	Convention for the Protection of the World Cultural and Natural Heritage (the World Heritage Convention), Paris, 1972
1993 ratification	1 <sup>st</sup> Protocol of the Convention for the Protection of Cultural Property in the Event of Armed Conflict , the Hague, 1954
1993 ratification	Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property, Paris, 1970
2000 ratification	European Cultural Convention, Paris, 1954
2000 ratification	Convention for Protection of Architectural Heritage of Europe, Granada, 1985
2000 ratification	Convention for Protection of Archaeological Heritage of Europe, La Valetta, 1992
2004 ratification	European Charter on Local Self Government, Strasbourg, 1985
2008 approval	Convention on the Protection and Promotion of the Diversity of Cultural Expressions, Paris, 2005
2008 ratification	Convention for Safeguarding of the Intangible Cultural Heritage, Paris, 2003
2010 signature	European Landscape Convention, Florence, 2000

### **Cultural Heritage Legislation**

The law on Cultural Heritage Protection replaced the Soviet legislation in 1999. It was amended in 2002 and in 2003. **The new Law on Cultural Heritage** was enacted in 2007, which was conceived as an attempt to improve and modernize the overall administration of heritage field. The Law defines the responsibilities of central and local government in the field of cultural heritage management, the provisions for protection of discovered heritage objects, the relationships between the state and the owner of monument, the issues of inventory, classification and listing of cultural heritage objects, etc. The major innovations of the new amendments are that it allows privatization of cultural heritage monuments, exempts the rehabilitation works of national monuments from the VAT, enforces stricter fines and provisions for the infringement of the heritage legislation, regulates the procedures for the rehabilitation project application, elaborated the system of protection zones for monuments, establishes criteria for their application and the relevant protection regimes.

Already at the end of 2008 the law underwent important amendments. The new approach to conservation was brought in that allowed volumetric transformation of historic buildings (art.3). The definition “change of an immovable monument” was added to already existing provisions for conservation, restoration,

reconstruction and adaptation which form the internationally accepted methodology in the field of cultural heritage. The new definition marks the trend towards relaxation of regulations regarding the alteration and exploitation of historic monuments. However, so far the successful examples of transformation of historic buildings for beneficial use avoiding excessive destruction of historic fabric are relatively few.

The amendments also altered the criteria **for application of protection zones exclusively for Tbilisi historic district**. The new amendments also handed over the authority of designation, de-listing and management of cultural heritage monuments in Tbilisi to the Government of Georgia.

As the present legislation was enforced only few years ago and has been in the process of constant amendment, the lack of practical experience does not give sufficient evidence to discuss its shortcomings. Nevertheless the need for the further improvement is still obvious. The Law on Cultural Heritage regulates a wide range of legal issues that require adoption of other laws and subordinate legal acts. The transitional provisions of the Law consider the duty of adoption of such legal acts. However, many of these issues, such as accreditation and professional activity in the field of cultural heritage, the definition of monuments of exceptional public interest and the rules for acceptance of general public by the owners of such properties remain without regulation today.

Without the comprehensive set of legal acts the state is limited in implementation of its authority in the field of cultural heritage, therefore the further improvement of the legislation in this field is ultimately necessary.

### **The Concordat**

The **Constitutional Agreement between the State of Georgia and the Apostolic Autocephalous Orthodox Church (2002)** regulates the relationship between the state and the Church. Its provisions (art. 7, 8 and 9) have a major impact on the management of cultural heritage in the country. By this agreement all the religious buildings and related structures on the territory of the country, in use or without function, standing or in ruins, together with their parcels and also all the immovable ecclesiastic treasures protected in museums and archives are handed down in the ownership of the Church of Georgia (art.7 and 8).

The MoCMP must agree with the Church of Georgia in the process of adopting protection zones, rules and methodologies, planning and approving rehabilitation projects or scientific research of movable and immovable religious monuments. Together with the state, the Church is responsible for maintenance and care of the monuments in its ownership (art.7 and 9). The property of the Church is exempt from the state taxes (art. 5).

According to the Concordat the church is the owner of the majority of immovable listed properties in the country, most of which, at the same time, are living heritage sites, with the religious function being restored and enhanced after the fall of Soviet regime. Because of this special circumstance, the specific rules for maintenance and exploitation of these properties need to be elaborated.

### **Spatial Planning Legislation**

The main document regulating the spatial organization is the Law on the Principles of the Spatial Organization and Town Planning (2005). It sets the major aims and principles in spatial organization of the country and the process of planning. The provisions set by the law are based on the principles of sustainable development which involve equal spatial development of the country, protection and rational use of the resources, decentralization and polycentrism of the spatial-economic development, equal

distribution of the infrastructure on the whole territory of the country etc. One of the significant aspects of the document is that in public-private relations it gives the apparent privilege to the public interests.

The law also requires harmonization of the plans at the different levels, as well as their integration with the planning documents of different fields, such a cultural heritage or environmental protection. It is important to note that the legal texts regulating the spatial organization, construction process and housing do not contain direct regulations for cultural or natural heritage. In the provisions having a potential connection to these fields they consider and refer to the respective Laws (e.g. on Cultural Heritage) and vice versa.

The analysis of other normative texts, such as the Decree of the Government on Rules and Conditions for Construction Permits is given in the section 2.9.

### **5.1.3 FORMS OF IMMOVABLE HERITAGE PROTECTION**

The Georgian legislation defines two mechanisms for protection of cultural heritage objects (a) Initial (temporary) and (b) permanent protection through granting the status of the Cultural Heritage Property or the Listed Property status.

Initial (temporary) protection is applied when the heritage object is being discovered. In such a case the founder is obliged to inform the MoCMP about the finding. The MoCMP is responsible to assess the discovered object and, in case the cultural-historic value of an object is confirmed, to inscribe the object in the List of Cultural Heritage Properties. The object can be inscribed in this list for the period up to six months. This period can be extended only once for another six month. This period gives the experts the possibility to study the object more in details in case the existing material evidence is not sufficient for granting the Listed Property status. After this period the object is either granted the Listed Property status or taken out from the List of Cultural Heritage Properties.

The permanent protection is granted by the decree of the Minister of Culture, Monuments Protection and Sport, on the basis of the advice of the Cultural Heritage Council. Among other provisions the protection regime implies the establishment of the individual protection zone, corresponding areas and regulations which aim to preserve the setting of the monument which contributes to its historic, cultural and other values. It is important that while being inscribed in the list of Cultural Heritage Properties an object enjoys the same protection regulations as the Listed Property.

#### **Designation Criteria**

A cultural property may be listed when it has a proved historic and cultural significance linked with its authenticity, uniqueness or age (Law on Cultural Heritage, art.15). Authenticity, uniqueness and age are the ultimate factors to define the significance of a cultural asset and to grant the status of a monument. The topographically identifiable groups of buildings or structures may also be listed as complex objects (ibid. art 3)

The presence of a monument, as defined above, is the ultimate criterion for designation of the General and Individual Protected Zones. The area of an immovable listed property can be defined as a plot of land registered with a property or, in case of absence of the land register, an area occupied by the listed property (ibid, art. 3 (r)).

## **Designation Authority**

According to the national legislation the Minister of Culture is entitled to assign a Listed Property status to the historically or culturally significant object. As an exception, on the territory of the capital city of Tbilisi the responsibility for granting the monument status, listing and delisting the cultural heritage properties is handed to the Government of Georgia, which takes decisions on the basis of proposals made by the city government.

## **Hierarchy and Classification of Cultural Heritage Listed Properties**

According to the Law on Cultural Heritage listed property can be granted the grade of national significance by the President of Georgia if it has the special historic and cultural value. A listed property of national significance can be nominated by the President for inscription in the List of World Heritage Sites. Thus there can be distinguished three steps in the hierarchy of listed properties (1) listed property (2) listed property of national significance (National monument) (3) listed property of international significance (World Heritage Site).

The protection regulations are stricter for the listed properties of national significance and World Heritage Sites than for listed properties without such a grade. For example, protection zones are more extensive for national monuments and World Heritage Sites, their privatization is not allowed by the law, etc.

The Law on Cultural Heritage defines the following types of immovable listed properties:

- Archaeological (cultural stratum, underwater and underground remains of more than 100 years)
- Architectural (buildings and ensembles, castles, cult buildings, etc.)
- Engineering (bridges, tunnels, canals, aqueducts, etc)
- Urban (unity of urban structures, street networks)
- Parks and gardens (urban or rural historic parks and gardens)
- Palaeographic
- Monumental painting (frescos, wall paintings, mosaics, etc)
- Memorial (linked with the historic event of a person)
- Fine arts
- Ethnographic
- Documental (publications, manuscripts, etc)
- Property linked with the development of science and technology.

Any intervention on or use of the listed property which diminishes its historic and cultural value, damages and endangers it, affects its authenticity and prevents its interpretation is prohibited by the Law.

## **Cultural Heritage Protection Zones**

The system of protection zones provides specific tool for territorial protection of immovable cultural heritage.

The Law on Cultural Heritage defines a cultural heritage protection zone as:

“A territory around immovable monuments or the area of their abundance, where the specific regime of exploitation is applied and the aim of which is to protect monuments from adverse impact (Law on Cultural Heritage, art.3)”

This is the broad concept under which two types of protection zones are distinguished:



- a) Individual Protection Zone is a statutory territory around monument, which ensures its protection from adverse impacts. It is made up of Physical and Visual Protection Areas. The first corresponds to an immediate area surrounding a monument; the latter - to a wider landscape, views, panoramas and vistas.

Individual Protection Zones are automatically established from the moment of listing. The statutory radius of a Physical Protection Area is defined as twice the maximum height of a monument, but no less than 50m (Parliament of Georgia, 2007, art. 36 (2)). The statutory radius of a Visual Protection Area varies according to the category of a monument and the location in rural or urban setting: the monuments located in urban areas are protected with a Visual Protection Area of 150m from its outer contour, the Visual Protection Area of the monuments of national importance is 250m, these distances double in rural areas and are respectively 300m and 500m. The World Heritage Sites enjoy the greatest degree of protection with 1000m Visual Protection Area (Parliament of Georgia 2007, art.36 (4)).

- b) General Protection Zones may be established according to the type of a protected cultural asset – be it a historic settlement, archaeological area or landscape.

General Protection Zone may be the following:

- Historical Built-up Area Protection Zone: a territory, where there is a dense concentration of monuments and other properties of cultural significance and the authenticity and integrity of the street network, the planning pattern and morphology of the built fabric is preserved.
- Built-up Area Regulation Zone: an additional layer of protection for any other Individual or General Protection Zone, or as a territory, where there are fragments of authentic street network, historic setting and planning pattern, and/or single monuments and other properties of cultural significance preserved.
- Historical Landscape Protection Zone: an urban or rural territory of historic, cultural and aesthetic significance, which had been formed as a combined work of man and nature, or which represents the traditional natural setting of a monument.
- Archaeological Protection Zone: the territory where archaeological findings are identified or observed.

The sophisticated hierarchy of zones makes the purpose of designation more specific and sets out what could be the justification in each case of designation – for example, the proportion of authentic historic fabric preserved, concentration of monuments and presence of historically evolved landscape.

The cultural heritage law of Georgia allows overlapping of Individual and General Protection Zones, which means that Individual Protection Zones remain in force after designation of General Protection Zones.

The General Protection Zones are designated by the government (the Cabinet of Ministers) following the submission of the Minister of Culture, Monuments Protection and Sport. Consultation with relevant local authorities is obligatory.

The Individual Protection Zones are established automatically at the time of listing of a monument and can be enlarged by the decree of the Minister of Culture, Monument Protection and Sport if it is deemed to be necessary for the protection of a monument.

As an exception, on the territory of the capital city of Tbilisi the right to propose the cultural heritage protection zones for approval to the government of Georgia rests on the Mayor of the city.

The cultural heritage protected zones are enforced by the Law on Cultural Heritage. The issue of territorial protection is also covered by environmental legislation (Law on Protected Territories, 1996), which introduces a category of Protected Landscape as an area evolved over time under anthropogenic factors. By definition Protected Landscapes stand close to the concept of a Cultural Landscape present in international and European treaties (e.g. European Landscape Convention, World Heritage Convention). A Historical-Cultural Zone is also present as a component of a National Park, although apart from a broad statement of purpose there is no specific protection regime defined.

The Law on Cultural Heritage requires the consideration of cultural heritage monuments and their protection zones in town and country planning documentation (art 42.8), so does the Law on the Principles of Spatial Organization and Town Planning (art 30.9) and its subordinate acts (see section 2.8).

### **Regulation for Cultural Heritage Protection Zones**

The Law on Cultural Heritage prescribes general as well as more detailed protection regimes for each type of zones. These regimes may be further refined in scope of the Historic-Cultural Reference Plan, which is the essential and mandatory basis for town planning documentation within protection zones. Where the Historic-Cultural Reference Plans are not elaborated, any project proposal should be based on preliminary Architectural and Historical Study, prepared by and at the expense of the developer.

Any intervention in the historic environment within protection zones requires consent from the local government with the approval of the Minister of Culture and Monuments Protection. The interventions in listed monuments and buildings inscribed in the list of Cultural Heritage Objects are the subject of the approval by the Minister of Culture and Monuments Protection.

Some of the most rigid regulations apply to the Historical Built-up Area Protection Zone. Here new development is only permitted when it replaces a deteriorated structure which is not of historic or cultural significance, or when it enhances the historic environment by filling the gaps in historic fabric, replacing invaluable buildings or dissonant structures and restoring the historic setting and morphology.

The demolition of buildings in all types of cultural heritage protection zones is prohibited except the cases when there is an imminent threat of destruction due to irreversible deterioration of physical condition of a building, or when it is deemed necessary to remove the buildings distorting the historical environment.

In the Historical Landscape Protection Zones only temporary constructions may be permitted when it is necessary for the purpose of protection or scientific research of protected structures within or when is it considered to be of the supreme public interest. No construction activities are to be permitted within Archaeological Protection Zones.

These general provisions are further articulated in articles 36-44 of the Cultural Heritage Law and explain the details of permitted outdoor advertisement, control of alteration of appearance of buildings, street network, landscape and streetscape as well as functions, traffic, clauses related to industrial wastes and hydro-geological conditions.

## **5.1.4 OTHER PROTECTION/SAFEGUARDING MECHANISMS FOR HISTORIC TOWNS AND SETTLEMENTS**

### **Historical-Cultural Reference Plan**

As defined by the Law on Cultural Heritage the Historical-Cultural Reference Plan is the comprehensive scientific-research instrument developed through multidisciplinary approach. It contains data and analysis of historic environment and cultural heritage monuments, as well as recommendations for the planning regulations necessary for their protection. The Historical-Cultural Reference Plan is the basis of the town planning documents, such as Building Regulation Plans.

The informative section of the Reference Plan contains informative, analytical and conclusive sections. The informative section provides an integrated database produced on the basis of comprehensive inventory of an area.

The analytical section contains the characterization of the historic environment, definition of the value of the area in general context, assessment of the historically formed architectural as well as natural spatial landmarks, etc.

The conclusive section provides the principles for protection, rehabilitation and development of cultural heritage in the given area, recommendations on permitted activities within protected zones, among others the recommendations on the properties in the need of rehabilitation (listed properties, cultural heritage properties, background buildings, public space, etc) and on the methodology for their rehabilitation. The conclusive section also provides the list of all monuments and cultural heritage objects and the synthetic map with all reference data.

Through the financing of the MoCMP the Historical-Cultural Reference Plans have been elaborated for the two largest historic cities in Georgia – Tbilisi and Batumi historic districts – and also for the resort town of Abastumani. These GIS based instruments have been handed to the local governments for management and control of the development in historic districts. The creation of these instruments enabled the transfer of the decision making power in relation to the listed properties and development from the MoCMP to the local-government in Tbilisi and Batumi.

### **Conservation Plan**

The Conservation Plan is an instrument for management of complex objects of cultural heritage (ensembles, groups of buildings, topographically definable units of immovable properties). It is elaborated by the MoCMP and enacted through the ministerial decree as a document mandatory for consideration. The Conservation Plan includes scientific, methodological and practical instructions in respect of the works applicable to a listed property, establishes basic regulations and the list of admissible works, procedures for maintenance and use, etc.

Even though some extensive studies have been carried out on different listed properties in the country, so far none of them is adopted by the MoCMP as a Conservation Plan.

### **Cultural Heritage Rehabilitation Area**

The cultural heritage rehabilitation area is a territory designated under the decree of the Government of Georgia on the proposal of the MoCMP and on the initiative of the self-government bodies. The rehabilitation area is being designated within a General Protection Zone with an aim to support and

promote cultural heritage, on the basis of a development program set up for the selected area. The development program shall be adopted by the Government and should include (a) comprehensive assessment of the historical, architectural and artistic values of buildings, (b) assessment of listed properties; (c) analysis of economic and social situation, potential tourism, economic and social development in a rehabilitation area; (d) projects for rehabilitation of communal infrastructure and listed properties; (e) cost estimates for implementation of the program.

The peculiarity of the concept of a rehabilitation area lies in its financing method. Namely along with the conventional funding sources, such a state and self-government budget, grants and donations the development program shall also be funded through the dues and fees imposed on the residents and owners in the Rehabilitation Area. The respective amendment in the Law on Local Dues and Fees define the payable amount as 1.5 GEL per square meter for each owner (legal user) within the area for the period of implementation of the development program.

The above method of financing the rehabilitation area has so far never implemented in practice, mainly because of the public protest against the new dues. The proposed formula does not consider the difficulties that these dues and fees impose on low income families, socially vulnerable groups and the population below the poverty line. It promotes gentrification and if intensively implemented may have a great influence on the social fabric in historic centres and settlements in future.

#### 5.1.5 CONSULTATION MECHANISMS

Despite the legal obligation of the state organs to provide the citizens with the out of charge scientific-methodological and legal consultation in the sphere of cultural heritage protection, regarding the monuments employed or owned by them, it can be said that the system is not built up yet. At present this function of the MoCMP is only general and is limited to the involvement of the representative of the MoCMP in the process of issuing building permits. In the system of the MoCMP there are no public servants with the duty of such service. As a result, in the conditions of low public awareness and culture in this sphere, the owners and users of the monuments do not address the ministry or organs of self governing entities for these types of consultations.

There is a slightly better situation in the sphere of natural heritage protection, where, due to the existence of the inspection of environmental protection, the citizens often address the MoENRP or the organs of self governments to avoid the sanctions.

The consultations prior to construction and archaeological works are relatively intensive as such works require adequate permits and consultations are part of permitting procedure. Consultation may be sought formally or informally prior beginning the process of permit.

The construction permit is issued through the public administrative procedure. A person, who seeks the permit, must put up an information board on the construction site with the details of planned development and later with the land use conditions defined by the permit. This rule applies when the planned construction is situated within a built-up area. At the same time a responsible administrative body is obliged to publish a public notice as it starts the administrative procedure for issuing the permit. Within 20 days from the public notice anyone has the right to submit an opinion on the project. The public hearing may as well be held during the process. An administrative body issuing the permit has the right to consider or

ignore these opinions, except the opinions of those directly affected by the planned project (e.g. residents and owners of businesses, of the area, etc).

The consultations with the owners of listed properties or general public are rarely held prior to listing the properties or enacting the protection zones. The reasons may be different: (a) the large number of properties were listed already in the Soviet period and now the inscription in the Register of Listed Properties is just a formality following the adoption of the new legislation; (b) the responsible bodies lack the implementation mechanism and adequate organization; (g) the lack of experience in designation of protected areas following the adoption of the new legislation e.g. since adoption of the new Law on Cultural Heritage the protection zones were legally enacted only in three cases (Mtskheta historic town, Gonio fortress and Sakdrisi ancient mining site).

### 5.1.6 INTEGRATED ASSESSMENT FOR PLANNING POLICIES

The following section explains the overall legal basis and administrative organization of the spatial planning system in the country and provides specific information as to how the process of spatial planning relates to the preservation of historic towns and monuments.

The main document regulating the spatial organization of the country is the Law on the Principles of the Spatial Organization and Town Planning (2005). It sets the major aims and principles in spatial organization and the process of planning. The provisions set by the law are based on the principles of sustainable development which imply equal spatial development of the country, protection and rational use of the resources, decentralization and polycentrism of the spatial-economic development, equal distribution of the infrastructure, etc.

One of the significant aspects of the document is that in public-private relations it gives the apparent privilege to the public interests (art.6 par.1, 2). Under the term “public interests in the spatial organization and town planning” the law defines the following aspects: (1) ensuring the conditions for sustainable and secure development of the settlements and the inter-settlement territories of the country; (2) functioning of the engineering and transport infrastructure; (3) protection and further development of the natural resources, cultural and natural heritage and recreational territories. According to the law any spatial organization and town planning document that opposes the above public interests should be halted. The “private interests in the spatial organization and town planning” are interpreted as the interests of the physical and legal persons related to the spatial-territorial planning, development and maintaining the healthy conditions of their immovable property. The activity of the physical and legal persons can be restricted if they oppose the public interests in the field of spatial-territorial planning. These provisions are very important in the process of town planning and heritage protection as they are a tool for the protection of public interests against the pressure of the market forces in the historic centres. In spatial terms this tool could help to maintain and harmoniously develop the public domain in the historic towns.

The law requires the harmonization of the spatial plans of different levels, as well as their integration with the planning documents of other related fields, such as cultural heritage or environmental protection. The legal texts regulating the spatial organization, construction process and housing do not contain direct provisions for cultural or natural heritage. The provisions related to these fields consider and refer to the respective Laws (e.g. on Cultural Heritage) and vice versa.

Even though legislation calls for the harmonization of different planning documents, the integration of the planning policies and regulations in different fields (spatial organization, agriculture, industry, tourism, economic development, etc.) with those of cultural and natural heritage is still poor. For example the rehabilitation of the historic towns is often being initiated with the economic and tourism development priorities in mind (e.g. Tbilisi, Signaghi, Kutaisi). Such initiatives are realized in very short timeframes, through the top down decision-making and often bear negative consequences on authentic historic fabric, such as excessive façadism, spatial homogenization and loss of authenticity. These interventions do not contribute to the sustainable development of the non-renewable heritage resources but remain focused on immediate revenues and commercialization of selected areas. On the other hand there are positive cases (e.g. Batumi) when the planning documentation for historic towns is developed in harmony with the recommendations of the Historical Cultural Reference Plan and the cases when the full set of planning documentation and a Historical Cultural Reference Plan is jointly developed (e.g. Abastumani).

The key body responsible on spatial planning is the MESD of Georgia and in the autonomous republics – bodies of the local executive government. On the local level the planning is implemented by the executive and representative organs of the local self government bodies.

The MESD of Georgia adopts the Basic Provisions on the Use of the Territories of the Settlements and Building Regulation. On the basis of these Provisions the self governing bodies of the country adopt the Rules on the Use of the Territory and Building Regulation. These two documents are the foundation for elaboration of particular land use and planning documents.

There are three levels in the hierarchy of the plans for the spatial management of the country:

- **National level:** The General Scheme of the Spatial Organization of the Country. This planning document is initiated by the MESD
- **Regional level:** Plan of the Spatial-Territorial Development of the Region. This planning document is initiated by the regional government, or, if the planning extends to several regions, the central government of the country.
- **Local level:** town planning of the settlements (city, town, community and village) is based on two types of plans: (a) the General Land Use Plan and (b) the Building Regulation Plan. The local planning documents are initiated and adopted by the local government, or, if planning extends to several settlements, jointly by the corresponding local governments. The spatial planning documents of settlements are enacted by the executive organs of the self government bodies, except of the General Land Use Plan, which is adopted by the Council.

The management of the spatial-territorial development of settlements is executed with the help of the General Land Use Plan and the Building Regulation Plan. If the Building Regulation Plan is found sufficient for defining the land use parameters and planning decisions, the General Land Use Plan is not obligatory to be elaborated.

The General Land Use Plan provides key principles for the spatial-territorial development such as: the use of the territories (zoning), main axis of the spatial and infrastructural development, etc. The General Land Use Plan shall identify four types of the zones:

- General Functional Zones, describing the functional uses of the territories;
- Territorial-Structural Zones, indicating the spatial-structural features of the territories;
- Zones of the Special Spatial-Territorial Regulation: this status is entitled to the specific territories or settlements on the basis of the government’s initiative, through the resolution of the Parliament of Georgia. Among other reasons, the justification of such a status can be the ecological or cultural features of the area. Therefore historic towns may also be designated as Zones of Special Spatial-Territorial Regulation. The Zones of the Special Spatial-Territorial Regulation are defined by the decree of the President of Georgia. The self governing bodies of such territories are required to get the agreement regarding any plans related to these territories with the central government. The Building Regulation Plan for such zones is enacted by the President of the country.
  
- Zones of the Environmental and Cultural Heritage Protection are defined by the MoCMP and the MoE and incorporated in the General Land Use Plan.

The Building Regulation Plan provides the terms for the land use and spatial development of sites including physical, volumetric, technical, etc. conditions. Namely, it provides the following:

- Terms for the regulation of the use and building-up the territories of the settlements;
- Indexes for the built intensity, compactness and greenery of the areas;
- Precise functional zones (General Plan of the Land Use provides broader definition of the functional zones)
- Zones of the Environment and Cultural Heritage Protection (as defined by the MoCMP and the MoENRP).

The Law on Cultural Heritage defines the additional requirements for the Building Regulation Plan within the cultural heritage protected zones. The Plan should include (a) the requirements for cultural heritage protection and rehabilitation; (b) requirements for the development and new constructions, identification of conservation and development areas, allowable parameters of new constructions (scale, height, spatial and planning configuration, fenestration, rhythm), and (c) requirements for public space improvement.

The boundaries of different zones of each document (The General Land Use Plan and Building Regulation Plan) are delineated taking into consideration several criteria and among them - the boundaries of cultural heritage and environmental protection zones defined by the appropriate state bodies. By law, when functional zones are overlapped by the zones of cultural heritage and environmental protection, the regulations of the latter two are enforced as a priority.

The legislation in spatial organization and town planning is defined sufficiently for effective management and development of the settlements; however the absence of the planning documentation for most of the settlements doesn’t enable their organized development.

There are 69 municipalities in Georgia. The majority of these are small or medium-size towns up to 10.000 inhabitants. About 35 of these are historic towns were formed before the 19<sup>th</sup> century. The rest of the small towns had been developed in 19<sup>th</sup> century and only few – in 20<sup>th</sup> century. The small towns do not have adequate planning documentation. The master plans of Soviet period are long outdated. The radical difference of current political and economic organization of the country makes these plans inapplicable in practice.

At present only very few of these towns have new planning documents and only one of them - Abastumani has a full set of planning documentation required by the legislation (the General Land Use Plan of the, Building Regulation Plan and Historical-Cultural Reference Plan). There are also several small towns (e.g. Mtskheta) which have cultural heritage protection zones defined and legally established, although this is hardly enough for regulating the complex urban activities within the historic areas. Some other towns (e.g. Signaghi, Telavi, Kutaisi) have cultural heritage protection zones defined, however these are not yet legally adopted.

### **5.1.7 AUTHORIZATION/CONSENT PROCEDURES**

The conservation, rehabilitation and reconstruction works on listed properties, as well as construction, demolition, landscaping or placing temporary structures within the cultural heritage protection zones are subject to construction permit. The construction permit is not required for refurbishment, facing, equipping and repair works.

The procedure of granting the construction permit is divided in three stages: (1) Identification of town planning conditions, (2) Agreement of the architectural-construction project, and (3) Granting the construction permit. The entire procedure and related administrative work must be implemented in 60 days. The conditions and the rules for granting a construction permit are defined by the Law on the Control of Technical Threat, which replaced the Law on Construction Permits in 2010.

In towns and settlements the permit is granted by the local self-government, however there are other administrative bodies that participate in the first and second stages of the process:

- The MESD (in recreational zones of the settlements of Gudauri, Bakuriani, Bakhmaro and Ureki and for the special building regulation zones on the territory of the town Borjomi);
- The MoCMP (in the cultural heritage protection zones except Adjara AR);
- The Ministry of Culture of Adjara autonomous republic (in cultural heritage protection zones in Adjara and the listed properties in Batumi);
- The MoENRP (in the protected areas and in case when the Environmental Impact Assessment (EIA) is required by the law);
- The National Environmental Agency of the MoENRP (in coastal zones);
- The Border Police of Georgia (subordinate to the Ministry of Internal Affairs) in state border zones.

The permits for archaeological works, for cultural heritage listed properties are granted by the MoCMP. For the construction of objects of special national importance a permit is granted by the MESD.

### **5.1.8 LEGAL RIGHTS OF THE PRIVATE SECTOR<sup>14</sup>**

Since the independence from the Soviet Union in 1992 and the transfer from state Socialism to the free market economy the percentage of private owners in the field of cultural heritage has greatly increased. During the Soviet period the state used to own all such immovable properties as at that time the private ownership was largely not accepted. After the collapse of the Soviet regime the ownership was transferred to private ownership. In relation to cultural heritage these were mainly the housing stock in the historic districts and towns. As a result, the majority of the residential listed properties in historic town are privately owned by the physical persons or legal entities.

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<sup>14</sup> The issue is important in the context of private investments in tourism sector to be financed by the project



The relationship and obligations of the private owners of listed properties and the state is regulated by the Law on Cultural Heritage. According to the law the owner (legal user) of a listed property is obliged to sign an agreement with the MoCMP concerning the maintenance of the listed property. The agreement shall secure the protection of the property from damage and destruction and preservation of its historical and cultural values. An owner is obliged to inform the MoCMP about changes of the condition of a property and its state of preservation, to prevent any unlawful influence, alteration, fragmentation, to give prior notice to the MoCMP in the event of alienation and inform the buyer on the status of the property.

So far this mechanism has not been effective as the necessary coordination among the state institutions is not yet achieved. For example, the National Agency for Public Registry does not have information on listed properties integrated in its database, thus it is not possible to verify the status of a property and, in case the owner does not inform the buyer, there is no barrier to prevent alienation of the listed property. The owner may lack information on the status of its property as they are rarely informed when the property is granted a listed property status (see section 2.5).

The maintenance agreement between the MoCMP and the property owner is also complicated due to the lack of administration in this field. The agreement form, rules and procedures are yet to be defined and specified to make this protection mechanism effective in practice.

The rights and obligations of the Church as a private owner has to be discussed separately (see section 2.2). According to the Concordat the Church is the owner of the most listed properties in the country and should take care of its properties together with the State. Moreover the churches, as the places of worship, represent a specific type of cultural heritage: since the collapse of the Soviet regime the mass rehabilitation of the religious functions of these historic buildings, previously abandoned or converted into different uses, has taken place all over the country. These circumstances are to be considered in the process of elaboration of the specific rules for the maintenance and rehabilitation of these properties. Before such rules are laid down, the relationship between the Church and the State, with regard to the maintenance and rehabilitation of monuments, remains without specific regulation.

The major issues that need to be considered for the improved management in historic towns:

- To bring the legal framework and subordinate legal acts into coherence through respective legislative amendments;
- To improve the system of administration in the field of cultural heritage proper as well as the coordination with different national and local authorities. The development of a unified information system for cultural heritage can be a key aspect in this direction.
- To build the capacity of responsible institutions for implementation of the legal provisions regarding the cultural heritage, such as the relationship between the state and an owner of a listed property and identification of crimes against cultural heritage.

There are also more technical and methodological aspects which would be desirable to improve, such as the delineation of cultural heritage protection zones, setting up and implementing the management plans and conservation plans for listed properties, the infill design and harmonization of modern and historic architecture in historic cities. The Pilot Program for Rehabilitation of Historic Towns provides a possibility to elaborate on some of the problems put forward in this report, e.g. to help definition of cultural heritage protection zones in selected historic towns, to create Historical-Cultural Reference Plans and town planning documents, to update the inventories, etc.

## 5.1.9 PROTECTION OF THE MUSEUM RESOURCES

Protection of the cultural heritage of museums is addressed in the law on Museums (2001) particularly in its chapter IV. This chapter covers issues related to inventory of museum exhibits, protection, restoration and rehabilitation of resources. More details are provided in the “Instructions on Inventory and Protection of Museum Funds” and particular instructions developed by each museum. In Annex 1 to this chapter we provide such instructions developed for Vani museum, which is rehabilitated within the frames of RDP II.

## 5.2 ENVIRONMENTAL PROTECTION

### 5.2.1 ADMINISTRATIVE STRUCTURE AND ENVIRONMENTAL LEGISLATION IN GEORGIA

#### 5.2.1.1 Administrative Structure

**Ministry of Environment and Natural Resources Protection (MoENRP)** is a leading ministry responsible developing the environmental policy of the government and has overall responsibility for managing natural resources and radiation safety. The MoENRP consists of several functional departments and services, which are responsible for different aspects of environmental protection, and other supporting departments, like administrative department, Legal Department, Service of Public Relations etc.

Functional departments and their responsibilities:

Department of Environmental Impact Permits	<ul style="list-style-type: none"> <li>- Carrying out Ecological Expertise and issuing Environmental permits</li> <li>- Post EIA monitoring of compliance with the conditions of Environmental Permit</li> </ul>
Department of Environmental Policy and International Relations	<ul style="list-style-type: none"> <li>- Development of the State Policy and State Environmental Programs</li> </ul>
Ambient Air Protection Service	<ul style="list-style-type: none"> <li>- Ambient air and water protection strategy;</li> <li>- Consent on the Reports of “Inventory of Stationary Sources of Emissions” and “Norms of Maximally Admissible Emissions”.</li> </ul>
Water Resources Management Service	<ul style="list-style-type: none"> <li>- Water resources protection policy, monitoring;</li> <li>- Consent on the Report on “Norms of Maximally Admissible Discharges”;</li> <li>- Consent on the technical regulations for Water Intake from the Surface Water Objects.</li> </ul>
Waste and Chemicals Management Service	<ul style="list-style-type: none"> <li>- Waste Management</li> <li>- Hazardous Substance Management</li> <li>-</li> </ul>
Climate Change Service	<ul style="list-style-type: none"> <li>- Climate change adaptation and mitigation policy and strategies</li> <li>- Greenhouse Gas inventories</li> </ul>
Biodiversity Protection Service	<ul style="list-style-type: none"> <li>- Biodiversity protection policy and strategies;</li> </ul>

	<ul style="list-style-type: none"> <li>- Red list species;</li> <li>- National Biodiversity Monitoring System;</li> <li>- Hunting and fishery policy and management.</li> </ul>
Legal Department	- Development of Environmental Legislation
Agency of Protected Areas	- Protected areas development policy and programs
Environmental Agency	<ul style="list-style-type: none"> <li>- Hydrometeorology</li> <li>- Pollution Monitoring</li> <li>- Geohazard monitoring</li> <li>- Monitoring of geo-ecological conditions of river basins, water reservoirs, Black Sea territorial waters, continental</li> </ul>

The functions and responsibilities of the former Department of Natural Resources of the Ministry of Energy have been redistributed among the Department of Environmental Supervision, National Forestry Agency and National Environmental Agency under the MoEPNR and State Agency on Oil and Gas. The National Environmental Agency is responsible to issue licenses on exploration of natural resources (except gas and oil). This includes also licenses for quarries and borrow pits and underground water intake.

Department of Environmental Supervision is responsible for execution of control over the environmental protection and use of natural resources. In particular, responsibilities of the Department cover matters like:

Inspection of compliance with the natural resource use regulations;

Inspection of compliance with the conditions of Environmental Impact Permit.

The MoENRP defines and evaluates real and possible risk of impact on natural environment during implementation of different types of activities. Accordingly the Ministry has been assigned as responsible body for making decision on granting permission to the proponent on implementation of projects, which require Environmental Impact Assessment (EIA). Granting procedures slightly differ for different type of projects.

For the projects, which do not require Construction Permit, the Environmental permit is being issued by the MoENRP on the ground of State Ecological Examination. State Ecological Examination is carried out by MoENRP upon official submission of EIA prepared by project developers.

For projects requiring Construction Permit, no special permit is issued by MoENRP (according to “One window principle”, only one permit shall be issued for each activity). The Construction Permit is issued by the MESD, but the issuance of the Permit is subject to the consent of the MoENRP in a form of Conclusion of Ecological Expertise, as well as the MoCMP (The Department for Cultural Heritage Strategy, Coordination and Permissions). Consent of the MoENRP in such cases should be issued according to the same procedures (EIA, public consultations; SEE etc.) as for issuing Environmental Permit. The MESD as an administrative body issuing a permit ensures the involvement of the MoENRP as a different administrative body in the administrative proceedings initiated for the purpose of permit issuance, in accordance with Georgia’s Law on Licenses and Permits.

Project screening (definition of the project category and necessity for preparation of EIA) and scoping (definition of set of environmental issues and Terms of Reference) is carried out by the project implementing agency and its consultants (in this case MDF and its consultants). Scoping and screening do

not represent mandatory procedures according to Georgian legislature although review of scoping/screening outcomes and agreement of the MoENRP is considered a desired practice.

As a rule, EIA permitting conditions contains requirement for informing MoENRP regarding fulfillment of the EIA permit conditions. This basically means giving information regarding implementation of Environmental Management and Monitoring Plans.

**Ministry of Economic and Sustainable Development (MESD).** For the projects classified as the projects of Special Importance, MoESD is responsible for carrying out the review of technical documentation (including conclusion of an independent experts) and issuing Permits on Construction for such projects, as well as for supervision over constructing activities and for arranging Acceptance Commission after completion of construction.

State supervision of construction and compliance monitoring is provided by the Main Architecture and Construction Inspection (MACI), which is operating under the MESD.

MESD is issuing licenses for operations of quarries, needed for infrastructure construction activities.

#### **Other Responsible Governmental Institutions:**

**The Ministry of Culture and Monument Protection (MoCMP).** The ministry is responsible on supervision of the construction activities in order to protect cultural heritage. In case if construction is to be carried out in a historic sites or zones of cultural heritage, consent of the MoCMP is also required for issuing construction permit.

### **5.2.1.2 Legal Framework**

#### **Framework Legislation**

The basic legal document is **The Constitution of Georgia**, which was adopted in 1995. While the Constitution of Georgia does not directly address environmental matters, it does lay down the legal framework that guarantees environmental protection and public access to information with regard to environmental conditions.

Article 37, Part 3 states that “any person has the right to live in a healthy environment, use the natural and cultural environment. Any person is obliged to take care of the natural and cultural environment.” Article 37, Part 5 states that “an individual has the right to obtain full, unbiased and timely information regarding his working and living environment.”

Article 41, Part 1 states that “a citizen of Georgia is entitled to access information on such citizen as well as official documents available in State Institutions provided it does not contain confidential information of state, professional or commercial importance, in accordance with the applicable legal rules.

Legislative execution of constitutional requirements in the sphere of environmental protection is implemented through framework Georgian “Law on Environmental Protection” (1996, as amended) and the set of specific laws developed on its basis. The framework law regulates the legal relationship between the bodies of the state authority and the physical persons or legal entities (without distinction-legal form) in the scope of environmental protection and in the use of nature on all Georgia’s territory including its

territorial waters, airspace, continental shelf and special economic zone. The law deals with education and scientific research in the scope of environment, environmental management aspects, economic levers, licensing, standards, EIA and related issues. Considers different aspects on protection of ecosystems, protected areas, issues of global and regional management, protection of ozone layer, biodiversity, protection of Black Sea and international cooperation aspects. In particular, the law addresses broad spectrum of issues, like environmental management, environmental education and awareness building, licenses and permits, fines and enforcement, EIA, which should be further regulated by specific laws. According to the requirements set forth in the framework law, numerous laws and normative–legal documents were adopted to regulate specific environmental issues in Georgia.

Further below the environmental regulations most relevant to the project – and first of all, to the permitting process - are described.

### **Legislation Related to Environmental Permitting**

At present, the environmental permitting procedure in Georgia is set out in three laws:

The project proponent, in implementing projects, will comply with (i) **The Law on Licenses and Permits (2005)**; (ii) **The Law on Environmental Impact Permits (EIP)**, and (iii) **The Law on Ecological Examination (EE) 2008**. In more details the EIA process and required content of the EIA document is described in the **Regulation on EIA issued by the MoENRP dated May 15, 2013**

**The Law on Licenses and Permits** was adopted by Parliament of Georgia, on June 24, 2005. The Law regulates legally organized activities posing certain threats to human life and health, and addresses specific state or public interests, including usage of state resources. It also regulates activities requiring licenses or permits, determines types of licenses and permits, and defines the procedures for issuing, revising and canceling of licenses and permits (Article 1, Paragraph 1).

**The Laws on Environmental Impact Permit and on Ecological Examination** have been published on 14.12.2007 and entered in force on 01.01.2008. These new laws integrate all the amendments introduced in legislation of Georgia during recent years.

### **The Law of Georgia on Environmental Impact Permit.**

The Law of Georgia on Environmental Impact Permit determines the complete list of the activities and projects subject to the ecological examination (clause 4 p.1) and the legal basis for public participation in the process of environmental assessment, ecological examination and decision making on issuance of an environmental impact permit.

Under the “activities” subject to the ecological examination the law considers construction of new or upgrading of existing facilities imposing change of technology and operational conditions for the projects and activities included into the list. The routine maintenance works in relation with the same facilities do not require ecological examination and permit.

In case if the activity included into the list given in clause 4 p.1 at the same time requires Construction Permit, the administrative body responsible for issuance of the Construction Permit ensures involvement of MoENRP, as a separate administrative body, in the administrative procedures initiated for the purpose of issuing Construction Permit, as it is envisaged by the Law on Licenses and Permits. In such cases the

MoENRP is issuing the Conclusion on the Ecological Examination of the project based on the documentation provided to MoENRP by the administrative body issuing the Permit.

The Conclusion on the Ecological Examination is adopted by the administrative (executive) legal act of the MoE and compliance with the conditions of the Conclusion is obligatory for the project proponent. The conditions of the Conclusion on Ecological Examination is a part of conditions of the Construction Permit.

In case if the activity included into the list given in clause 4 p.1 does not require Construction Permit, based on the Conclusion on the Ecological Examination the MoENRP will issue the Environmental Impact Permit, supported by the administrative (executive) legal act issued by the minister. The ecological examination is carried out in accordance with the law of Georgia on Ecological Examination and the conditions set forth by the Conclusion present the Conditions of the Permit.

The aforementioned laws do not provide details of screening procedure and do not define responsibilities of parties. According to the practice, the screening<sup>15</sup> of project proposals is being carried out by the project proponent in consultation with the MoENRP.

#### Public Consultation Procedures.

The 6<sup>th</sup> clause of the law of Georgia on the Environmental Impact Permit provides detailed requirements and procedures for conducting public consultations and established timeframes for information disclosure and discussion, namely:

According to article 6, developer is obliged to carry out public discussion of the EIA before its submission to an administrative body responsible for issuing a permit (in case of activity requiring construction permit before initiating stage 2 procedure for construction permit issuance).

A developer is obliged to disclose (publish) the draft EIA document and publish information regarding details of the planned public discussion. Information is subject to publication in the central periodical as well as in the printing organ existing within the administrative territory of the same rayon (if such exists) where an activity is planned. Information (advertisement) shall contain the following information:

- The objectives, title and location of the planned activity;
- The location where interested individuals may obtain the activity related documents (including the EIA report);
- Deadline for the submission of their opinions;
- The place and time of public discussion.

A developer is entitled:

- To submit a hard copy and an electronic version of the EIA to administrative body issuing a permit within a week from the date of the publication;
- To receive and consider within 50 days from the date of publication from citizens written comments and suggestions;
- Hold a public discussion on a planned activity not earlier than 50days and not later than 60 days from the publication of an advertisement;
- To ensure invitation to public discussion of the representatives of respective local administration and governmental agencies representatives; the Ministry and MESD and other interested administrative bodies.

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<sup>15</sup> In fact the procedure implies simple checking with the list of projects requiring Environmental Impact Permit. MoENRP does not even consider that this is “screening” procedure, although – simplified.

Discussion shall be held publicly and any citizen has a right to attend it. Public discussion shall be held in the administrative center of the rayon where an activity is planned.

According to the article 7 of the law, during 5 days after conducting the public disclosure meeting, the minutes of the meeting should be prepared to reflect all the questions and comments raised and explanations, provided by the project proponents in response. Appropriate corrections should be incorporated into the main text of the EIA, if required. If the comments and proposals of stakeholders are not accepted a letter of explanation should be sent to the authors. The minutes of the meeting, as well as response letters, explanations and corrections should be submitted to the MoENRP or the administrative body responsible for issuing the Permit as supplementary materials to the EIA. The mentioned documents should be considered as an essential part of the EIA.

#### Procedure of Official Submission of EIA to MoENRP

Article 8 of the Law specifies the documents to submit to receive a permit:

- (1) An operator, in order to receive a permit, shall submit a written statement to the Ministry. A statement to receive a permit is submitted, considered and processed under the rule established by the ‘Law of Georgia on Licenses and Permits’.
- (2) An operator is obliged, in addition to the information specified by the ‘Law of Georgia on Licenses and Permits’, to submit the following documents:
  - (a) An EIA report drawn up under the standards specified by the legislation of Georgia (in 5 hard copies and 1 soft copy)
  - (b) A situation plan of the planned activity (with the indication of distances)
  - (c) Volume and types of the expected emissions (a technical report of inventory of the stationary sources of pollution and emitted/discharged harmful substances and project of maximum permissible concentrations of emitted/discharged harmful substances (in 4 copies))
  - (d) A brief description of the activity (as a technical summary)
  - (e) A statement about the confidential part of the submitted statement.
- (3) An operator is obliged to submit a full diagram of the technological cycle to the permit issuing body even if the given activity contains a commercial and/or state secret. This part of the statement, according to sub-clause ‘e’ of clause 2 of the given Article should be submitted separately by the operator.

#### Issuance of the Permit on Environmental Impact

The article 9 of the law describes the procedures of issuing the Environmental Impact Permit. The same issue is addressed in the laws of Georgia on “Licenses and Permits” (2005) and “on Ecological Examination” (2008).

1. According to the law on “Licenses and Permits,” the MoENRP takes decision on issuing Permit within the 20 days after submission of request on permit by the project proponent.
2. MoENRP, in accordance with the law on Ecological Examination, ensures expertise of the submitted documentation and issuance of Conclusion on Ecological Examination. The Permit (Environmental Permit, or Construction Permit when the latest is required) is issued only in case of the positive conclusion of the Ecological Examination.

**Regulation on EIA issued by the MoENRP dated May 15, 2013**

The requirements related to EIA studies and the structure and content of the EIA report are set forth in the **Regulation on EIA issued by the MoENRP dated May 15, 2013, #31**

The content of the EIA document is specified in the clause 5 of the Regulation as follows:

Article 6. Content of the EIA

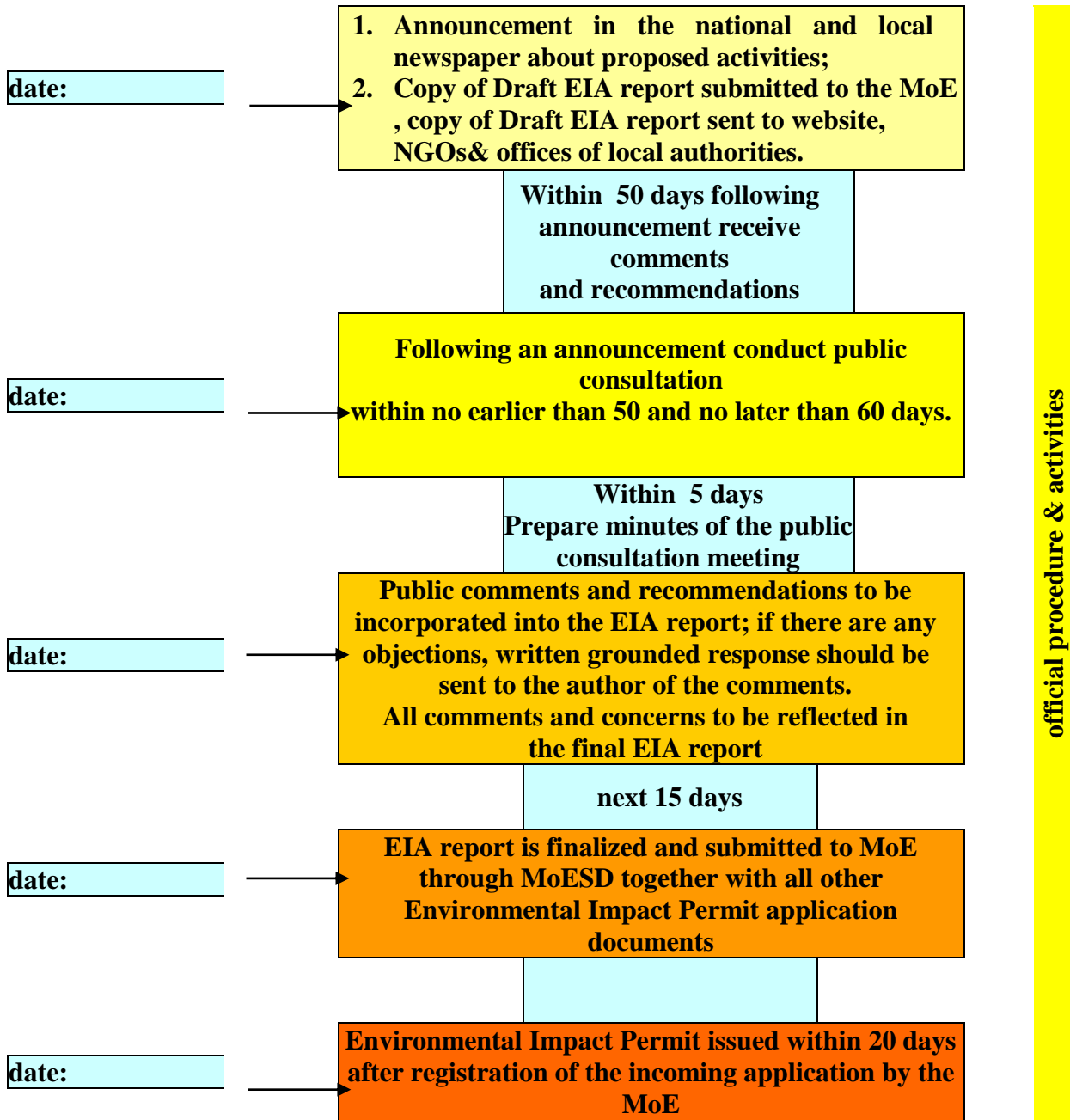
The EIA report should include the following information:

- (a) Analysis of the existing state of the environment;
- (b) Identifying the sources, kinds and objects of impact caused by the activity;
- (c) Forecast of the changes of quantitative and qualitative characteristics of the environment;
- (d) Determining the probability of emergency situations due to the activity and evaluating the expected results;
- (e) Evaluation of the environmental, social and economic results of the planned activity;
- (f) Specifying the reduction measures for the negative impact on the environment and human health and specifying the compensation measures as necessary;
- (g) Identifying the residual (cumulative) impact and measures for its control and monitoring;
- (h) Undertaking environmental and economic evaluation of the projects;
- (i) Analysis of the alternative variants of the project implementation, selection and forming new variants;
- (j) Identifying the ways and means to restore the initial environmental condition in case of terminating entrepreneurship or other activity;
- (k) Informing the society and studying the public opinion;
- (l) Plan for the post-project situational analysis;
- (m) Identifying the kinds and quantities of the expected emissions;
- (n) Forecast of the expected environmental state gained through the environmental impact factors;

Decree also requires development of the Monitoring Plan during the implementation of the project and at the end of the activity.



**Fig. 5.1 Disclosure and Environmental Impact Permit Procedure**



Environmental Permitting procedures in Georgia are not well matched to the project cycle, especially as it is understood by International Financial Institutions. The legal systems lacks decision making tools for the early stages of the project development, when as a rule strategic decision making is required (e.g. selection of strategic alternatives, route selection for highways and pipelines, development of strategic regional or sectoral programs etc). There are no instruments like Strategic EIAs or Preliminary EA as part of Feasibility Study. The documents elaborated at the basic design or feasibility study are not reviewed by MoENRP and mostly even informal opinion is not provided.

The Georgian legislation does not provide for a Strategic Environmental Assessment. Only an EIA should be carried out only for the types of development defined by the law. These are the developments bearing risks to the environment, such as: the heavy industry plants, mines, energy plants, oil/gas pipelines, etc. The list of developments, bound by the law to obtain the EIA prior to construction permit, has been considerably reduced in the last years.

### **Other Environmental Laws**

The Law on Environmental Inspectorate has been adopted in 04.05.2010. This Law has been abolished in 2011, however its provisions are in force until the relevant authorized bodies will issue new regulations.

**Waste Management.** The following decrees of the Government of Georgia define the waste management technical regulations:

The Decree #64 on “Approval of the technical regulation on rules of collection, storage and neutralization of the wastes of preventive treatment establishments”, January 15, 2014

The Decree #416 on “Approval of the technical regulation on arrangement of polygon/grounds for disposal of solid household wastes and adoption of operating rules and norms”, December 31, 2013

### **The “Georgian Law on Ambient Air Protection” was put into effect from 1 January 2000.**

The scope of the “Georgian law on Ambient Air Protection” is to protect ambient air on the whole territory of Georgia from harmful human impact. This law does not govern the field of air protection in work places. Main competences of governmental authorities in the field of ambient air protection (a) Development of environmental monitoring (observation) system; (b) Development and implementation of common policies and strategies; and (c) Development of integrated ambient air pollution control.

Types of harmful human impact include:

- introduction of pollutants into the ambient air;
- radioactive impact on ambient air;
- ambient air pollution with micro-organisms and microbial toxins;
- physical impact of noise, vibration, electromagnetic field etc. on ambient air.

Types of ambient air pollution are specified:

- emission of pollutants into the ambient air from stationary pollution source;
- emission of pollutants into the ambient air from mobile sources of pollution;
- emission of pollutants into the ambient air from non-point sources of pollution;
- emission of pollutants into the ambient air from small-scale sources of pollution.

According to the Article 29<sup>1</sup>, the inventory on emissions of air pollutants from stationary pollution sources is obligatory for physical and legal entities. The special inventory report is to be prepared for 5 years for each source of the atmospheric air pollution and each type of a harmful substance.

At preparing the EIA project, a full inventory on emissions (in case of existence) is to be carried out and maximum permissible concentrations or temporarily agreed permissible concentrations of the emitted harmful substances for stationary pollution sites are to be set. Maximum permissible concentration is an amount of permitted emissions of air pollutants from stationary pollution sources. Temporarily agreed

permission concentrations can be approved for five years (maximum) without prolongation. The Maximum permissible concentration of the emitted harmful substances for stationary pollution sites is approved for 5 years for each source of the atmospheric air pollution and each type of a harmful substance.

All activities that are not subject to EIA, however are stationary sources of air pollution, becomes obligatory for the development of the inventory of hazardous substances emitted. Technical regulation on inventory of atmospheric air pollution source is adopted by the Decree of Government of Georgia #42, January 6, 2014. Technical report must be agreed with MoENRP.

Registration of emissions from stationary pollution sources comprises:

- self-monitoring of emissions;
- state emission registration system.

Self-monitoring of emission of pollutants from stationary pollution sources means that economical actor (operator) shall conduct adequate self-monitoring of pollutant emissions from stationary pollution sources.

It includes:

- emission measurements (assessment)
- registration of emissions
- reporting of emissions

State emission registration system is a system of compilation, processing and analysis of emission reporting documentation. The MoENRP conducts state registration of emissions.

**The Law of Minerals of 1996** provides provisions for the mineral resource exploration and management and establishes the requirement to obtain a license according to the procedures established under this law. The Law on Licensing and Permits (June 25, 2005) establishes the most recent regulations for licensing. According to the current legislation all quarries and borrow pits require to obtain a license.

**The Wildlife Law of 1996** mandates the MoENRP to regulate wildlife use and protection on the whole territory of the country. The law empowers the MoENRP to issue hunting licenses, declare hunting areas, control poaching, etc. Potential poaching by the workers should be controlled also during construction works, especially in a sensitive ecological areas.

#### **Forestry Code of Georgia (1999, including effective amendments)**

The Forestry Code of Georgia regulates the legal relations connected to looking after, protection, restoration and application of the forest fund and its resources. The aims of the Forestry Code of Georgia are as follows:

Looking after, protection and rehabilitation of forests aiming at conserving and improving their climatic, water-regulating, protective, cultural, health, medicinal and other mineral wealth, conservation and protection of original natural and cultural environment and its individual components, including the vegetation cover and fauna, bio-diversity, landscape, cultural and natural monuments in the forests, rare and endangered plant species and others and regulation of their interaction in the benefit of the future generation.

Article 38 of the Forestry Code establishes the modes of protection of the state forest fund:

- (1) Aiming at protecting the present state of the state economic forest fund and its biodiversity, originality of intact forests and relict, endemic and other valuable plant species, the general or

special mode of protection of the state economic forest fund has been introduced by considering the priority functionality, historical, cultural and other values of the forest

(2) The mode of protection of the protected territories of Georgia is defined under the Georgian Law ‘On the system of protected territories’.

According to the Article 39 cutting of a principal use is prohibited in the state forests where a special mode of protection is applied.

### **Law of Georgia ‘On the system of the protected areas’ (1996)**

The Law defines the categories of ‘protected areas’ and specifies the frames of activities admissible in the given areas. The permitted actions are defined by considering the designation of the areas and in accordance with the management plans and provisions of the international conventions and agreements to which Georgia is a party. As a general requirement, the following activities are prohibited in the protected areas:

- (a) Disturbance or any other changes of the natural ecosystems
- (b) Demolition (destroy), arrest, disturbance, damage (invalidation) of any natural resource with the purpose of its exploitation or any other purpose
- (c) Damage of the natural ecosystems or species by reason of the environmental pollution
- (d) Bringing and breeding foreign or exotic species of living organisms
- (e) Bringing explosives or toxic materials to the area.

The Law conclusively establishes the legal status of the protected territories, as it explicitly declares the State’s exclusive ownership rights on all territories including natural resources (lands, forests, waters, animals and etc.) located within the borders of State Nature Reserve, National Park and Natural Monument and Managed Reserve.

It follows from the Law that the “natural-culture and historical-culture objects” shall be under the exclusive ownership of the State if located within the protected territories other than th, Protected Landscape and Multiple Use Area. The Law allows different forms of ownership on the natural resources located within the Protected Landscape and Multiple Use Area, as well as within the traditional use zones of the national parks and several areas of the managed reserve.

Categorization and internal zoning of each protected area is based on the Law on the System of the Protected Areas. Detailed descriptions of the borders of the internal zones as well as rules and regulations imposed upon them are laid down by the management plan.

According to the law, all kinds of economic and entrepreneurship activities are admissible in the support zone provided they do not hamper the functioning of the protected areas.

### **Legal status of the Protected Areas in Imereti Region**

- **Law on creation and managing protected areas of Imereti caves, #5485-III s of November 22, 2007**
- **Law on creation and managing protected areas of Borjom-Kharagauli protected areas, # 5263 of April 11, 2007;**

- **Order N 97 of the Minister of Environment Protection and Natural Resources of Georgia, January 28, 2008, Tbilisi “On Approval of Typical Regulation of the Territorial Administrations of the Protected Areas Agency”**

Above mentioned laws

define the categories, status, administration of the protected areas.. Buffer zones bordering protected territories are also created for BKNP. Specific activities within protected areas are largely governed by the relevant regulations and management plans developed for each area.

Management and administration of the protected areas is executed based on the **“Typical Regulation of the Territorial Administrations of the Protected Areas Agency”** (Adopted by the decree of Minister of Environment and Natural Resources Protection, # 12, May 10, 2013))

The guidance for the elaboration of PAs management plans (general structure and content of the management plans and methodology for development of thematic parts) is adopted by the decree of the Minister #110, March 12, 2014.

However, the key importance issue is absence of management plans. Management plans are considered as a main tool for integrated management of nature protected areas. Currently, only five (Javakheti, Tusheti, Borjomi-Kharagauli, Mtirala da Vashlovani protected areas) out of the 84 protected areas have adopted management plans (i.e. management plans that have been adopted in accordance with the procedures regulated by Georgian legislation and those that have not expired<sup>16</sup>). Thus, the vast majority of PAs are managed without documented comprehensive objectives and policies that can be communicated to PA staff, adjacent communities and others; they lack coherent and integrated strategies for protection, conservation, socio-economic development of adjacent communities, monitoring, and strengthening the administration.

Because of absence of management plans, adjacent communities have few opportunities to participate in planning and management of PAs. One of the consequences is that opportunity costs, which fall on adjacent communities (e.g. loss of access to resources resulting from the establishment of the PA or restrictions imposed by the PA administration), usually are not taken into account in planning.

### **Law of Georgia ‘On the Red List and Red Book’ (2003)**

The Law regulates the legal relations in the field of developing the Red List and Red Book, protecting and using the endangered species, except the legal issues of the international trade with endangered wild animals and wild plants, which within the limits of the jurisdiction of Georgia are regulated by virtue of the Convention ‘On the international trade with the endangered species of wild fauna and flora’ concluded on March 3 of 1973 in the city of Washington.

According to Article 10 of the Law, any activity, including hunting, fishing, extraction, cutting down and hay-mowing, except particular cases envisaged by the present Law, Law of Georgia ‘On Wildlife and legislation of Georgia, which may result in the reduction in number of the endangered species, deterioration of the breeding area or living conditions, is prohibited.

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<sup>16</sup>. Protected areas that do not have current management plans are managed by temporary regulatory documents adopted by the Government of Georgia, #84, January 16, 2014.

Possible negative impacts of the planned activity on the endangered species should be taken into account while EIA and ecological expertise.

The Red List of Georgia was approved by the **Presidential Decree No. 303 ‘On approving the Red List of Georgia’ (May 2, 2006)**. Later, the **Decree of Government #190, February 20, 2014 adopted the same list**.

“The Technical Regulation on Adoption the Methods to Estimate Damage to Environment” has been adopted by the Decree of the Government #54, January 14, 2014 which defines rules to estimate and compensate environmental damage if mitigation is impossible even through planning and realizing the preventive measures.

Below we site the clauses, which may be useful to estimate the damage within the limits of the project.

**Article 2.** The rule to estimate the damage caused by the harmful anthropogenic action on the atmospheric air

**Article 3.** The rule to estimate the environmental damage caused by the soil pollution

**Article 4.** The rule to estimate the environmental damage caused by the soil degradation

**Article 5.** The rule to estimate the environmental damage caused by illegal action with forest resources

**Article 6.** The rule to estimate the environmental damage caused by damaging the green plantations in the capital of Georgia, other cities and towns, regional centers and settlements

**Article 7.** The rule to estimate the damage caused by damaging the fish reserve and other biological forms

**Article 8.** The rule to estimate the damage caused by illegal acquisition of the animal life objects

**Article 9.** The rule to estimate the environmental damage during the fossil exploitation

**Article 10.** The rule to estimate the environmental damage caused by the pollution of water resources.

### **The Law of Georgia on Soil Protection**

(1994. Amended in 1997, 2002)

The aim of the Law is to protect the soil from the contamination and sets the limits for the hazardous substances concentration in it.

The regulates the usage of fertile soils for non-agricultural purposes and strictly prohibits to undertake any kind of activity without removal of the fertile soil layer and makes compulsory to reinstate sites after open mining. It regulates uncontrolled pasturing of animals and protects forest as a mean to maintain the soil in a favorable condition. Prohibits and regulates any kind of activity related to the storage of chemicals and hazardous substances could pollute or damage the soil properties.

### **The Law of Georgia on Water 1998 as amended**

This Act governs the legal relations: Between state authorities and natural and legal persons (regardless of the form of ownership and the legal-organizational status) in the sphere of water protection, study and use;

In the sphere of water protection, restoration and use on the land, in the continental shelf, territorial waters and in the special economic zone;

In the sphere of commercial water production and international trade in water.

For activities to be subjected to ecological expertise that require EIA, it is mandatory to set regulations for pollutant discharge into the surface water bodies. The rule of calculation of such standard is approved by Decree #414 of December 31, 2013 of the Government of Georgia “On approval of technical regulations

for calculation of maximum admissible discharge (MPD) standards of pollutants discharged into the surface water bodies together with effluents”

Industrial and nonindustrial facilities that discharge effluents into surface water bodies and whose activities are not subjected to ecological expertise, should adhere to technical regulations of admissible discharge approved by the Decree #17 of January 3, 2014 of the Government of Georgia.

The ‘**Law of Georgia on Cultural Heritage**’ was approved in May of 2007. Article 14 of the Law specifies the requirements for ‘large-scale’ construction works. According to this Article, a decision on career treatment and ore extraction on the whole territory of Georgia, as well as on construction of an object of a special importance as it may be defined under the legislation of Georgia, is made by a body designated by the legislation of Georgia based on the positive decision of the MoCMP. The basis for the conclusion is the archeological research of the proper territory to be carried out by the entity wishing to accomplish the ground works. The entity wishing to do the ground works is obliged submit the Ministry the documentation about the archeological research of the territory in question. The preliminary research should include field-research and laboratory works. In case of identifying an archeological object on the territory to study, the conclusion of the archeological research should contain the following information: (a) a thorough field study of the archeological layers and objects identified on the study territory by using modern methodologies, (b) recommendations about the problem of conservation of the identified objects and planning of the building activity on the design territory, on the basis of the archeological research.

### **Georgian Law on Regulation and Engineering Protection of Coasts of Sea, Water Reservoirs and Rivers of Georgia (27.12.2006, No. 4131)**

Article 9. Rules regulating the economic activity within the coast protection zone

- (1) The body issuing a building permit within the zone of coast engineering protection is obliged to engage the Ministry in the permit issuing process as a concerned administrative body and send it proper documentation for the obligatory conclusion.
- (2) The construction project of buildings and premises within the zone of coast engineering protection should envisage the compensation amounts for the expected coastal damage.
- (3) Extraction of inert material within the zones of strict supervision of sea, water reservoir or river is prohibited, unless this is done for the purposes of coast-formation or control of streams.

### **International Commitments**

International cooperation is a dominant feature and driving force for environmental reforms in Georgia. Some of the International Treaties and Conventions Ratified or Signed by Georgia are provided in the list below.

#### Short List of the Ratified or Signed Conventions

N	Title	Year of ratification
1	Ramsar Convention on Wetlands	1996
2	United Nations Framework Convention on Climate Change (UNFCCC)	1994
3	Kyoto Protocol	1999

4	Basel Convention on the Control of Transboundary Movement of Hazardous Waste and Their Disposal	1999
5	Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus Convention)	1999
6	United Nations Convention to Combat Desertification (UNCCD)	1999
7	Convention on Biological Diversity	1994
8	Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)	1996
9	The Vienna Convention for the Protection of the Ozone Layer	1995
10	Montreal Protocol on Substances that Deplete the Ozone Layer	1995
11	Convention on Long-range Transboundary Air Pollutants	1999
12	Stockholm Convention on Persistent Organic Pollutants	2006
13	Convention on the Conservation of European Wildlife and Natural habitats	2008
14	Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade	2006

### **Aarhus Convention June, 1998**

The Aarhus Convention establishes a number of rights of the public (individuals and their associations) with regard to the environment. The Parties to the Convention are required to make the necessary provisions so that public authorities (at national, regional or local level) will contribute to these rights to become effective. The Convention provides for:

- the right of everyone to receive environmental information that is held by public authorities ("access to environmental information"). This can include information on the state of the environment, but also on policies or measures taken, or on the state of human health and safety where this can be affected by the state of the environment. Applicants are entitled to obtain this information within one month of the request and without having to say why they require it. In addition, public authorities are obliged, under the Convention, to actively disseminate environmental information in their possession;
- the right to participate in environmental decision-making. Arrangements are to be made by public authorities to enable the public affected and environmental non-governmental organisations to comment on, for example, proposals for projects affecting the environment, or plans and programmes relating to the environment, these comments to be taken into due account in decision-making, and information to be provided on the final decisions and the reasons for it ("public participation in environmental decision-making");
- the right to review procedures to challenge public decisions that have been made without respecting the two aforementioned rights or environmental law in general ("access to justice").

Setting the goal to preserve its biological diversity and realising the importance of international cooperation, Georgia signed the Convention on Biological Diversity in 1994, thus accepting responsibility to safeguard the nation's rich diversity and of plant, animal, and microbial life to begin using biological resources in sustainable way, and to ensure equitable sharing of benefits from biodiversity

**The Convention on Biological Diversity** is the first global agreement, which, along with biodiversity conservation, necessitates the sustainable use of biological resources Georgia has been recognized as holding an important reservoir of biodiversity and is very important in the global context – according to



the surveys and assessments conducted at an international level Georgia, as a part of the Caucasus, is recognized as:

- One out of 34 biologically richest and endangered land ecosystems (Conservation International);
- One out of 200 vulnerable ecoregions (WWF);
- One out of 221 endemic bird habitats (Bird Life International);
- One of the World Agrobiodiversity Centers.

National Biodiversity Strategy and Action Plan was revised and updated according to the global Strategic Plan for Biodiversity 2011-2020, including Aichi Biodiversity Targets and adopted by the Government of Georgia on May 8, 2014

The development of protected areas is the major strategy for protection of biodiversity in Georgia, some other priority directions in this field have emerged:

- Assessment and integration of the economic values of biodiversity and ecosystems into legislation, national accounting, rural development, agriculture, poverty reduction and other relevant strategies;
- Reducing of negative factors directly affecting threatened natural habitats through the sustainable management;
- Improving of the status of endangered species through effective conservation measures and sustainable use;
- Enhancing knowledge on the values, functioning, status and trends of biodiversity and the consequences of its loss,

## **Environmental Standards and Norms**

### **Environmental Quality Regulations and Standards**

The environmental quality standards and norms define the quality of drinking water, admissible levels of surface waters pollution and measures of their protection including the zones of sanitary protection, the maximum admissible levels of atmospheric air pollution and noise.

Technical regulations approved by the Government of Georgia for environmental protection, potable water safety and labor safety are as follows:

1. Resolution #17 of GoG of January 3, 2014 on “Approval of Environmental technical regulations”. Specifying the following technical regulations approved by the resolution:
  - a) Technical regulation for discharging effluent from industrial and non-industrial facilities into surface water bodies;
  - b) Technical regulation for water extraction from surface water bodies;
  - c) Technical regulation for atmospheric air pollution activities with hazardous substances;
  - d) Technical regulation form for water extraction from surface water bodies;
2. Resolution #58 of GoG of January 15, 2014 on “Approval of technical regulations for potable water”;
3. Resolution #42 of GoG of January 6, 2014 on “Approval of technical regulations for inventory of stationary sources of atmospheric air pollution “;

4. Resolution #424 of GoG of December 31, 2013 on “Approval of technical regulations for removal, storage, utilization and recultivation of topsoil” ;
5. Resolution #361 of GoG of May 27, 2014 on “Approval of technical regulations for construction safety“;
6. Resolution #425 of GoG of December 31, 2013 on “Approval of technical regulations for protection of surface waters from pollution in Georgia“;
7. Resolution #440 of GoG of December 31, 2013 on “Approval of technical regulations for water protection areas”;
8. Resolution #413 of GoG of December 31, 2013 on „Approval of technical regulations for self-monitoring and reporting on emissions from stationary sources of pollution“;
9. Resolution #416 of GoG of December 31, 2013 on „Approval of technical regulations for domestic solid waste landfill arrangement and operation rules and guidelines“;
10. Resolution #445 of GoG of December 31, 2013 on „Approval of technical regulations for water protection zones of small rivers in Georgia”

Except for the above-mentioned, pursuant to the Decree#85 of the GoG (January 16, 2014), the Resolution #297/N (August 16, 2001) “On approval of environmental quality standards” of the Minister of Labor, Health and Social Affairs, remains valid, which specify the tolerable and maximum admissible levels of noise for different zones.

## 5.2.2 EIA AND ENVIRONMENTAL SCREENING UNDER WB PROCEDURES

The WB undertakes environmental screening of each proposed project to determine the appropriate extent and type of EA. Screening principles and procedures, as well as other conceptual and procedural details of EIA process, are described in BP/OP/GP 4.01 Environmental Assessment. The WB classifies the proposed project into one of four categories, depending on the type, location, sensitivity, and scale of the project and the nature and magnitude of its potential environmental impacts. The WB establishes three categories.

Category A is assigned to a proposed project if it is likely to have significant adverse environmental impacts that are sensitive, diverse, or unprecedented. These impacts may affect an area broader than the sites or facilities subject to physical works. EA for a Category A project examines the project’s potential negative and positive environmental impacts, compares them with those of feasible alternatives (including the “without project” situation), and recommends any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance. For a Category A project, the Borrower is responsible for preparing a report.

Category B is assigned to a proposed project if its potential adverse environmental impacts on human environment are less adverse than those of Category A projects. Like Category A EA, it examines the project’s potential negative and positive environmental impacts and recommends any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts. The findings and results of Category B EA are described in the project documentation (Project Appraisal Document and Project Information Document).

Category C is assigned to a proposed project if it is likely to have minimal or no adverse environmental impacts. Beyond screening, no further EA action is required for a Category C project.

Category FI: A proposed project is classified as Category FI if it involves investment of WB funds through a financial intermediary, in subprojects that may result in adverse environmental impacts.

As additional criteria in support for screening procedures the GP-4.01 Annex B provides – “Types of Projects and Their Typical Classifications” with following comment: “Bank and international experience shows that projects in certain sectors or of certain types are normally best classified as illustrated below. These examples are only illustrative; it is the extent of the impacts, not the sector, that determines the extent of the environmental assessment and, hence, the category.” (see annex 4).

## **EIA**

EIA evaluates the potential environmental risks and impacts of a specific project in its area of influence, examines alternatives to the project, identifies ways of improving project selection, siting, planning, design, and implementation by preventing, minimizing, mitigating, or compensating for adverse environmental impacts and enhancing positive impacts. EIA includes the process of mitigating and managing adverse environmental impacts during the implementation of a project.

### **EIA should:**

- be initiated as early as possible in project development and be integrated closely with the economic, financial, institutional, social, and technical analyses of a proposed project
- take into account the natural environment (air, water and land), human health and safety, social aspects (involuntary resettlement, indigenous peoples and cultural Property), and trans-boundary global environmental aspects.
- Also take into account specific host- country conditions – the findings of environmental studies, National Environmental Action Plans, national legislation, the capabilities of the entity implementing the project, as they relate to managing environmental and social impacts, and obligations of the country under relevant international environmental treaties and agreements.

### **EIA report should include:**

- Executive summary – significant findings and recommended actions
- Policy, legal and administrative framework within which the EIA is carried out
- Project description
- Baseline data
- Environmental impacts
- Analysis of alternatives (including mitigation measures)
- EMP including associated costs
- Consultation - lists and describes consultation meetings, including consultations for obtaining the informed views of the affected people, local NGOs and regulatory agencies.

## **Public consultation**

Consistent with WB principles of host-country ownership of the projects implemented under its loans, WB will ensure meaningful public consultation in the development of WB loan-related EIAs and make public the results of EIAs. Public disclosure and consultation procedures are defined in WB BP 17.50 – “Disclosure of Operational Information” and described in details in WB Environmental Sourcebook Vol. I chapter 7 and Updates #5 - “Public Involvement in

Environmental Assessment: Requirements, Opportunities and Issues”. The Bank requests consultations for A and B Category projects. For the category A projects WB requires two consultation meetings (one at scoping, and one on draft EA) and disclosure of draft and final documents in country and through WB website.

### **Comparison of the National legislation and WB requirements**

Environmental assessment established under the WB’s Operational Policies (OP 4.01) and Guidelines (BP 4.01) is analogous to the EIA provided under the legislation of Georgia.

The WB’s guidelines provide detailed description of procedures for screening, scoping and conducting EIA and explain a complete list of stages, which are not envisaged under the national legislation.

Considering an ecological risk, cultural heritage, resettlement and other factors, the WB classifies projects supported by them under categories A, B and C. As mentioned in the Georgian national legislation review section, EIA is carried out only if a developer seeks to implement projects listed in the Law on Environmental Impact Permit. This list is compatible with the category A projects of the WB classification. According to the Georgian legislation EIA is not required in other instances, while WB guidelines may require limited EA or Environmental Reviews for the B category projects, as well.

Georgian legislation does not specify format of EMPs and stage of their provision for the projects requiring EIA and do not request EMPs for the projects not requiring EIAs. The WB guidelines request EMPs for all categories of the projects and provides detailed instructions on the content.

According to the Georgian legislation MoENRP is responsible for monitoring of project implementation on compliance with the standards and commitments, provided in the EIA, and less clearly is defined role of EMPs. The PIU or “Project Proponent” is responsible for implementing “self-monitoring” programs for the projects requiring EIA. The WB guidelines stress the role of EMPs, which are important for all categories of projects and Project Proponent (in our case – RDMED in conjunction with TRRC) is requested to ensure inclusion of monitoring scheme and plans into EMPs. Monitoring of performance compliance against EMPs is important element of WB requirements.

The above considerations reveal major differences between the WB guidelines and the national legislation.

Some of the specific issues are considered below:

The most significant difference between the WB’s approaches on one hand and the national legislation on the other is that the latter does not take into account the issue of involuntary resettlement at any stage of environmental permit issuance. The Georgian legislation considers social factor only in regard with life and health safety (e.g. if a project contains a risk of triggering landslide, or emission/discharge of harmful substances or any other anthropogenic impact). Thus, the national legislation does not consider resettlement as an issue in the process of issuing environmental permits, unlike the WB which takes a comprehensive approach to this issue.

While the WB’s document establishes the responsibility of a Borrower for conducting an environmental assessment, the national legislation provides for the responsibility of a project implementing unit to prepare EIA and ensure its consultation.

The role of the Ministry is restricted to the participation in EIA consultation and carrying out state ecological examination required for the adoption of a decision on issuing an EIA permit as established under the legislation of Georgia. Under the WB regulations the WB resident mission is responsible for coordination of the whole EIA process from initial screening/scoping till the review of drafts and approval and public disclosure of the final EIA.

In regard with consultation: The WB provides for consultations for A and B Category projects (at least two consultations for Category A projects) and requires a timetable of consultations from the Borrower. The national legislation (The Law on Environmental Impact Permit) obligates a developer (i) to ensure public consultation of EIA, (ii) publication of information, (iii) receive comments within 45 days, (iv) arrange consultation not later than 60 days from the date of publication, invite stakeholders and determine the place of consultation).

### Table of Activities

#	Action	Georgian Legislation	WB Requirements
1	Screening	Project Proponent in consultation with MoENRP	WB and the Project Proponent
	Classification	MoENRP	WB
2	Scoping	Not required. Could be conducted voluntarily by Project Proponent.	Obligatory. WB and Project Proponent
3	Draft EIA	To be prepared by Environmental Consultant.	To be prepared by Environmental Consultant.
4	Public Consultations	The EIA should be available for public review during 45 days. Publication of information in central and regional mass-media. Arrange consultation not later than 60 days from the date of publication.	At least two consultations for Category A projects – one at the scoping stage and one for the draft EIA.
5	Final EIA	Consider all comments received during public consultations, incorporate accepted remarks and explain rational when the comments are disregarded.	Consider all comments from WB and public. Agree with the WB on each raised point.  Incorporate accepted public comments and explain rational when the comments are disregarded.
6	Management Plans	No clear guidelines on format, content and timing	Incorporate Monitoring and Management Plans in the EIA report

7	Review and Approval	MoENRP	WB and separately - MoENRP (if the EIA is required by Georgian legislation)
8	Disclosure of final EIA	Not requested	Publication (mainly electronic) of the final EIA.

### 5.3 LEGAL FRAMEWORK FOR INVOLUNTARY RESETTLEMENT

The legal and policy framework of the RDP 2 is based on national laws and legislations related to Land Acquisition and Resettlement (LAR) in Georgia and the WB Safeguard Policy on Involuntary Resettlement (OP/BP 4.12). Based on the analysis of applicable laws and policies and Policy requirements of the mentioned OP/BP 4.12, project related resettlement principles have been adopted by the Project Implementing Institution (MDF) in a form of Resettlement Policy Framework (RPF).

#### 5.3.1 GEORGIA'S LAWS AND REGULATIONS ON LAND ACQUISITION AND RESETTLEMENT

In Georgia, the legislative acts given below regulate the issues of obtaining State ownership rights to privately owned land parcels based on the necessary public needs caused due to road constructions activities:

- (i) The Constitution of Georgia, August 24, 1995
- (ii) The Civil Code of Georgia, June 26, 1997
- (iii) The Law of Georgia on Protection of Cultural Heritage, 2007
- (iv) The Law of Georgia on Notary Actions, December 4 2009;
- (v) The Law of Georgia on Privatization of State-owned Agricultural Land, July 8, 2005
- (vi) The Law of Georgia on Ownership Rights to Agricultural Land, March 22, 1996
- (vii) The Law of Georgia on Recognition of the Property Ownership Rights Regarding the Land Plots Owned (Used) by Physical Persons or Legal entities; 2007
- (viii) The Law of Georgia on Public Register (No820 –IIs; December 19 of 2008;
- (ix) The Law of Georgia on the Rules for Expropriation of Ownership for Necessary Public Need, July 23, 1999
- (x) The Civil Procedural Code of Georgia, November 14, 1997

The existing Laws provide that compensation for lost assets, including land, structures, trees and standing crops, should be based on the current market price without depreciation. Overall the above laws/regulations provide that the principle of replacement cost compensating at market value is reasonable and legally acceptable. The laws also identify the types of damages eligible to compensation and indicate that compensation is to be given both for loss of physical assets and for the loss of incomes. Finally, these laws place strong emphasis on consultation and notification to ensure that the APs participate in the process. Income loss due to loss of harvest and business closure will be compensated to cover net loss. The above-listed laws and regulations give the possibility of applying the following mechanisms for legal application of the property rights:

- (i) Obtaining the right on way without expropriation through the payment of due compensation (on the basis of a contract of agreement or a court decision) prior to commencement of the activities.
- (ii) Expropriation which gives the possibility of obtaining permanent right to land and/or other real estate property on the basis of Eminent Domain Law or a court decision through the payment of due compensation.

Land will be acquired through eminent domain, first on the basis of negotiated settlement with individual affected entities. Should the contract fails, the expropriation process under the eminent domain will start. Under the existing Law in Georgia, the president will issue an order for expropriation based on the request from relevant state agencies. Relevant regional court will assess the presidential order and determine the case of public needs, and grant the expropriation entity rights to obtain land. The court will also appoint a third party to assess the market value of lost assets and determine the compensation payable to relevant land owners accordingly to the value of assets thus found.

### **5.3.2 WB SAFEGUARDS POLICY ON INVOLUNTARY RESETTLEMENT**

The Four important elements of WB's involuntary resettlement policy are: (i) provision of compensation for loss of assets at replacement cost (ii) assistance for relocation, to improve living conditions among displaced persons through provision of adequate housing with security of tenure at resettlement sites; (iii) assistance for rehabilitation to improve or, at a minimum, restore the livelihoods and standards of living of displaced persons to pre-project levels; and (iv) ensuring that resettlement activities are implemented with appropriate disclosure of information, consultation, and the informed participation of those affected. For any WB operation requiring involuntary resettlement, resettlement planning is an integral part of project design, to be dealt with from the earliest stages of the project cycle, taking into account the following basic principles:

- (i) Involuntary resettlement is to be avoided or at least minimized.
- (ii) Compensation/Rehabilitation provisions will ensure the maintenance of the APs' pre-project standards of living.
- (iii) APs should be fully informed and consulted on compensation options.
- (iv) APs' socio-cultural institutions should be supported/used as much as possible.
- (v) Compensation will be carried out with equal consideration of women and men.
- (vi) Lack of legal title should not be a bar to compensation and/or rehabilitation.
- (vii) Particular attention should be paid to households headed by women and other vulnerable groups, such as Indigenous Peoples, and appropriate assistance should be provided to help them improve their status.
- (viii) Resettlement Action Plan should be conceived and executed as a part of the project, and the full costs of compensation should be included in project costs and benefits.
- (ix) Compensation and resettlement subsidies will be fully provided prior to clearance of right of way/ ground leveling and demolition.

### **5.3.3 COMPARISON OF WB'S POLICY WITH GEORGIAN LAWS AND LEGISLATION**

Overall, the legislation of Georgia adequately reflects the major provisions of the WB OP/BP 4.12 but a few differences are to be noted. The most significant of these differences is that under Georgian legislation/regulation, emphasis is put on the definition of formal property rights and on how the acquisition of properties for public purposes is to be implemented and compensated while in the case of WB policy emphasis is put both on the compensation of rightfully owned affected assets and on the general

rehabilitation of the livelihood of Affected People (AP) and Households (AH). Because of this, WB policy complements the Georgian legislation/regulation with additional requirements related to (i) the economic rehabilitation of all AP/AH (including those who do not have legal/formal rights on assets acquired by a project); (ii) the provision of indemnities for loss of business and income, (iii) and the provision of special allowances covering AP/AH expenses during the resettlement process or covering the special needs of severely affected or vulnerable AP/AHs. Also, in addition, the legislation of Georgia does not require any specific measure regarding the need to prepare Resettlement Action Plans (RAP) based on extensive public consultations. The differences between Georgia law/regulation and WB policy are outlined in Table 4.5.

**Table 5.5: Comparison of Georgian Laws on LAR and WB Resettlement Policy**

<b>Georgia Laws and Regulations</b>	<b>WB Involuntary Resettlement Policy</b>
Land compensation only for titled or legalizable landowners. In practice non-legalizable land users who were leasers under the soviet system and/or have cultivated their land continuously are also compensated.	Lack of title should not be a bar to compensation and/or rehabilitation. Non-titled landowners receive rehabilitation assistance.
Only registered houses/buildings are compensated for damages/demolition caused by a project	All Affected houses/buildings are compensated for buildings damages/demolition caused by a project
Crop losses compensation provided only to registered landowners.	Crop losses compensation provided to landowners and sharecrop/lease tenants whether registered or not
Land Acquisition Committee is the only pre-litigation final authority to decide disputes and address complaints regarding quantification and assessment of compensation for the affected assets.	Complaints & grievances are resolved informally through community participation in the Grievance Redress Committees (GRC), Local governments, and NGO and/or local-level community based organizations (CBOs).
Decisions regarding LAR are discussed only between the landowners and the Land Acquisition Authorities.	Information on quantification, affected items value assets, entitlements, and compensation/financial assistance amounts are to be disclosed to the APs prior to appraisal.
Loss of income is considered for compensation but no provision for income/livelihood rehabilitation, allowances for severely affected or vulnerable APs, or resettlement expenses.	WB's policy requires rehabilitation for income/livelihood, severe losses, and for expenses incurred by the APs during the relocation process.
There is provision for consultation with APs but there is no specific plan for public consultation under the Georgian laws	Public consultation and participation is the integral part of WB's policy which is a continuous process at conception, preparation, implementation and finally at post implementation period

To reconcile the gaps between Georgia laws/regulations and WB's Policy, the Resettlement Policy Framework (RPF) have been elaborated by the MDF and adopted by WB, ensuring compensation at full replacement cost of all items, the rehabilitation of informal settlers, and the provision of subsidies or allowances for AHs those will be relocated, suffer business losses, or will be severely affected.



## 6. IMERETI – HISTORICAL-CULTURAL OVERVIEW

Imereti is one of the greatest historical and cultural regions of Western Georgia. Imereti, which is in west Georgia, is divided into Zemo (upper) and Kvemo (lower) Imereti. It borders the Likhi Mountain range on the north, Tskhenistskali River on the west, the Caucasus Mountains on the north and Meskheti or Persati Mountains on the south.

According to legend, the name Imereti comes from the tribal name of "Iberia". The region is famous in Georgia for its quick talking – and quick thinking – population.

Imereti is an ancient part of the country known for its rich cultural heritage, impressive landscapes, open, hospitable people and unique cuisine. There are more than 250 historical, archeological, architectural and natural monuments in the region, which give a full picture of ancient settlements, its cultural development and history.

Some of the biggest towns and settlements of Imereti are: Kutaisi, Zestaponi, Samtredia, Sachkhere, Chiatura, Khoni, Vani, Tskaltubo, Vartsikhe, Kharagauli, Shorapani, Kulashi, Terjola, Tkibuli, Baghdadi and many villages.

Rivers flowing across Imereti include the Rioni, Dzirula, Chkherimela, Kvirila, Rikotula, Tskaltsitela, others.



### History

During the 13<sup>th</sup> century BC a big union of tribes lived on the territory of Imereti. Later, the early class Georgian state was created. Its name – "Colcha" was first mentioned in oriental sources in 12-11 centuries BC.

After the fall of Colcha, the powerful and well-known Colchis (Kolkheti) Kingdom was established in the 7-6<sup>th</sup> centuries BC. This was the kingdom the legendary Argonauts traveled to find the Golden Fleece. Within the legend exists historic fact; the gold found in Colchis was especially well-known, which served as the basis for calling Colchis a country with an abundance of gold. During 6-4<sup>th</sup> centuries BC Colchis used to produce its own silver money, the Kolkhuri Tetri (Colchis White). There were a number of trade roads going through Kolkheti: according to Strabo, there were 120 bridges over the Phasis River.

During 6-3<sup>rd</sup> centuries BC Colchis Kingdom fell under the influence of another Georgian Kingdom, Iberia. During the 1<sup>st</sup> century a new state unit was created on the territory of Colchis – Egrisi Kingdom (Lazika), which soon fell under the influence of the Roman Empire. Greeks and Persians fought over Egrisi. At the beginning of the 7<sup>th</sup> century, Egrisi was attacked and destroyed by the Arab Murvan the Deaf.

Afterwards Imereti was still in the center of Georgian life. During the 8<sup>th</sup> century Kutaisi became the capital of west Georgia and the capital of all Georgia in the 10-12<sup>th</sup> centuries.

It was during this period that Imereti had its renaissance. Unique masterpieces of Georgian architecture were created at this time – Bagrati Cathedral and Gelati Monastery Complex, both of which are protected by UNESCO. During the 15<sup>th</sup> century, after the fall of the Georgian feudal monarchy, Imereti became a separate feudal kingdom – Imereti Kingdom. The king was the supreme ruler, who had his Darbazi (The Council), serving as the state council.

Kutaisi has risen to power and been destroyed many times due to its wealth and strategic territorial location. For centuries Kutaisi has been a cultural and educational center. During the Soviet era Kutaisi was one of the biggest industrial cities of the country. At the moment it is the second biggest city in Georgia.

### **Archeology**

A number of trade roads, including the Silk Road, crossed this area, supporting the development of culture and trade. Findings of archeological excavations show that the first human being in Imereti lived during the lower Paleolithic period. Numerous flint and obsidian items, including cutting instruments and knives have been discovered in caves and settlements.

The most interesting is the town of Vani, which was known to exist as early as the 8<sup>th</sup> century BC. It was one of the most important towns of the Colchis Kingdom with an antique settlement. It is often considered as one of the cities of the King Aetes (other versions name current Kutaisi, Vani or Poti). According to one of the versions, Vani was a Hellenistic town, known as “Surium”. During the 3<sup>rd</sup> to 1<sup>st</sup> centuries BC the Goddess Levkotea was considered the protector of Vani. Dionysus was also worshiped in the town.

At the moment there is a museum and the ruins of the ancient town. The ruins are located on 12 hectares, with only 1/3 of the area studied.

Archeological excavations were first initiated in Vani in 1890-ies by Ekvtime Takaishvili. Gold jewelry was discovered in Vani, which is now preserved in the Gold Fund of the State Museum of Tbilisi, while copies are kept in Vani Museum, opened in 1985. Only the treasures found after 1985 are exhibited here.

Kutaisi is considered as one of the ancient cities of the world. According to the mythological sources it is 3,500 years old.

### **Myth about the Argonauts**

The myth about Argonauts is also related to Imereti and Kutaisi, which was a part for the legendary Colchis Kingdom. According to ancient Greek sources, the king of Colchis was Aetes (Ayet), son of Helios, the God of Sun. Aetes was the keeper of the Golden Fleece – fleece of the ram with gold wool. According to legend, 50 Greek heroes under the leadership of Jason came to Kolkheti in search of this wool, known as the Golden Fleece. Their ship was called Argo, serving as the basis for the name of the expedition participants – Argonauts. King Aetes hosted Argonauts in his palace, surprising them with its glory: vines were blossoming in the yards together with four eternal fountains – one for milk, another for wine, the third for oil and the fourth for water.

Jason informed the king about the purpose of his visit, proposing his assistance during wars as an exchange for the fleece. The King promised to give him the Golden Fleece if Jason would be able to mount a fiery

bull with copper feet, specially made for Aeetes by Hephaestus, cultivate the valley with a the steel plough and defeat the warriors which arose from the dragon teeth planted in the valley. Aeetes himself could easily do this, but he hoped Jason would die in the attempt. The Goddess Aphrodite helped Jason by making Aeetes's Daughter, the beautiful magician Medea fall in love with him. Medea helped Jason to fulfill the assignment, but the King was still not planning to give him the Fleece. Then Medea made Argus, the dragon with hundred eyes and the guard of the Fleece, fall asleep. Jason stole the Fleece and took Medea with him.

The town of the King Aeetes was then called Kutaya (Kutaisi). Nobody knows where the ruins of the palace are, but some day new discoveries will turn this legend into reality.

### **Protected areas**

Home to the largest national park in Europe – the Borjomi-Kharagauli National Park – Imereti is a paradise for nature lovers. Between the Staplia Caves, the Marelisi Forest and the dramatic river gorges around Chiatura, the region has something for everyone.

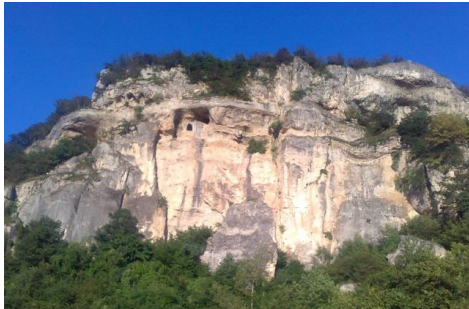
**Sataplia protected Area** is located very close to Kutaisi, on Sataplia Mountain, with a total area of 354 hectares. It has mountains and hills and is almost fully covered by the Colchis Forest. There are numerous grotto caves, although the most interesting one is "Sataplia Cave", located on Samgurali slope. It has a corridor system with branches and halls with somewhat lyric names: "Arched", "Cemetery of Accretion" etc. The cave is rich with stalactites, stalagmites and curtains. The total length is 600 meters. It has a little river flowing inside, which has carved this cave over the past 30 million years. Over 200 footprints from dinosaurs have been discovered here, located on the stones in two rows. To the north of Sataplia cave, there is a flowering meadow on the cliff with a number of bee colonies. This was the reason for naming this area Sataplia ("place for honey"). When you go, be sure to check out the local museum.

**Ajameti Protected Area** is interesting with its diverse plants, wild birds and animals. First mentioned as a prime hunting spot in the 11<sup>th</sup> century, even David the Builder was rumored to be a fan: his historian, Vakhushti called it a "hunting place for kings."

### **Marelisi (Part of Borjomi-Kharagauli National Park)**

Borjomi-Kharagauli National Park has several entrances. One of them is located in village Marelisi of Kharagauli district. Borjom-Kharagauli Park itself is the biggest in Europe with total area of 76,000 hectares, which is 1% of the total area of Georgia.

There are number of historical monuments on the Kharagauli side of the National Park. One of the most interesting ones is the "Iron Cross" Mountain, which is about 2,439 meters high. This mountain is linked with the spread of Christianity in Georgia. According to folklore, Apostles Andrew, Simon the Cananean and Matthias came to Georgia at the request of St. Mary and brought a sacred icon. According to the legend, these apostles set the first Christian cross and the place where the cross stood is now called "Metal Cross".



## People & Traditions

Imereti has always been known for its highly developed spiritual and domestic culture, believed to be influenced by the Colchis.

### *The Tradition of Georgian Feast or “Supra”*

People of Imereti region are famous for their hospitality. They respect guests and are good at being friendly and generous while entertaining them, especially in their own home. They give parties in honor of certain respectable people, or for a special events like a wedding, a birthday, a housewarming, Christmas, Easter, etc. It's recommended for visitors try not to miss parties as it is supposed to be a real performance put up by the toast master, or the "Tamada".

The tamada acts like a director of the party announcing traditional toasts to peace, health, happiness, well-being, etc. Tamadas can make exceptional toasts. Guests at the party are like actors responding to the toasts and often with their own interpretation.

So, a toast-master ought to be eloquent, intelligent, smart, sharp-witted and quick-thinking, with a good sense of humor because very often some of the guests might try to compete with him on the toast making.

Songs have always accompanied the Georgians in joy and sorrow, in battle and labor. Special drinking songs and wedding songs (if it is a wedding party) as well as chants full of humor, sung by guests during the course of the party contest. It may sound strange but sometimes even events of social, economic and political significance are discussed during the table talks, and some problems are solved peacefully. The atmosphere at the Imeretian table is so friendly and candid that even the enemies are likely to make up. If there is enough room at the party you make take part in folk dances. In these dances and at the table men ought to be gentlemen and try to be very polite and respect the ladies.

As for wine, it has been adored by the Georgians as a symbol of strength, beauty and joy. Imereti is rich in wines and it has been the pride of people cultivating it for centuries and loving it as their own children. Most Imeretians have their own wine at home.

One of the most important toasts is a toast devoted to the memory of deceased ancestors. Having poured some wine on bread, a toast-master crosses himself and prays God to be merciful to the souls in the other world. But this is not mysticism. For Georgians consider this world and the other world to be an indivisible entity.

At the Georgian table a toast-master bridges the gap between past, present and then the future. It seems that not only the guests, but their ancestors and descendants are invisibly present at the table. A toast-master toasts them with the same love and devotion as the other members of the table. When drinking some toasts all men have to stand up and drink wine in silence. A toast can be proposed only by a toast-master and the rest are to develop the idea. Everybody tries to say something more original and emotional than the previous speaker. The whole process grows into a sort of oratory contest.

A toast master arranges breaks from time to time. The thing is that there are special toasts which according to the ritual should be accompanied by a song or a verse. Almost everyone in Imereti has a good ear to music and good voice. Old Georgian drinking-songs are melodious, polyphonic and rather complicated. Some of them don't need any accompaniment. The choir of men creates musical background. Modern drinking-songs are usually performed to the accompaniment of the guitar or the piano.

The Georgian folk dances are rather common for the Georgian table. The Georgian dance is distinguished for its aristocratic restraint and steadiness: a man is a knight, a lady is as delicate and gracious as a fairy. Their restrained, smooth movements express flaming emotions. The toast-master has to propose a toast to every person and so have the others. Every speaker tries to distinguish the most interesting, original and praiseworthy features of a person toasted. But it should not be considered to be flattery. These are lessons of love and humanism.

Love, life, friendship and other abstract notions are subjects of eloquent toasts at the Imeretian table. Every speaker tries to express his personal understanding of these notions. When a person is toasting, the rest are listening to him with great attention and respect. The revelry never grows into an unrestrained drinking-bout.

The table has come to an end. A toast-master proposes a toast to the Saints patronizing the Georgian people. Finally, one of the men proposes a toast to a toast-master and thanks him on behalf of all guests. As a rule the table is full of dishes as the Imeretian cuisine is diverse and delicious.

Imereti developed viticulture, cattle-breeding, poultry-farm, bee-keeping, production of dairy products and gardening. Some of the most important agricultural sectors were viticulture, the cultivation of corn crops and orchards.

A number of folk traditions and rituals have been preserved in Imereti. People have special traditions for celebrating Giorgoba (St. George's Day), Mariamoba (St. Mary's Day), Barbaroba (St. Barbara's day), New Year and Christmas, days for commemorating the dead, weddings and births of children, Kutaisoba and Gviriloba (civil festivals).

Imeretian people usually treat their guests to homemade wine and very delicious food which is different than in other Georgian regions by its variety.

### **Cuisine**

The Imeretian cuisine makes extensive use of walnuts, which are used to thicken soups and sauces (anything including the word *satsivi* will be served in a rich sauce flavored with herbs, garlic, walnuts and egg). Walnuts add a wonderful flavor to local products. Walnuts also feature as desserts, coated in caramelized sugar (*gozinaki*), or in *churchkhela*, when they are threaded on string then dipped in thickened, sweetened grape juice which is subsequently dried into chewy, flavor some 'candles'. There is less emphasis on lamb to the exclusion of other kinds of meat than in other parts of the Caucasus. Roast suckling

pig is often served, and beef and chicken are grilled or casseroled in various sauces, one of the commonest forms being *chakhokhbili*, a stew involving herbs, tomatoes and paprika. Meals usually start with an array of hot and cold dishes which may include spicy grilled liver and other offal, *lobio* (a bean and walnut salad), marinated aubergines, *pkhali* (made from young spinach leaves pounded together with spices), *khachapuri* (consisting of layers of flat bread alternated with melting cheese), not to mention assorted fresh and pickled vegetables and cured meat (*basturma*).

Most of the food is prepared in clay pots and cooked with herbs.

Some of the most popular dishes of Imereti are: Khachapuri, Satsivi, Gomi, Matsoni (Georgian yoghurt), Pkhali, Mchadi, Ekala, Pelamushi, variety of sauces, Imeretian cheese, etc.

Cafés, restaurants and street-food traditions are established in Imereti region and the markets are full of locally grown fruits and vegetables.

### **Viniculture**

Imereti area has some unique vine varieties and there is evidence that wine production here dates back to ancient times (even mentioned in the Legend about Jason and the Argonauts). Ancient qvevris (wine vessels), grape presses, wine culture and traditions of the Georgian table are proof of their dedication to the craft of wine making.

Both red and white wines are produced in Imereti.

Among other red wines, the famous for Imereti region are the following wines:

*Aladasturi* - Red dry wine. It is made of grapes Aladasturi, cultivated in the region of Imereti: Terjola, Zestafoni, Bagdati and Vani. The wine has pomegranate coloring, distinctive bouquet and harmonious fresh taste. Best served with hot salads, meat, cheese and vegetables.

*Otskhanuri Sapere* - Red dry wine. It is made of grapes Otskhanuri Sapere, cultivated in upper and lower Imereti. The wine has a dark pomegranate color, with remembering distinctive bouquet and harmonious fresh taste. Best served with chill collations and dressed meat with fresh vegetables and greens.

*Usakhelouri* - Semi-sweet red wine. Usakhelouri is one of the most famous Georgian wines. It is made of grapes Usakhelouri, cultivated in Okureshi village, in the Lechkhumi region (neighboring region to Imereti). It has a strong sorted bouquet, very interesting, pleasant aroma and harmonious taste. Best served with cheese, dessert and fruit.

Among other white wines, the famous for Imereti region are the following wines:

*Krakhuna* - Dry white wine. Krakhuna is made of grapes Krakhuna, cultivated in the valley of river Kvirila, in West Georgia. The wine has a light straw color, is characterized with original sorted aroma and harmonious pleasant taste. Best served with fish, cheese, vegetables and fruit.

*Tsistska* - Dry white wine. White table wine of pale-straw color, possessing a pleasing freshness and a harmonious taste. It is made from the Tsistska grape variety cultivated in Western Georgia. The final product has light straw coloring, pleasant freshness and harmoniousness.

*Tsolikouri* – Dry white wine. White dry wine made from grape variety of the same name cultivated in West Georgia, in Imereti. The wine is of pale-straw color and has strong bouquet, a fresh harmonious taste.

## **Cultural Heritage / Architecture**

There are numerous castles, churches, monasteries, museums, examples of folk housing and wall painting in Imereti, but a visitor does not have to travel far to see examples of the region's fascinating past. There is at least one significant monument close to every village – and some of villages themselves are worth a trip.

Villages of Imereti have special charm and color. One example is the village of Khani, located by Zekari Cross. Archeological artifacts dating back to the second millennium were discovered in Khani, along with remainders of a culture that developed through the trade roads and ruins from the Church of St. George.

Over the centuries the village has been destroyed several times, but it always managed to rebuild itself.

It is very interesting to see houses with large halls and yards, which is unusual for this part of the country. Streets in the village were named for families living in the area.

Imereti region is rich with antique, earlier and later Christian period's historical-cultural monuments. These monuments are very interesting for tourists. There are more, than 450 historical-cultural monuments in Imereti region.

### **Gelati Monastery Complex**

Gelati Academy and Monastery was founded by King David IV the Builder in 1106. During the 12-13<sup>th</sup> centuries Gelati was one of the biggest religious, educational, scientific and philosophy centers of Georgia. The well-known philosopher Ioane Petritsi used to work here. The Academy taught geometry, mathematics, music, rhetoric, grammar, philosophy and astronomy.

The founding of Gelati is tied to the cultural renaissance of Georgia. The complex includes the main cathedral of the Virgin, the church of St. George, belfry, gates and the building of the academy.

In 1510 the temple was burned by the Turks, but it was painted again during the same century. The group portrait of rulers is of the same period, which also includes an image of David the Builder himself.

At the southern end of the cathedral, at the main entrance, is the grave of David the Builder. The king wanted to be buried in a place where all people coming to the monastery would step on his grave. According to legend, the gravestone is the same height as the king himself was. Above the arch where King David is buried, original frescos remain. There is an iron door from the town of Ganja that hangs in front of the grave of the King. The gate was brought here by the son of David, as a sign for victory over Ganja. Gelati treasury used also include many manuscripts, religious relics, engraved and painted icons.

### **Ubisi monastery complex**

Ubisi monastery complex includes several buildings: a main building – three nave basilica, a tower, remains of fortification wall (12<sup>th</sup> c), a belfry and subsidiary buildings.

Some of historians date the church, as of 9<sup>th</sup> century, a period after Arab domination, when full-scale construction of the monastic communities and the educational centers was headed by ecclesiastic figure Grigol Khandzteli (Grigol of Khandzta) whose name is also derived to Ubisi.

Four-storeyed tower, the abode of a stylite, was built by Simon Chkondideli in 1141, at the reign of King Demetre (1125-1156)

Both, the church and the tower are built of porous, yellowish pumice stone with almost no ornamental decoration on facade. The main attraction and the special interest of the complex are the wall paintings done in basilica. According to the inscription, it was painted under the guidance of artist Damiane "...with the hand of Gerasime, disciple of Damiane". The murals are depicting the main scenes from the Bible: the Annunciation, the Nativity, Entering to Jerusalem, the Crucifixion, Easter and Epiphany. Quite well preserved 14<sup>th</sup> c. wall paintings, which cover the vault, the walls and the pilasters, are painted by the master with a very individual manner and some influence of Byzantine art. However, the work of another artist is also obvious.

The later date wall paintings are preserved in the annexes (16<sup>th</sup> c.) of the church, which shows the patronage of Abashidze family in 16-19<sup>th</sup> cc.

### **Vani Archaeological site**

Vani museum was founded in 1985 by Academician Otar Lordkipanidze during the international symposium. The museum includes: Site of Vani, expedition base and the museum itself. The museum houses the majority of the archeological materials discovered in the site of Vani. In 1987, after discovery of the rich burial, the Gold Fund was opened at the Museum, which preserves the unique pieces of Vani Goldsmith. The exposition of the museum displays cultural development of the site from VI c. BC. to I c. A.D including bronze statues and their fragments, gold, silver, bronze objects, samples of coins, etc.

### **Tskaltubo**

Tskaltubo was announced as a town since 1953, located at the bank of Tskaltubostsklali River, is an important balneological resort, with humid, subtropical climate and warm, mild winters. Average temperature in Jan. 5,3°C., average temperature in Aug. 23,3°C. Annual precipitation 1820mm, relative humidity 73%, sunshine hrs per year more than 2000.

The main salutary factors are unique mineral waters, weakly radon, nitrogen, chlorides-hydrocarbonic- sulphate, with natrium-calcium- magnesium. Water mineralization 0,7-0,8 m/l. daily debit of springs 18-20 million with natural heat 33-35°C, which is used for bath taking and inhalation.

The salutary factor is also microclimate of karst caves which is good for curing hypertension maladies, hypotonia, bronchial asthma, neurosis and others.

The construction of the resort buildings was done mainly in 1926, when 19 sanatoriums and boarding houses, and 9 baths were built. The wide-ranging research engineering and hydrological works took place in 1931-1932 years.

### **Katskhis "Sveti" / Katskhi Pillar**

Katskhis Sveti is 40 m height, limestone pillar emerged from the denudation of the rocky mountain with a surface 10X17 m, where two small, one nave basilicas were built in 5<sup>th</sup> and 6<sup>th</sup> centuries, when the stylistics (pillar asceticism) became popular in West Asia. One of the rare carved cross example of 5<sup>th</sup> -6<sup>th</sup> centuries was discovered at Katskhi Pillar. Christian Georgia had a very close relationship with Syria of that time and ascetic lifestyle of the monks became popular in the country too. The basilica of the 5<sup>th</sup> c. was built with a rough, local rock and the apse was carved into the rock. The 6<sup>th</sup> c. church has a crypt and was built with a smooth, tuff rock, lifted from down. The exact reason and date of stopping monastery life on the pillar is unknown, but when Vakhushti Bagration-Batonishvili (1696 – 1757), Georgian historian, geographer and



cartographer was describing the area, the churches were already inactive in 18<sup>th</sup> century. Katskhi Pillar monastery was functioning in 5<sup>th</sup> – 16<sup>th</sup> cc.

The bell tower was described by Georgian historians in 19<sup>th</sup> century, but in the beginning of 20<sup>th</sup> century bell tower was destroyed.

### **Katskhi church**

The Katskhi church is a large, domed polyhedral building with six apses inside. According to the inscription on the tympanum of the southwestern entrance, it was built in 1010-1014 years. The monument stands on the bank Katskhura, tributary of the Kvirila River surrounded by a pentagonal wall (repaired in 1937) in the eastern corner of which there is an old bell tower. About thirty years after the construction of the church, a gallery was added to the building around three sides. The whole building consists of three concentric, multilateral parts, arranged in three-step cascade – the gallery, the Church building proper and the dome drum. Each plane is pedimented which produces broken, saw-tooth cornices. The building was decorated with carved ornaments, the major part of which was destroyed during the repairs of 19<sup>th</sup> c. though in the eastern part of the gallery the bas-relief sculpture depicting the ascension of the cross by four angels, set in a round frame is still visible. In 1924 Katskhi church stopped functioning until 1990-s when it became active again.

The written historical sources of late feudal times, mention Katskhi fortress the ruins of which can be seen on the right side of Katskhuri River.

### **Village Koreti**

The village of Koreti is located 16 km from Sachkhere. The village, as well as its surrounding territory, has been inhabited since ancient times. Two burial mounds from the Bronze Age have been discovered on the territory of Koreti, in addition to a number of decorated metal weapons as well as jewelry and ceramics.

This village is especially interesting for its large number of cellars and viticulture. In 19<sup>th</sup> century the village's families united and started wine production together. The ancient part of the village still has over a dozen very old wine cellars covered with roof tiles, with presses for grapes, bread bakeries, wine jars and other inventory for wine-making. A visitor to the village can see an old ethnographic film that ends with the feast characteristic to Imereti.

### **Village Shrosha**

Shrosha is the ancient home of clay-making in Georgia, known since ancient times for its masterpieces. Red soil, useless for agriculture is perfect for making pottery. There was a factory built in Shrosha at the beginning of the 20<sup>th</sup> century to produce ceramic items, but traditional methods, passed on by ancestors, are still popular.

Bread, mushrooms and trout baked in clay bakeries are incredibly delicious. Qvevri (wine vessels made of clay) are usually stored in the ground to keep wine cool during summer and therefore increase its lifetime. Storing drinking water in a clay jar is also convenient. Georgian festive tables are characterized by making toasts with "different" – and often very symbolic – cups. The village of Shrosha has a market for clay products offering a huge variety of wine jars, pots, plates, water jars, cups and drinking cups.

### **Bagrati Cathedral**

Bagrati Cathedral (10<sup>th</sup> - 11<sup>th</sup> cc) is located on Ukimerioni Mountain and proudly watches over Kutaisi and the Rioni River and has been the home of Colchis kings since antiquity.

King Bagrat III is credited with building the cathedral, which was named after the Assumption of the Virgin Mary. King Bagrat united the country politically as well as religiously, so the cathedral is considered the symbol for the united Georgia.

In the 17<sup>th</sup> century, western Georgia was attacked by the Turks and the cathedral was destroyed in 1691. Since 1994 the Cathedral has been under the UNESCO protection. UNESCO supported restoration of the Cathedral in 2000-2001. The western façade has been restored according to the old engraved stones. Currently there are regular religious services held in the cathedral under the open sky. Icons and other items required for holding church services are held in a small chamber at the entrance of the cathedral. In 1994 the Bagrati Temple Revival Fund was established in Kutaisi. Today the temple is in the list of the world-significant historical and cultural monuments of UNESCO. But because of public scandal regarding new concept and architectural plan for Bagrati cathedral, currently constructional works are stopped until consensus and final agreement between UNESCO, Patriarchate of Georgia, public and MoCMP.

### **Motsameta monastery complex**

Motsameta (8<sup>th</sup> – 11<sup>th</sup> cc) is a small and beautiful monastery with round turrets crowned with peaked tent-shaped domes. The monastery is situated above the rough Rioni river and is buried in coastal vegetation. The name of the church, Motsameta ("place of martyrs"), is tied to the nobles of Argveti, brothers David and Constantine Mkheidzes, who organized a revolt against the Arabs. The revolt was unsuccessful and the Arabs captured both brothers, proposing forgiveness in return if the brothers converted to Islam. The brothers would not give up their religion, and they were tortured and their bodies were thrown into the river. The river turned red and has been known as Tskaltsitela ("The Red Water") ever since. People buried the bodies of David and Constantine on the nearby hill and the church declared both of them as saints. Later, during the 11<sup>th</sup> century, King Bagrat IV built a temple over their graves. The temple had plain walls with painted interiors; the only remaining example of the wall artwork is on the alter, near the final resting place of David and Constantine. According to legend, there used to be a secret tunnel between Motsameta and Gelati Monasteries, used by people during wars. Motsameta was a naturally unreachable place due to its location: it is surrounded by Tskaltsitela River from three sides, and walled on the fourth side. The church often protected the population during war.

### **Mgvimevi Monastery Complex**

Mgvimevi Monastery is located in the village of Mgvimevi. The monastery is partly carved into the side of a cliff and is difficult to access.

The façade of the main temple is decorated with crosses and engravings. Painted frescos of the 13<sup>th</sup> century are still visible on the northern side of the temple, while the paintings on the southern side date back to the 16<sup>th</sup> century. Paintings on the older layer of the temple show portraits of Rati, the Ruler of the Racha region – and the builder of this temple – as well as his wife and brother. The front door is a unique masterpiece of wood carving.

### **Vartsikhe Palace**

Vartsikhe – earlier called as "Vardtsikhe" ("Fortress of Roses") was one of the most important towns in Egrisi Kingdom. It is referred to as Rodopolis in Greek sources. Due to its geographic location, Vartsikhe was of strategic importance. A number of trade roads passed through the town. Archeologists discovered ruins of the town surrounded by a fence with towers, dating back to the 4-6<sup>th</sup> centuries. During medieval times, Vartsikhe was one of the residences of the kings; the mild climate, pretty gorges and hunting areas were very attractive for kings and nobles. Currently there are ruins from the old town still visible, as well as local and imported ceramics artifacts. Vartsikhe is considered the birthplace of Georgian cognac: during

the 19<sup>th</sup> century the Sarajishvili family produced the first Georgian cognac here. The village of Geguti is also close to Vartsikhe, where the ruins from an ancient 12<sup>th</sup> century palace and an old cemetery can be seen.

### **Tabakini Monastery**

The monastery of Tabakini, named after St. George is located in 10 km from Zestafoni in village Tabakini. The complex is interesting for its two nave basilica of the 7<sup>th</sup>-8<sup>th</sup> cc and the wall paintings of the 16<sup>th</sup> c. which was partly destroyed during the soviet times, when the monastery stopped functioning. Last centuries more than 70 monks lived there and monastery played a great part in the history of Georgia. In XIX century St. Ilarion Kartveli, the rector of the King Solomon II, spent his childhood there. Then he moved to Atheny Mountain.

The restoration and preservation of the paintings have been done recently. Today the monastery is active and the local monastic people have built the living building, one nave basilica and some subsidiary buildings.

### **Shorapani Fortress / archaeological site**

The fortress of Shorapani is an antic and Middle Ages construction located at the confluence of Kvirila and Dzirula Rivers was first mentioned by Strabo (1 c. B.C. – 1 c. A.D.) where he described the stronghold big enough to allocate the citizens of the whole town. According to the writings of Leonti Mroveli (11<sup>th</sup> c.) the fortification was built by King Parnavaz I in the 3<sup>rd</sup> c. B.C. During the war of Iran and Byzantine, (the big war of Egrisi 542-562) the fortress was permanently controlled by both parts. In late feudal era the fortification became an important strategic entry.

Only the ruins on the territory of 5 ha are remaining today, where the layers of different periods constructions, from antique to late feudal is visible.

### **Ruins of Geguti Palace**

Geguti is a medieval royal palace, now in ruins, in 7 km south of Kutaisi. The ruins of the palace complex occupy an area of over 2,000 m<sup>2</sup> along the Rioni River.

An extensive fieldwork between 1953 and 1956 allowed the specialists to stratify the principal archaeological layers, which dates to the 12<sup>th</sup> century, the period when the first written mention of Geguti appears in the Georgian Chronicle. The earliest structure – hunting lodge with a large fireplace, was built in the 8<sup>th</sup> c. At that time plain was covered in oak and Geguti was the summer residence of the Georgian kings.

The additions to the original hunting lodge – the great central domed hall and wings are from the 10<sup>th</sup> c. side rooms served as storage areas and private chambers were added in the 12<sup>th</sup> – 13<sup>th</sup> cc. under the initial impetus of George III.

The palace situated atop a plinth 2.5 meters high. Running throughout the plinth was a heating system; the walls are of brick faced with dressed stone. The basic rectangular outline of the structure is relieved by rounded towers that project from the corners and the middle of each side. The vestibule leadind into the hall led past bathhouse to the right and domestic quarters to the left. These rooms form the northern arm of the basic cruciform structure formed around the central cupola hall. The southern arm is almost twice as deed as the other 3 arms. It contained the bedchamber of the king to the right and his treasury on the left. Beyond the walls in the south is an aisle less church that probably dates to the 12<sup>th</sup> or 13<sup>th</sup> c.

The central cupola was 14 meters in diameter that was supported enormous squinches. Only the southern vaulted portion remains. The western rooms were added in 12<sup>th</sup> – 13<sup>th</sup> cc and were originally 2 stories high.

The palace was destroyed by Turks in the 17<sup>th</sup> c.

Given the cruciform ground plan, the parallels with the ecclesiastical architecture of the period are easily drawn. Because so few secular buildings of this scale remain, Geguti is of major architecture significance.

### **State Historical Museum**

Kutaisi State Historical Museum is a [museum](#) in [Kutaisi, Georgia](#). A major museum, it is also considered to be one of the most important scientific-research institutions in Georgia with its extensive research library and laboratory.

The museum contains more than 16,000 exhibits, displaying the archaeological, numismatic, paleographical, ethnographical and spiritual heritage of Georgia.

### **Ruins of Gordi Palace**

The construction of the two-storied summer residence was begun in 1841 by David Dadiani (1813-1985), with the advice of Alexander Chavchavadze, and plan of architect Leonid Vasiliev. The completed building was 40 m length and 20 m width, where the ground floor space was divided with a colonnade and arches. The presence chamber, saloon and library were located on the first floor.

The botanical garden of the palace was laid out on 80 ha and planed by famous agronomist and landscape architect Joseph Banini, who was the designer of the gardens around Dadiani Palace in Zugdidi. Later famous Italian gardener, Gaetano Dzamberleti was maintaining the garden. The complex included the bath and artificial lake and was fenced by the wall with 3 gates.

During the October revolution of 1917, when Gordi palace was occupied by the soldiers of the Red Army, the most part of the furniture, tableware and the weapon kept in Dadiany family residence was lost. The abrochment of the palace was continued in the years after, when the wooden decorations of the columns, windows and the doors were also gone.

In 1922-1923 the palace building was used as a post office.

The present condition of the palace is lamentable, its roofless building frame.

### **Mosque in Kutaisi**

Golden Mosque (19<sup>th</sup> c) - situated on the left bank of the River Rioni, near the White Bridge in Kutaisi.

### **Kharagauli**

Town of Kharagauli is situated on both banks of Chkherimela river in a narrow and deep gorge, 280-400m above the sea level. A railway station was built here in 1870s, when Poti-Tbilisi permanent way was constructed. Kharagauli assumed an administrative, later-an economic function. The most beautiful is its west entrance. In Kandeshi rock beautiful and narrow gorge the river Chkherimena flows. The most attractive for visitors are two big holes on the right bank of the river. Here a primitive man's upper Paleolithic era man's natural shelter is, called "the giant's hole". A bit aloof, on the left bank, there are giants' statues and the place is called "the giants" due to those beautiful holes.

Near the place, up the Chkherimela river gorge there is an old fortress ruins. It is a typical construction of the Middle Ages, mentioned sometimes as Khandi, or Kharagauli fortress. It was here in Kharagauli fortress where the wedding ceremony of the king Vakhtang VI took place.

There is a district called "small Kharagauli" where people settled here first, later - on the borough territory. On its mountain there are tombs of 14th - 11th centuries BC. There was a Jesus church, a basilica construction on the cemetery territory, now it is ruined.

Beautiful nature, pleasant people, hospitality tradition become muse for many visitors and guests. There are also culture, household, customized objects, a perfect Regional Studies Museum and a big park on the riverbank.

The most important building is Borjom-Kharagauli National Park administration, where offices, small hotel and visitors' center are located.

### **Tourism Infrastructure / lodging / restaurants**

In addition to existed Tourist hotels in Imereti, there are new hotels in the process of construction in Kutaisi and Tskaltubo, but the network of family-owned guesthouses is well-developed in Kutaisi. There are a few small hotels as well. Also, there are health resorts in Sairme, Tskaltubo and Nunisi. Family guesthouses are also available in Samtredia, Zestaponi, Vani, Marelisi and Khani, where comfortable accommodation and meals are available by reservation. Please see detailed description of the hotels in Annex 1.

There is a large variety of cafes and restaurants throughout Imereti. Some of the most well-known restaurants for their taste and quick service are those located by Rikoti Pass, in Kutaisi and on the road to Sachkhere.

**Developed forms of Tourism:** Cultural-educational, Eco-tourism, religious and archeological tours; using 4X4 vehicles for adventure tours in Zekari and Sairme; food tasting tours and walking tours in Borjomi-Kharagauli National Park (Marelisi).

**Tourism Potential:** horse-riding, water, fishing, photo-video and environmental tours, speleological tours in Tskaltubo and Katskhi; bird-watching and botanic tours in the national parks of Imereti (Sataplia, Ajameti), ethnologic, arts and wine tours in the villages of Zemo Imereti, MICE (meetings, incentives, conferences, events), SPA development.

### **Notes**

If coming from Tbilisi, it is possible to reach Imereti through Rikoti Pass or the tunnel underneath. The road follows the river, going into tunnels, turning right and left and becoming straight again by Zestaponi. It is also possible to get to Imereti through via the Sachkhere-Chiatura or Zekari Pass (only in summer). All of the roads have beautiful landscape and river gorges, and pass through scenic villages and towns. The central road from Tbilisi to Kutaisi is 260 km, requiring 3-4 hours of travel.

If coming from Adjara, two different roads go to Imereti region: 1. Via Guria region; 2. Via Samegrelo region. The both roads have beautiful landscapes, especially Guria through attractive villages and towns.

Project related cultural monuments & sites

#	Name	Location	Date of construction	Risks for conservation or reconstruction	Remarks
1	Katskhis Sveti (Katskhi Pillar)	village Katskhi, Chiatura municipality	5 <sup>th</sup> – 6 <sup>th</sup> cc	<p>The area purposed for infrastructure is too small and located pretty close to monuments. Heavy techniques &amp; equipment (bulldozers) should be avoided. Delicate working procedures are required. Required: careful approach to unexpectedly discovered archaeological sections; parking management and appropriate space for turning large vehicles; workers should be controlled by responsible chiefs.</p> <p>All infrastructural plans to be discussed to monastery authorities.</p>	Infrastructural & rehabilitation works are planned
2	Katskhi Church	village Katskhi, Chiatura municipality	11 <sup>th</sup> c (1010-1014 years)	<p>Work field for tourism infrastructure is situated pretty closed to monastery entrance. Some risks during infrastructural works are expected. Serious challenges are not obvious. It is recommended to avoid heavy equipment (bulldozer, other). It's required: minimizing shakes, careful attitude to expectedly discovered archaeological sections;</p>	Infrastructural & rehabilitation works are planned

				delicate actions & procedures during conservation & rehabilitation works outside the venue. All infrastructural plans to be discussed to monastery authorities	
3	Vani archaeological site & museum-reserve	Vani municipality	VI c. BC. to I c. A.D	Risks & challenges during reconstruction works are expected because area supposed for tourism infrastructure including parking site, etc, is not well investigated. Careful approach to unexpectedly discovered archaeological sections & filed work permanent control is required;	Infrastructural & rehabilitation works are planned
4	Tshkaltubo	Town of Tshkaltubo, Imereti region, Tskhaltubo municipality	20 <sup>th</sup> c, status of the city since 1953	Risks & challenges during infrastructural works are not expected. Town of Tskaltubo is not considered as cultural heritage site, but careful attitude is required during works by heavy equipment to avoid damages of underground waters, which is the main value & attraction of Tskhaltubo SPA-s. It's required careful attitude to expectedly discovered archaeological sections; delicate actions during rehabilitation works inside & outside the	Infrastructural & rehabilitation works are planned

				SPA venues and entire the town.  Workers should be controlled by responsible chiefs.	
5	Ubisi monastery	Kharagauli municipality	9 <sup>th</sup> century	It's highly recommended: minimizing shakes due to existed unique wall painting inside the church and architectural value of the monument; careful attitude to expectedly discovered archaeological sections; delicate actions & procedures during conservation & rehabilitation works outside the venue.	Infrastructural & rehabilitation works are planned
6	Gelati monastery complex	Kutaisi municipality		Entrance of the complex is located closer than 100 meters from estimated filed work. It's required: minimizing shakes, careful attitude to expectedly discovered archaeological sections; delicate actions & procedures during conservation & rehabilitation works outside the venue. Parking management should be established and vehicle turning space taken into account from the beginning of works. Workers should be controlled	Infrastructural & rehabilitation works are planned. All infrastructural plans to be discussed between UNESCO, monastery authorities, NACHP & public figures. Reconstruction plan has to be regulated as per UNESCO's instructions.



				permanently by responsible chiefs.	
7	Motsameta monastery complex	Kutaisi municipality		Kvareli fortress is less known and less popular. There is no risk of damages or any other from the project SECHSA	Basic infrastructure & road is constructed. Requires maintenance of water supply & WC for visitors nearby the entrance

#### Other cultural & architectural monuments of Imereti

#	Name	Location	Date of construction	Risks for conservation or reconstruction; Relation to project	Remarks
1	Bagrati cathedral	Kutaisi municipality	10 <sup>th</sup> - 11 <sup>th</sup> cc	One among top highlights of the area (architecture, culture, history). It's highly recommended to improve infrastructure in the surroundings of Bagrati monastery. There is no risk for monument during implementation of SECHSA project	All infrastructural plans to be discussed between UNESCO, monastery authorities, NACHP & public figures. Reconstruction plan has to be regulated as per UNESCO's instructions.
2	Mgvimevi monastery complex	Chiatura municipality		Mgvimevi monastery is located at one of the main tourist routes. It's one of the main highlights of the area. It's less known & popular than other	Requires easy & safe access, rehabilitation of stairs, basic infrastructure for

				historical and cultural monuments of Imereti. There is no risk for monument during implementation of SECHSA project	visitors (water supply, WC)
3	Vartsikhe Palace	Baghdadi municipality	12 <sup>th</sup> – 19 <sup>th</sup> cc	Vartsikhe – former palace of Sarajishvili - cognac producing family and the area of Vartsikhe is one of the highlights of civil architecture of 19 <sup>th</sup> century. There is no risk for monument during implementation of SECHSA project	Infrastructure requires maintenance, especially guest rooms. The palace can be considered as luxury hotel for Imereti area. This will help to attract visitors to explore the area of Sairme & Baghdadi.
4	Tabakini Basilica (monastery complex)	Zestaponi municipality	6 <sup>th</sup> – 7 <sup>th</sup> cc	Tabakini monastery (old basilicas & wall paintings) are less known for “tourism world”. There is no risk for monument during implementation of SECHSA project	Infrastructure is recently reconstructed
5	Shorapani archaeological site	Zestaponi municipality	3 <sup>rd</sup> c BC	Shorapani is situated along the Rikoti Pass & the main tourist corridor. Access by road is poor, tourism infrastructure doesn't exist. Site is less visited by tourists.	Requires rehabilitation works. Shorapani is excellent place to start tour of Imereti if entering region from Eastern Georgia (Gate to History and Past of Imereti region). History

					& archaeology will become attractive for all visitors if the site will be turned to archaeological destination & basic infrastructure will be established.
6	Ruins of Geguti arc. complex	Kutaisi municipality		Geguti is less known and less popular, but quite significant from the point of view of architecture, history & culture. There is no risk of damages or any other from the project SECHSA	Requires rehabilitation works. It would be worth to reconstruct site according to original architecture and turn to civil site for visitors.
7	Ruins of Gordi arc. complex	Kutaisi municipality		At the time being Gordi Palace is roofless frame building. There is no risk for monument during implementation of SECHSA project	Requires intensive rehabilitation works. It would be worth to reconstruct site according to original architecture and turn to civil site for visitors.
8	Wine cellars of Koreti	Chiatura municipality	18 <sup>th</sup> – 19 <sup>th</sup> cc	The village Koreti is not known for tourism industry. This is uDzveli Gavazi is less known and less popular, but significant from view of history & architecture.	Requires conservation and rehabilitation of the village road. Itself the land and existed

				There is no risk of damages or any other from the project SECHSA	Marani-s (wine cellars) should be kept untouched. This site can be considered as attractive addition for Imereti wine route.
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## SPA & RESORTS IN IMERETI REGION

The Imereti region is known for its remarkable location extending from the humid subtropics, alpine meadows and numerous health spas to a large number of mineral water springs.

SPA-s under developing infrastructure

### NUNISI

It is located in Orjonikidze district, 4 km south of the resort Zvare. Nunisi stands at the foothills of the Likhi Ridge 750-800 mm above sea level. The area of the Resort is extremely picturesque. The nearby mountain sides are covered with leaf-bearing (oak, beech, hornbeam) and coniferous (pine, fir, silver fir) woods.

Its climate is subtropical. Winter is mild with little snow (average monthly temperature of January is about 0°C). Summer is warm, moderately humid (average monthly temperature of August is +20-22°C). Precipitation totals about 1200 mm per annum. Relative air humidity is 70 per cent in summer.

The major natural curative factors are mineral waters, which by their chemical composition are of weak sulphide, chloride-hydrocarbonate, sodium variety with a low salination (0.2-0.3 g/l) and high content of silicic acid. The waters have a temperature of +27°C. Daily yield of the springs is 80 000 liters. Waters are used for medicinal baths.

### TSKALTUBO

Resort Tskaltubo is famous of its unique thermal-mineral waters, which cure more than 60 different illnesses. Tskaltubo was a very popular resort in the period of Soviet Union. 15000 tourists and holiday-makers had been visiting resort Tskaltubo per year. Resort Tskaltubo mineral waters cure such illnesses as: the system of motivate support, gynecological dishes. In 1980-s resort possessed 23 sanatoriums with 3500 room capacity. At present only one sanatorium with 50 beds is functioning, which is used by domestic tourists and some visitors from CIS. Occasionally, it also serves for hosting international travel groups if hotels in Kutaisi are booked fully.

### SAIRME

Resort Sairme is situated 55 km from Kutaisi on the height of 915-950 m from sea level. It is located in the deep gorge of the river Tsablari, which begins in the north-west of Imereti-Adshara Mountain. In the east part of this mountain the peak Didmaghala (2585) is situated and there is the peak Mepistskaro (2848m) in the west part of it. Resort Sairme is surrounded by pine forest, which includes 19000 hectares and plays a great role in creating micro-climate. At 7-8 km from the pine forest Adshara-Imereti small Caucasians range begins.

Resort Sairme history includes 100 years. It was discovered by the hunter-shepherds. In 1944 the roadway between resort Sairme and Bagdadi was made and in 1946 by extending this roadway to the pass of Zekari, Bagdadi was linked to Abastumani.

Thus the roadway became this linking road between the West and East Georgia. Resort Sairme is classified as a moderate-damp resort. The area of mineral-healing waters is located in the gorge of the river Tsablari and contains 4 hectares. Mineral healing waters are on the both banks of the river Tsablari.

Mineral-healing waters N1, N2, N4 are on the right bank of the river and mineral-healing water N3 is on the left bank.

Pharmacological action:

Therapeutics the effect of action of exchange calcium, magnesium is expressed that these connections block fats, chamois and phosphorus of an acid. Therefore urine is united with sulfur and phosphate and becomes of low molecular of concentration that causes acceleration of process of decomposition of uranium. The sources Sairme well work on different diseases of digestion of system (at chronic gastric, at ulcer of a stomach and duodenum, chronic prick), at diseases on liver, at process of an inflammation gall of a bubble, at gallstone disease. There is the whole line of researches about it. The sources well work at inflammations of irater of ways. Is established, that Sairme raises circular filtration, reduces in blood the contents creatininum, raises dieresis, normalizes albumen of a faction, and adjusts an exchange of some microelements.

Indication to treatment includes:

- Pathology of a kidney and of irater of ways
- Chronic nephritis - at staying function and during decrease (reduction) function of a liver of function (without a terminal stage), when is not expressed hypertension and attributes of intimate insufficiency urolithiasis of illness, chronic hyalites and cystitis.
- Diseases of alimentary canal pat
- Chronic gastritis with normal or raised (increased) acidity
- Disease of a stomach and duodenum (without bleeding).
- Enteritis and colitis.
- Disease gall of a bubble and liver
- Chronic inflammation process of a gall bubble and gall of ways.
- Chronic hepatic. Infringement of an exchange of substances.
- Pod agric arthritis without aggravation.
- Uric acid diathesis.

Guest-Houses

1. Bagdadi-Boarding-house for 320 visitors (state-owned).
2. Sairme- Sanatorium for 170 visitors (under privatization)
3. Guest-house for 40 places
4. Balneological resort "Udabno", with 120 places in guest-house "Oazisi"
5. Guest-house "Edemi", with 14 rooms, newly opened in 2005

Several small cottages (3-5 rooms), one of which has been newly constructed in 2005 In addition to the drinking mineral springs in resort "Udabno", comfortable medicinal bathes are functioning.

Sairme is mainly attracting domestic visitors during the summer months (June –September), when the resort is regularly booked up to 80-90%. Since 2000, tourism figures have remained relatively constant at about 50,000 tourist overnights per year.

*Potential SPA-s and old resorts*

**KURSEBI**

*It is located in Tkibuli district, 35 km from the district centre and 14 km from the town of Kutaisi, at the foothills of the greater Caucasus 350 m above sea level, in the valley of the Tskhaltsitela-River (a tributary of the Rioni- River). Vegetation is represented by broad- leaved wood (oak, beech, hornbeam).*

*Climate is subtropical. Winter is very mild and snow less (average monthly temperature of January is +5°C). Summer is very warm, moderately humid (average monthly temperature of august is about +23°C). Rainfall totals 1200 mm per annum.*

*The resort has mineral waters, which in- term of their chemical composition fall into the category of weak sulphine hydrocarbonated sodium calcium magnesium water is used for balneologic procedures (baths). It is used for chronic diseases of joints, the peripheral nervous system and for women s disorders.*

**SIMONETHI**

*It is situated in Terjola district, 12 km from the district centre and 20 km south-east of the town of Kutaisi. The resort lies in the eastern part of the Colchis Lowland. The terrain is of plain type. Vegetation is represented by fruit and ornamental plantations.*

*Climate is very much similar to humid, subtropical kind. Winter is very mild and snow less (average monthly temperature of January is +3-6°C). Summer is warm, moderately humid (average monthly temperature of August is +21-2°C). Rainfall totals 1400-1800 mm on the average per annum. The typical feature is eastern, feohn type winds.*

*The major natural curative factor is thermal (with a temperature of +38-39°C) mineral water, which in terms of its chemical composition falls into the category of weak sulphide-sulphate-hydrocarbonated calcium-sodium varieties. Daily yield of the springs amounts to over 100.000 liters. Their water is used for bath procedures.*

*At the resort patients are treated for diseases of locomotor system, peripheral nervous system, skin and for women s disorders.*

**SULORI**

*It is situated in Vani district 8 km from the district centre and 35 km south-east of Samtredia. Its location is in the south-eastern part of the Colchis Lowland, 200 m above sea level. The terrain is a plain. Vegetation is represented by broad-leaved woods (oak, beech, hornbeam) and also by orchards and citrus plantations.*

*Climate is humid, subtropical. Winter is very mild and snow less (average monthly temperature of January is about +5°C). Summer is very warm and humid (average monthly temperature of August is +23°C). Rainfall totals about 1600 mm per annum.*

*The major natural curative factor is mineral water (with a temperature of +35°C) with a low salination (0.3-0.4g/l) which in terms of its chemical composition falls into the class of weak sulphide sulphate-hydrocarbonated sodium waters. It is used for balneologic procedures (bath) in treatment the diseases of locomotor system, also women s disorders.*

### **SAMTREDIA**

*It is a town and a district centre, 244 km west of the city of Tbilisi. Samtredia is situated in the Colchis Lowland, on the right bank of the Rioni-River. Vegetation is represented by subtropical species with tea and citrus fruit plantations.*

*Climate is humid subtropical. Winter is very mild (average monthly temperature of January is +5°C). Summer is very warm and humid (average monthly temperature is +23°C). Relative air humidity reaches 81-85 per cent, rainfall totals 1600 mm per annum.*

*In Samtredia there is hyperthermal (with a temperature of +65-67°C) mineral water brought to the surface by means of a borehole. In terms of its chemical composition it falls into the class of sulphate-chloride sodium-calcium varieties with a salination of 2.5-3.0 g/l. It is used mainly for balneotherapy in the form of bath procedures, which are taken by patients suffering from diseases of locomotor system, peripheral nerves, cardiovascular system, and skin and from women's disturbances. The water is also employed as a medicinal drink in treatment concomitant diseases of stomach and intestine.*

### **GORMAGALA**

*It is situated in Samtredia district, 20 km from the district centre, and 12 km from the railway station of Sajavakho, 200 m above sea level. Vegetation is represented by evergreen woods.*

*Winter is very mild and snow less, summer is very warm and humid. Average monthly temperature of January is +4.7°C and of August +23.3°C. Rainfall totals 1526 mm per annum.*

*The major curative factor of Gormagala is chloride-sulphate sodium mineral water with a daily yield of up to 100.000 liters.*

*The resort has a small place for taking medicinal baths. It is in operation in summer.*

*Treatment is provided for out-patients suffering from diseases of locomotor system.*

### **AMAGLEBA**

*It is situated in Vani district of Western Georgia, 9 km from the district centre, on the left bank of the Rioni-River. Climate is humid, subtropical with very mild snow less winter and very warm, humid summer. Rainfall totals 1600-1800 mm per annum. Along the Rioni-River strong eastern and western winds are frequent.*

*The major natural curative factors are thermal (with a temperature of +40-41°C) mineral waters with a salination of 9.4-10.3 g/l. In terms of their chemical composition they fall into the class of acidulous chloride-sodium waters with a high content of hydrocarbonate and calcium. Over 160 mg/l of silicic acid are found in the water. Daily total yield of the springs is 350-400 thousand liters. The water is used for administering bath procedures in treating diseases of locomotor system, peripheral nervous system, skin and women's disorders.*

### **KVERETI**

*It is situated in Sachkhere district, 7 km north-east of the district centre and 21 km from Chiatura, at the foothills of the Racha Ridge (within the Greater Caucasus), 570-600 m above sea level, in the valley of the Chikhura river flowing into the Kvirila-River (a tributary of the Rioni-River). The nearby mountain sides are overgrown with mixed woods.*

*The Resort's climate is determined by its location in the forest zone of the subtropical belt, by its protection from northern winds owing to the Greater Caucasus ranges and by its exposure to warm humid air masses coming from the Black Sea. Winter is mild with very little snow (average monthly temperature of January is +3°C). Summer is warm, moderately humid (average monthly temperature of August is +21°C). Precipitation totals 1100-1200 mm per annum, average annual air humidity is 76 per cent (in summer it varies within 72-78 per cent).*

*In Kvereti there are mineral water springs, which in terms of chemical composition belong to weak sulphide chloride-hydrocarbonate calcium-magnesium-sodium waters with a temperature of +16°C. Daily yield of the springs (boreholes) is 40 000 liters. The mineral waters are used as baths for balneotherapy.*

*The resort provides treatment for diseases locomotor system, peripheral nervous system and with women s disorders.*

## SATSIRE

Resort Satsire is less-known as a children healing resort. It is located on the height of 730-740m from sea level. The conjoint climate of sea and mountain is effective for breath organ bronchitis, for the pneumonia. Resort has a building with 150 beds and a dining-room. It is functioning and used by domestic visitors. Current capacity utilization is unknown.



## CONCLUSION

There is a great need to construct initial tourism infrastructure for all cultural, architectural and historical sites listed in the project. There are numerous positive impacts of the project:

1. Rehabilitation and conservation of monuments will protect them from damages, natural disasters, heavy rains and snow.
2. Initial tourist infrastructure will avoid chaotic actions by visitors; All visits will be organized;
3. It will be possible to make exact statistics and segmentations for all visits, which will be useful for future projects and creating promotional and marketing plans;



4. Finalized project will create opportunity for new part time and full time jobs for local population and increase their incomes;
5. Country will cost benefit from paid taxes from all parties;
6. Tourists and visitors will be satisfied during visiting listed sites;
7. Finalized projects will help to increase number of visitors to Imereti region;
8. Finalized projects will make opportunity for developing new tourist routes and itineraries;
9. Finalized projects will be connected to other future projects like: Imereti wine routes, agricultural projects, new concept for Kutaisi, APA (protected areas) projects, SPA development in Imereti region, Kutaisi international airport, the system of subsidizing tourism, etc.
10. Enterprises related to tourism and leisure industry will benefit as well (hotels, agencies, camping sites, health and SPA, leisure and sport)
11. Tourist season will be longer: overnight stays will be increased than at the present time.

## Annex 1 to Chapter 6

### **Recommendations and opinion about infrastructure development in Imereti by Mitropolitan Daniel of Sachkhere and Chiatura (written and sent on 20 June, 2012)**

- Rehabilitation plans should be prepared together with representatives of monasteries and special departments of patriarchate.
- Actually tourism infrastructure will be planned and implemented by suitable specialists.
- Infrastructural works which are planned in Imereti should be reviewed and discussed among appropriate specialists and monastery and patriarchate representatives. All parties together should discuss reasonability and implementation opportunities.
- We should implement plan at the territories of churches and especially monasteries, which will create comfortable environment and schedule for visitors, avoid much discomfort for liturgy and monastery inhabitants. Determination for visitors should be required as follows:
  - Quantity of group members and visitors
  - Duration of stay / visit at the territory
  - Strictly or partly restricted sites
  - Behavior codex
  - Dress code
- It's very important, that visiting process and management of the visit schedule should be operated by the parish under control of clergymen.
- It is required by Mitropolitan Daniel of Sachkhere and Chiatura to be informed about next phases of the project, necessary responsibility, involvement, function and tasks from their side.

## Cultural Heritage Resources in the Project Area



### No 1. Gelati monastery complex

*Location:* Georgia, Imereti region, Kutaisi municipality, village Katskhi

*Nearest city:* Kutaisi (distance from Kutaisi 12 km)

*Description & brief history:*

Gelati is a monastery complex near [Kutaisi](#), [Imereti](#), western [Georgia](#). It contains the Church of the Virgin founded by the King of Georgia [David the Builder](#) in 1106, and the 13th-century churches of St. George and St. Nicholas.

The Gelati Monastery for a long time was one of the main cultural and intellectual centers in Georgia. It had an Academy which employed some of the most celebrated Georgian scientists, theologians and philosophers, many of whom had previously been active at various orthodox monasteries abroad or at the [Mangan Academy](#) in [Constantinople](#). Among the scientists were such celebrated scholars as [Ioane Petritsi](#) and [Arsen Ikaltoeli](#).

Due to the extensive work carried out by the Gelati Academy, people of the time called it "a new [Hellas](#)" and "a second [Athos](#)".

The Gelati Monastery has preserved a great number of [murals](#) and [manuscripts](#) dating back to the 12th-17th centuries. The [Khakhuli triptych](#) had also been enshrined at Gelati until being stolen in 1859.

In Gelati is buried one of the greatest Georgian kings, [David the Builder](#). Near his grave are the gates of [Ganja](#), which were taken as trophies by king [Demetrius I](#) in 1139.

In 1994, Gelati Monastery was recognized by [UNESCO](#) as a [World Heritage Site](#).

The site was included in the 2008 World Monuments Watch List of 100 Most Endangered Sites by the World Monuments Fund to draw attention to deterioration caused by prolonged neglect.



*Legal Status:* Immovable listed property of National significance

*Function:* Functioning monastery (convent);

*Protection zone:* Automatically approved individual protection Zone: A) area of physical protection: radius minimum 50 meters B) area of visual protection: radius 500 meters

*Physical condition:* Good

*Access:* Good

*Road:* Average

*Attraction:* High

*Arranged works past 10 years:* rehabilitation works have been partly implemented.

*Current and future work plans:*

Main Concept: Gelati – visitors' infrastructure

*Main components:*

- Guides' room and storage
- Septic toilets
- Cafeteria
- Administration unit
- Exposition hall
- Open market place

*Infrastructure components:*

- Access Road improvement;
- Water supply for the site and village network
- Sewage system for the site and village connection
- Electricity connection;
- Improvement of local road and bus parking;

*Visitors center:*

It is planned to build Visitors Center of Gelati monastery complex. The building will be located in 30 meters farther from the entrance of the monastery, along the road. The space: 431.00 sq. m.

This is 1 storey building with several rooms:

1. Information center
2. Office for guides and cashier
3. Exposition hall

4. Souvenir shop
5. Administration office
6. First aid room
7. Toilets
8. Storage rooms
9. Open studios for artisans
10. Cafe

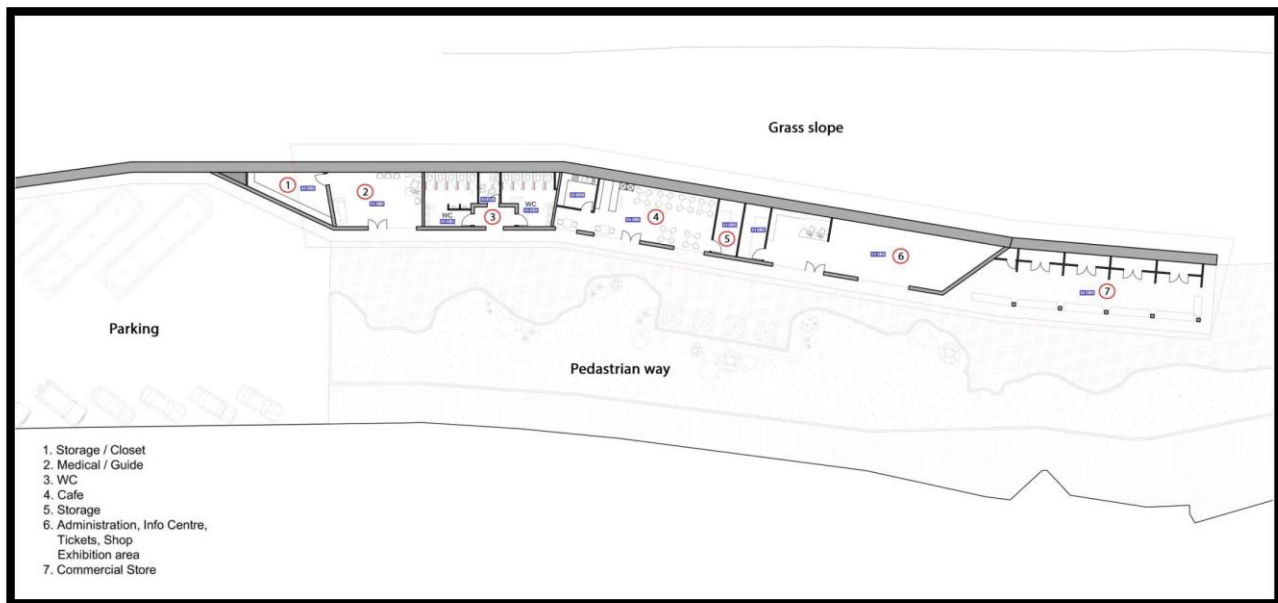
There will be coverings on the façade of the building with natural materials, mainly stone decoration. Greenery will be arranged at flat roof of the construction. Construction will be illuminated.

Capacity of the parking: 14 sedan type vehicles; 3 minivans and 2 large vehicles (tourist buses). There will be availability to park additional vehicles along the road during busy days. Special poles for lighting will be constructed along the road. The height of outdoor poles: 9 meters

In front of the building open café will be constructed and overlapped with umbrellas.

*What to be done:*

The territory has to be investigated by archaeologists; External infrastructure is required for the following components: simple parking for vehicles in 500 meters from the complex, signage; info-board; establish rubbish removal management and responsible party; recycle bins;



**Analyses for Gelati visits**

1. Attraction / Tourism form: The complex in general is unique, interesting and exceptionally attractive with its architecture, age, history, arts, inner-yard, grave places, façade decoration, gates, defense wall, wall paintings, monastery life, Orthodox liturgy. Splendid views open from the area of the complex. Pilgrimage is key issue for Gelati monastery.
  - 1.1.General sightseeing: Cultural, historical, architectural site & religious site
  - 1.2.Activities: Visit cultural & religious site; acknowledge to history, arts and architecture
  - 1.3.Strengths: long season (Can be visited during all 4 seasons); high awareness; uncomplicated access; short distance from Kutaisi; Interesting site for those interested in culture, architecture, history, nature & religion; recognizable site for national visitors; listed in international guide books, tour-operators’ itineraries, GNTA’s informational brochures; nice location; splendid view;

Patriarchate & monastery representatives look after complex carefully; Cuisine of the area (Imereti); Folklore; Extremely hospitable people; Water spring inside the monastery complex; Travel agencies located in Kutaisi;

1.4. Weaknesses: non-established regulations for school children (they are not trained for visits to tourists' sites); archaeology of the area is less investigated; non-existent experience of the management to coordinate visitors; unknown management authority for the venue; lack of right strategy & coordination; Less interesting for adventure people;

1.5. Opportunities:

- A) Increase awareness of Gelati wall paintings for art historians and specialists of frescos; Study Tours for target groups of people interested in arts;
- B) Consider Gelati as N1 complex of medieval culture; Gelati Monastery given its historical and cultural significance is among the most popular destinations of the country.
- C) Revival of Gelati academy with all functions as in medieval, when it was a center of philosophy, religion, culture and education.
- D) New jobs for local people created by new tourism infrastructure; New comfortable infrastructure will bring more tourists; Local society's opportunity to sell handicrafts (jewelry, post cards, hats, socks, local cheese, fresh baked bread, dairy products, churchkhela, wine, etc);
- E) Support component for developing cultural & educational tourism; Keep cultural & architectural heritage untouched;
- G) Arrange special folklore evenings;
- H) Establish school for chanting and church songs for national and international fans & professionals;
- I) Cooperation between "Kutaisi and Gaenati eparchy" and tourism industry;
- J) Arrange tourist paths in the area of Gelati monastery: to connect monastery with old architectural religious buildings in the area, such as small basilicas, towers, wine cellar, etc.

Threats:

- A) High demand by tourists and damage of cultural heritage;
- B) Much noise by visitors and risk to disturb monastery inhabitants;
- C) Destruction of local community;
- D) Pollution of the territory by visitors;
- E) Rubbish removal management;
- F) Lack of tourists supposed to use services of visitors center;
- G) Unexpected number of increased visitors will make difficulties for parking and itself for the condition of monastery complex.
- H) Risk of keeping sustainability of new infrastructure in case of wrong management of the site;
- I) Parking problems in case of visitors from Cruise Ships from Batumi & Poti;
- J) Threat of removal Gelati monastery from the list of UNESCO due to wrong reconstructions in the area.

Remarks & Recommendations:

1. There are some specific restrictions while visiting Gelati monastery. Restrictions come from the patriarchate of Georgian Orthodox Church and monastery authorities.

There are following restrictions:

Noise and shouting is forbidden at the territory.

*Dress code:*

Women are requested to put skirts on over their trousers. Skirts are available at the entrance.

Women and men are required don't wear shorts and "open" t-shirts;

Women are required to cover head with scarf;

Men are required don't cover head with hats;

2. Taking photos and videos of monastery people is not allowed. There are some exceptions with prior agreement to monastery authorities.
3. TV and Film productions are required to present written and proved permission to film area by the Georgian patriarchate.
4. Unexpected number of increased visitors will make difficulties for parking and itself for the condition of territory. This difficulty is expected only during high season months: May, June, July, August, September and October. End of May, beginning of June are busy seasons due to school children visits; local people and the foreign tourists visit architectural complexes with big groups from May to October.
5. Groups should be coordinated with coordination through tourism authorities (GNTA) & monastery authorities and National Agency for Cultural Heritage Preservation of Georgia.
6. The area is not well investigated from the point of view of archeology. Unexpected archeological discoveries may stop or post-pone infrastructural works in the area.
7. It would be worth to reconstruct old “Marani” (wine cellar) and Qvevri show room outside of the monastery.
8. It’s recommended to arrange small vineyard where Imeretian vine varieties will be planted; This would be interesting addition to the whole complex.
9. Wine cellar and old Qvevri exposition would be attractive for Gelati visitors.
10. It’s unknown who will take care of the area of parking and cleaning septic toilets. This may cause serious problems and spoil the whole plan of improving hygiene condition of the area during tourists’ visits.
11. It is recommended local municipality to take responsibility for maintenance of parking and septic toilets.
12. Monastery authorities require their involvement in all discussions for new infrastructural plans.
13. Cooperation: this is the most important issue to be taken into account. There are several parties related, involved and interested in developing Imereti region and Gelati area: government of Georgia; WB; local community; National Agency for Cultural Heritage Preservation; Patriarchate of Georgia; Agency of Protected Areas of Georgia; Private sector – small & medium enterprises; Inbound tourism industry; Imereti eparchies; Investors, others. All plans and decisions should be discussed to all above mentioned parties concerned.
14. Important issue after finalizing infrastructure is selection of proper management structure, coordination and management of the venue. Only appropriate team and cooperation of stakeholders will succeed to make venue and activities sustainable.
15. Associated jobs created at “visitors center’ camp: Permanent – 1 site manager, 1 tourism coordinator, 4 local guide, 1 cleaning, 5 artisans, 1 accountant, café: 2 waiters, 1 cook – total 16 jobs; 1 maintenance works; Seasonable (high season 3-4 month). Indirect jobs opportunity – local food, folklore performance presenters & crafts marketplace, local supply (fruits, wine, meal) – 8-10 families during the high season.
16. How to effectively communicate with the local population  
It should be mentioned that tourists while communicating with local residents do not need to take any special care to try to observe any particular norms. The population here kindly meets the guests what is a feature of any Christian culture. The local hospitable people are easy to communicate and any awkwardness with them is not expected for tourists. When participating in festivals or private parties however, the guests need to consider some of the behavioral peculiarities (e.g. ask permission from Tamada – toast master, to drink toast; sometimes hosts are insisting to invite guests at their homes). In any other case communication between the tourists and local population will without a doubt pleasant and kind.
17. Infrastructural works are planned for summer time, this is high season for tourism visits. It will make difficulties for all parties to combine tourists visits and reconstruction works same time. Guides and

Tour planners have to inform visitors in advance about delays, road condition, dust and some limits during the site visit.

18. After implementing project create special marketing plan for Imereti's wall paintings for large auditorium of tour planners;

19. Additional information about uniqueness of Gelati wall paintings:

Alongside the architectural variety, the monastery is rich in paintings executed in different periods and mediums – Mosaic and fresco. Amongst these the multi-layered paintings of the main church of the Virgin are the most significant. Dating back to 12th-19th centuries, these murals offer a unique glimpse of nearly the whole history as well as the important stages of the development of Georgian church painting. Amongst them are the famous mosaic of the apse – the Virgin with child Christ juxtaposed with the archangels and the unique 12th century frescos of the Narthex. The latter contains the images of the Seven Ecumenical Councils and the “Miracle of St. Euphemia”, which are exceptional for Georgia. The murals of the southeastern chapel are examples of Palaeologan style painting, the later stage of which is exemplified by the refined fragments of the painting of the southern portal (1360-1395). The other frescoes of the 15th, 16th and 17th century reflect the variety of styles of that period. The mural of the northeastern chapel (first half of the 17th c.), reveal the high degree of skill of the master (second half of the 17th c.), while the frescos of the northwestern chapel are less skilled. The murals of southwestern chapel of St Marine are executed in the peculiar “folk style”, developed in Georgia in Late Medieval period. This style, specifically national in character, is distinguished with its naïve pictorial language and extremely enchanting, expressive imagery. Each layer of the painting, together with its iconographic and stylistic features, with its abundance of inscriptions and historic portraits, including the 16th century portrait of David IV in the central space of the main church, provides valuable materials not only for the study of medieval Georgian art but for the culture of the entire Eastern Christian medieval world.

It is recommended to arrange special paths in the area for visitors. First of all this makes opportunity to have short walking tours, second connects existed architectural and religious sites and complexes to Gelati monastery.

20. By WMF (World Monuments Fund)

The architectural complex of the Gelati Monastery and Academy in central Georgia is one of the country's most treasured religious and cultural landmarks. King David the Builder began constructing the monastery and academy in 1106 as a grand tribute to his victory over the Turks. The academy was one of the first institutions of higher education founded in the Middle Ages, and became a principal cultural center in Georgia. Although the academy ceased to function in the late Middle Ages—after which it was converted into a refectory—the monastery remains in use. The site is renowned for its collection of twelfth- to nineteenth-century mosaics, wall paintings, enamels, and metalwork. In 1994, Gelati was listed as a UNESCO World Heritage Site and in 2006 was included on the list of Unmovable Monuments of Georgian Cultural Heritage.

As a result of political and economic unrest in Georgia in recent years, the Gelati Monastery and Academy have suffered from neglect, along with many other historic sites. The Church of the Virgin at Gelati has a leaky roof, and suffers from problems caused by climate fluctuation and water infiltration. These problems have caused damage to the structure and the frescoes, and biological agents have caused plaster and paint layers to crack, powder, and detach from the walls. The twelfth- to fourteenth-century frescoes in the narthex now have a pink discoloration caused by changes in the microclimate. Lack of funds and professional expertise has hampered the preservation of this world-renowned site. Proper restoration of the



Gelati Monastery and Academy could set an example for the numerous other churches in the region that are also in dire need of care.

WMF'S MISSION IS TO PRESERVE THE WORLD'S ARCHITECTURAL HERITAGE OF SIGNIFICANT MONUMENTS, BUILDINGS, AND SITES.

<http://www.wmf.org/project/gelati-monastery-and-academy>



## No 2. Katskhis Sveti (Katskhi Pillar)

*Location:* Georgia, Imereti region, Chiatura municipality, village Katskhi

*Nearest settlement:* Village Katskhi and Chiatura (10 km)

### *Description & brief history:*

Etymology of “Katskhi” originates from Svan language (Georgian group of languages) and means “summit”. Katskhis Sveti is 40 m height, limestone pillar emerged from the denudation of the rocky mountain with a surface 10X17 m, where two small, one nave basilicas were built in 5<sup>th</sup> and 6<sup>th</sup> centuries, when the stylistics (pillar asceticism) became popular in West Asia.

One of the rare carved cross example of 5<sup>th</sup> -6<sup>th</sup> centuries was discovered at Katskhi Pillar.

Christian Georgia had a very close relationship with Syria of that time and ascetic lifestyle of the monks became popular in the country too. The basilica of the 5<sup>th</sup> c. was built with a rough, local rock and the apse was carved into the rock. The 6<sup>th</sup> c. church has a crypt and was built with a smooth, tuff rock, lifted from down. The exact reason and date of stopping monastery life on the pillar is unknown, but when Vaxhushti Bagration-Batonishvili (1696 – 1757), Georgian historian, geographer and cartographer was describing the area, the churches were already inactive in 18<sup>th</sup> century. Katskhi Pillar monastery was functioning in 5<sup>th</sup> – 16<sup>th</sup> cc.

The bell tower was described by Georgian historians in 19<sup>th</sup> century, but in the beginning of 20<sup>th</sup> century bell tower was destroyed.

An article about Katskhi Pillar was published in magazine “Kvali” by scientist Giorgi Tsereteli in 1895. Until 20<sup>th</sup> century pre-Christian ritual – “Kokhijvroba” were held at the foot of the pillar. According to legend the chapel at Katskhi Pillar was created against to “evil”.

The pillar was first investigated in 1944 with a leadership of climbers & enthusiasts: Alexander Japaridze, Akaki Beliashvili, Levan Gotua and other villagers of Katskhi. The documentary film named as “Secrets of Katskhis Sveti” was made after investigation of the site.

The architectural complex was investigated and measured by architect Vakhtang Tsintsadze.

In 20<sup>th</sup> century Pillar was protected by the “committee of protection of antiquity”, since 1999 it is under protection of NACHP.

Legends related to Katskhi Pillar:

- Once God desired to lay out the new Garden of Eden and ask the angels for a help. One had to plant the flowers and the trees, the others had to settle the animals. So, the angels dressed up the garden. But one, varicolored snake hid under a big stone in the garden. When God looked from the heaven and noticed the snake, he poor boiled mud onto the rock into the anger and destroyed the

nest. Immediately lava cooled down and hardened in the shape of pillar, as a symbol of victory on temptation and perfidy.

- Formerly, there was a chain connecting the pillar to Katskhi church. When stylite was praying on pillar, he was giving a signal to the parish in the church when time of bending the knee.
- As if there was a woman cleaning the pillar, once in a year, the dirt comes from the top of the pillar – the fruit of queens, dates and nuts falling from the top, even though there are no trees.
- Those who try to climb the pillar will lose the eyesight. They would have 50 eggs in advance to become stronger, but will die immediately when toughing it. The strength and the braveness will come on those who pray on the pillar.
- Those who passed away in infancy were buried with a cradle, close to the pillar.
- When Katskhi went under the patronage of Abashidze family, the necessity of castle construction raised. The family chose a place close to Katskhi church with a beautiful nature and pure spring water, a place where Modebadze family was living. The Modebadzes did not start the “war”, but decided to hide the spring. They dug out deep pit at the headwater, let the water in and covered the hole with the ground. The spring found its way out in 2 km., but Abashidze family change their mind to settle in the area. Since then the Modebadzes are called Omiashvili (omi – war) and the territory close to the church Omiashvili district, where they still suffer from the lack of the water.

At present father Maxim, local monk, has finished the rehabilitation works of the churches and lives as a stylite (ascetic) on the top of the pillar.

*Legal Status:* Immovable listed property of National significance

*Function:* Functioning monastery (convent);

*Protection zone:* Automatically approved individual protection Zone: A) area of physical protection: radius minimum 50 meters B) area of visual protection: radius 500 meters

*Physical condition:* Good

*Access:* Good

*Road:* Average

*Attraction:* High

*Arranged works past 10 years:* rehabilitation works have been partly implemented.

*Current and future work plans:* Katskhi Pillar rehabilitation; rehabilitation of the road; elementary tourism infrastructure: parking for vehicles, septic toilets; signage; info-board;

*Main Concept:* develop area around “Katskhi Pillar and monastery” as outdoor heritage park.

*Main components:*

- Walking trail, view point, camp area;
- “Katskhi Gate”: coffee shop/snack, toilet, parking;
- Entry parking area for bus stop;
- Katskhi pillar conservation and reconstruction;
- Adaptation of one of the monastery property for visitor’s interpretation space and monastery shop.

*Infrastructure components:*

- Access Road improvement;
- Water supply and sewage system (local treatment plant);

- Electricity connection;
- Improvement of local road and bus parking;

*What to be done:*

The territory has to be investigated by archaeologists; External infrastructure is required for the following components: simple parking for vehicles in 500 meters from the complex, septic toilets; signage; info-board; establish rubbish removal management and responsible party; recycle bins;

Analyses for Katskhis Sveti visits

2. Attraction / Tourism form: The complex in general is unique, mystical and attractive. Splendid views open from the area of the complex.
  - 2.1. General sightseeing: Nature, Cultural & Religious site
  - 2.2. Activities: Visit cultural & religious site; acknowledge to history and architecture
  - 2.3. Strengths: uncomplicated access; short distance from Chiatura, interesting history; Interesting site for those interested in culture, history, nature & religion; recognizable site for national visitors; listed in international guide books, tour-operators' itineraries, GNTA's informational brochures; Attractive nature; Can be visited during all 4 seasons; Patriarchate & monastery representatives look after complex carefully.
  - 2.4. Weaknesses: women are not allowed on the top of the pillar, non-established regulations for school children (they are not trained for visits to tourists' sites); archaeology of the area is less investigated; non-existed experience of the management to coordinate visitors to such different site; safety of visitors is not guaranteed;
  - 2.5. Opportunities: A) The complex can be considered as Nature and Cultural heritage site and recommended to UNESCO. B) Connect Kaktkhi Pillar to Imereti cultural and architectural sites and main tourism corridor of Imereti; Make Katskhi Pillar as tourist destination more attractive for visits.
  - 2.6. Threats:
    - K) For visitors: Legend about punishment of those to intend to climb pillar; climb up to pillar may cause serious problems for visitors due to difficult access to pillar.
    - L) For complex: Increased visitors of the area can be abusive for monastery habitants; the sight is with a expected queue of visitors during high season of school children visits (May, June); weather conditions and natural disasters will decrease number of visitors; weather conditions and natural disasters might damage the pillar; unknown management for the surrounded area and maintenance for septic toilet and water system; uncontrollable number of visitors, climbers can damage the pillar.
    - M) Pollution of the territory by visitors is one of the serious risks.
    - N) Unknown responsible party for rubbish removal;
    - O) The legend connected to Katskhi Pillar may re-ensure visitors to visit the site.

Remarks:

21. There are some specific restrictions while visiting Katskhis Sveti. Restrictions come from the patriarchate of Georgian Orthodox Church and monastery authorities.

There are following restrictions:

Noise and shouting is forbidden at the territory.

*Dress code:*

Women are requested to put skirts on over their trousers. Skirts are available at the entrance.

Women and men are required don't wear shorts and "open" t-shirts;

Women are required to cover head with scarf;

Men are required don't cover head with hats;

According to old folk information the pillar is assessable, though women are not allowed climb.

22. Taking photos of monastery people is not allowed. There are some exceptions with prior agreement to monastery authorities.
23. Unexpected number of increased visitors will make difficulties for parking and itself for the condition of territory. This difficulty is expected only during high season months: May, June, July, August, September and October when school children, local people and the foreign tourists visit architectural complexes with big groups. Groups should be coordinated by tourism & monastery authorities.
24. The area is not well investigated from the point of view of archeology. Unexpected archeological discoveries may stop or post-pone infrastructural works in the area.
25. It's unknown who will take care of the area of parking and cleaning septic toilets. This may cause serious problems and spoil the whole plan of improving hygiene condition of the area during tourists' visits.
26. Monastery authorities require their involvement in all discussions for new infrastructural plans.
27. Groups should be coordinated by monastery authorities and NACHP.





### No 3 Katskhi Church

*Location:* Georgia, Imereti region, Chiatura municipality, village katskhi

*Nearest settlement:* village Katskhi, 11 km from Chiatura

*Description & brief history:*

The Katskhi church is a large, domed polyhedral building with six apses inside. According to the inscription on the tympanum of the southwestern entrance, it was built in 1010-1014 years. The monument stands on the bank Katskhura, tributary of the Kvirila River surrounded by a pentagonal wall (repaired in 1937) in the eastern corner of which there is an old bell tower. About thirty years after the construction of the church, a gallery was added to the building around three sides. The whole building consists of three concentric, multilateral parts, arranged in three-step cascade – the gallery, the Church building proper and the dome drum. Each plane is pedimented which produces broken, saw-tooth cornices. The building was decorated with carved ornaments, the major part of which was destroyed during the repairs of 19<sup>th</sup> c. though in the eastern part of the gallery the bas-relief sculpture depicting the ascension of the cross by four angels, set in a round frame is still visible.

In 1924 Katskhi church stopped functioning until 1990-s when it became active again.

The written historical sources of late feudal times, mention Katskhi fortress the ruins of which can be seen on the right side of Katskhuri River.

<i>Legal Status:</i>	Immovable listed property of National significance
<i>Function:</i>	Functioning monastery
<i>Protection zone:</i>	Automatically approved individual protection Zone: A) area of physical protection: radius minimum 50 meters B) area of visual protection: radius 500 meters
<i>Physical condition:</i>	Good
<i>Access:</i>	Good
<i>Road:</i>	Average
<i>Attraction:</i>	High

*Arranged works past 10 years:* Rehabilitation works have been partly implemented.

*Current and future work plans:* Katskhi Church visitors' infrastructure

- Organization of the territory at the site wall;
- Visitor's info center;
- Toilets and recreation area;
- Parking (car and bus stop)
- View point – open terrace

*What to be done:*

According to project external infrastructure is required for the following components: parking for vehicles, septic toilets; signage; info-board; small shop to sell snacks and non-alcohol beverages; café-restaurant designed in traditional way (ethnographical decorations, exterior and interior is required).

By the NACHP refurbishment of the roof, gallery, subsidiary buildings, bell tower, defensive wall and the gates is required.

Establish rubbish removal management and responsible party; recycle bins;

Analyses for Katskhi Church visits

3. Attraction / Tourism form
  - 3.1. General sightseeing: Cultural / Religious site
  - 3.2. Activities: Visit cultural & religious site; acknowledge to history and architecture
  - 3.3. Strengths: Easy access; short distance from Chiatura; Interesting history; Interesting site for those interested in culture, history, nature & religion; recognizable site for national visitors; well-known for foreign tourists from guide books, tour-operators' itineraries, GNTA's informational brochures; Attractive nature; Can be visited during all 4 seasons; Site is controlled by monastery people.
  - 3.4. Weaknesses: Less interesting for adventure people; non-established regulations for school children (they are not trained for visits to tourists sites); archaeology of the area is less investigated.
  - 3.5. Opportunities: Connect Katskhi to Imereti cultural and architectural sites and main tourism corridor of Imereti; Make Katskhi destination more attractive for visits.
  - 3.6. Threats: Increased visitors of the area can be abusive for monastery habitants; expected queue of visitors during high season of school children visits (May, June); weather conditions and natural disasters will decrease number of visitors; unknown management for the surrounded area and maintenance for septic toilet, water system and rubbish removal.

Remarks:

1. There are some specific restrictions while visiting Katskhi church. Restrictions come from the patriarchate of Georgian Orthodox Church and monastery authorities.  
There are following restrictions:  
Dress code:  
Women are requested to put skirts on over their trousers. Skirts are available at the entrance.  
Women and men are required don't wear shorts and "open" t-shirts;  
Women are required to cover head with scarf;  
Men are required don't cover head with hats;  
Noise and shouting is forbidden at the territory of the church.
2. To take photos monastery people is not allowed. There are some exceptions with prior agreement to monastery authorities.

3. Unexpected number of increased visitors will make difficulties for parking and itself for the condition of the complex. This difficulty is expected only during high season months: May, June when school children visit architectural complexes with big groups. Groups should be coordinated by monastery authorities.
4. The area is not well investigated from the point of view of archeology. Unexpected archeological discoveries may stop or post-pone infrastructural works in the area.
5. It's unknown who will take care of the area of parking and cleaning septic toilets. This may cause serious problems and spoil the whole plan of improving hygiene condition of the area during tourists' visits.
6. Monastery authorities require their involvement in all discussions for new infrastructural plans.
7. It is recommended cooperation of monastery people and shop owners planed to constructed nearby the entrance of the church.
8. Groups should be coordinated by monastery authorities and NACHP.





#### **No 4 Ubisi Monastery complex**

*Location:* Georgia, Imereti region, Kharagauli municipality

*Nearest settlement:* Village Ubisi

*Description & brief history:*

Ubisi monastery complex includes several buildings: a main building – three nave basilica, a tower, remains of fortification wall (12<sup>th</sup> c), a belfry and subsidiary buildings.

Some of historians date the church, as of 9<sup>th</sup> century, a period after Arab domination, when full-scale construction of the monastic communities and the educational centers was headed by ecclesiastic figure Grigol Khandzteli (Grigol of Khandzta) whose name is also derived to Ubisi.

Four-storeyed tower, the abode of a stylite, was built by Simon Chkondideli in 1141, at the reign of King Demetre (1125-1156)

Both, the church and the tower are built of porous, yellowish pumice stone with almost no ornamental decoration on facade. The main attraction and the special interest of the complex are the wall paintings done in basilica. According to the inscription, it was painted under the guidance of artist Damiane “...with the hand of Gerasime, disciple of Damiane”. The murals are depicting the main scenes from the Bible: the Annunciation, the Nativity, Entering to Jerusalem, the Crucifixion, Easter and Epiphany. Quite well preserved 14<sup>th</sup> c. wall paintings, which cover the vault, the walls and the pilasters, are painted by the master with a very individual manner and some influence of Byzantine art. However, the work of another artist is also obvious.

The later date wall paintings are preserved in the annexes (16<sup>th</sup> c.) of the church, which shows the patronage of Abashidze family in 16-19<sup>th</sup> cc.

Ubisi monastery complex is location down from the highway, on the outskirts of village Ubisi.



<i>Legal Status:</i>	Immovable listed property of National significance
<i>Function:</i>	Active monastery complex (convent); church service operates permanently
<i>Protection zone:</i>	Automatically approved individual protection Zone: A) area of physical protection: radius minimum 50 meters B) area of visual protection: radius 500 meters
<i>Physical condition:</i>	Good
<i>Access:</i>	Good
<i>Road:</i>	Good
<i>Attraction:</i>	High

*Arranged works past 10 years:* Rehabilitation works have been partly implemented.

*Current and future work plans:* It's planned to build tourism infrastructure in the area of the complex:

- Access road improvement
- Pedestrian path
- Parking area
- Visitor's center with shop
- Septic toilets
- Rest area
- Water spring & small pool

*What to be done:* Inner court, defensive wall and subsidiary building reconstruction. Preservation and conservation of the paintings, infrastructure is required for the following components: signage; corner for info-board; recycle bins.

#### Analyses for Ubisi visits

##### 4. Attraction / Tourism form

##### 4.1. General sightseeing: Cultural / Religious site

##### 4.2. Activities: Visit cultural and religious site; wall paintings; acknowledge to history and architecture

##### 4.3. Strengths: Easy access; short distance from highway; "Location at the main tourist corridor";

Interesting history; Interesting site for those interested in culture, history, nature & religion; Attractiveness of architectural elements; exceptionally inspiring and beautiful well-preserved wall paintings of 14<sup>th</sup> century; recognizable site for national visitors; well-known for foreign tourists from guide books, tour-operators' itineraries, GNTA's informational brochures; Attractive nature; Can be visited during all 4 seasons; Site is controlled by monastery people.

- 4.4. Weaknesses: Less interesting for adventure people; non-established regulations for school children (they are not trained for visits to tourists sites); archaeology of the area is less investigated; un-existed of parking management;
- 4.5. Opportunities: Increase awareness of Ubisi wall paintings for art historians and specialists of frescos; Study Tours for target groups of people interested in arts; After implementing project create special marketing plan for Imereti's wall architecture and paintings for large auditorium of tour planners – Unisi monastery should be among top 3 attractions as cultural site; consider wall paintings and architecture of Ubisi as site of protection by UNESCO;
- 4.6. Threats: Increased visitors of the area can be abusive for the monastery habitants; risk of damage of wall paintings due to much smoke from candles during increased visitors; condition of wall paintings expected queue of visitors during high season of school children visits (May, June); weather conditions and natural disasters at Rikoti pass will decrease number of visitors; Parking for large vehicles (tourist buses) may cause problems of parking; unknown management for the surrounded area and maintenance for septic toilet, rubbish removal and water system.

#### Remarks:

1. There are some specific restrictions while visiting Ubisi. Restrictions come from the patriarchate of Georgian Orthodox Church and monastery authorities.  
There are following restrictions:  
Dress code:  
Women are requested to put skirts on over their trousers.  
Women and men are required don't wear shorts and "open" t-shirts;  
Women are required to cover head with scarf;  
Men are required don't cover head with hats;  
Noise and shouting is forbidden at the territory of monastery complex;  
Scarves and skirts are available at the entrance of the monastery.
2. Taking photographs in the church is not allowed. There are some exceptions with prior agreement to monastery authorities.
3. Unexpected number of increased visitors will make difficulties for parking and itself for the condition of monastery complex. This difficulty is expected only during high season months: May, June when school children visit architectural complexes with big groups. Groups should be coordinated by monastery authorities and NACHP.
4. The area is not well investigated from the point of view of archeology. Unexpected archeological discoveries may stop or post-pone infrastructural works in the area.
5. It's unknown who will take care of the area of parking and cleaning septic toilets. This may cause serious problems and spoil the whole plan of improving hygiene condition of the area during tourists' visits.
6. Monastery authorities require their involvement in all discussions for new infrastructural plans.

- 7. It is recommended cooperation of monastery people and shop owners planed to constructed nearby the entrance of the monastery.
- 8. Groups should be coordinated by monastery authorities and NACHP.



## **No 5 Vani Archaeological Museum-Reserve after Otar Lortkipanidze**

*Location:* Georgia, Imereti region, Vani municipality

*Nearest settlement:* Town of Vani

*Description & brief history:*

Vani museum was founded in 1985 by Academician Otari Lordkipanidze during the international symposium. The museum includes: Site of Vani, expedition base and the museum itself. The museum houses the majority of the archeological materials discovered in the site of Vani. In 1987, after discovery of the rich burial, the Gold Fund was opened at the Museum, which preserves the unique pieces of Vani Goldsmith. The exposition of the museum displays cultural development of the site from VI c. BC. to I c. A.D including bronze statues and their fragments, gold, silver, bronze objects, samples of coins, etc.

Vani hosts annual international symposiums over the issues of history and archeology of the ancient Mediterranean countries.

**Quantity of stored items:** more than 4000

**Total space of the museum:** 1594,88 m<sup>2</sup>

**Display space:** 770 m<sup>2</sup>

**Temporary exhibitions space:** 130 m<sup>2</sup>

**Space for restoration:** 55.5 m<sup>2</sup>

**Museum-Reserve market:** 24 m<sup>2</sup>

**Annual quantity of visitors:** 5909

*Legal Status:* since 2004 – unified in the Legal Public Entity - Georgian National Museum (under the governmental control of MoCMP)

*Function:* active museum

*Protection zone:* Automatically approved individual protection Zone: A) area of physical protection: radius minimum 50 meters B) area of visual protection: radius 500 meters

*Physical condition:* good

Access: good

Road: good

Attraction: high

*Arranged works past 10 years:* rehabilitation works have been partly implemented.

Visitor's infrastructure: bridge, pathway, barriers, fences, recreation area.

*Current and future work plans:*

Works to be implemented:

1. Roofing archaeological remains
2. Preparatory works - cleaning
3. Site conservations – specific locations
4. Interpretation and signage
5. Trails and pathways

Works to be done detailed as per locations:

**City Gate**

1. Conservation of the monuments
2. Cleaning & fencing territory
3. Roof renovation
4. Construct Interpretational board

**Temple Complex**

1. Conservation of the monument
2. Reconstruct railings
3. Clean up and fence complex
4. Construct trails and walkways
5. Construct interpretational & info boards

**Temple of Dionysus**

1. Cover renovation
2. Renovate railings, fencing & decors
3. Conservation of the monument
4. Construct interpretational panels & boards

**Medea's Gardens**

1. Construct roof
2. Site orientation / should be visible
3. Conservation of the monument
4. Construct interpretational boards
5. Construct pathways & trails

**Upper Altar**

1. Reconstruction of the steps
2. Conservation of the monument
3. Set up interpretation boards

4. Construct trail for bicycles

#### **Twelve steps altar**

1. Reconstruction works of the steps
2. Conservation of the monument
3. Construct site interpretational boards
4. Construct trail for bicycles

#### **City wall area “platform”**

1. Restoration of “lavgardani”, cleaning, wall fixation
2. Construct interpretational boards
3. Construct pathways & trails

#### **“Big channel”**

1. Make overall planning clear, Site orientation / should be visible
2. Site conservation
3. Construct pathways & trails
4. Construct site interpretational boards

#### **Eight angle building**

1. Research for site orientation
2. Conservation of the monument
3. Construct pathways & trails

#### **Tunnel**

1. Make steps for the entrance
2. Installation of lights
3. Conservation of the monument

#### **Metal workshop & Studio**

1. Construct studio for making bronze statues
2. Construct stove
3. make overall planning clear
4. Conservation of the monument
5. Construct trail for bicycles
6. Construct site interpretational boards

#### **Round Temple**

1. Roofing
2. Conservation of the monument
3. Trail for bicycles
4. Construct site interpretational boards

#### **“Tea house”**

1. Restoration of the building
2. Rehabilitation of the territory around

**Dining house**

1. Roofing and facade rehabilitation
2. Rehabilitation of interior and equipment

*What to be done:*

Conservation and preserving works of the site; external infrastructure is required for the following components: parking for vehicles, septic toilets; signage; info-board; small shop to sell snacks and non-alcohol beverages;

Additional space for temporary exhibitions, cafeteria, auditorium & conservation works.

Revaluation of entrance situation.

Internal spaces to benefit from attractive surroundings.

Improvement of daylight and exhibition light situation.

Provision of accessibility for handicapped visitors and staff.

Enhancement of buildings’ long distance appeal.

Extensive refurbishment of existing building - incl. building services.

Need for adequate storage for exhibits.

Need for “CHURI / QVEVRI” making studio (Churi – ceramic vessel for wine)

Analyses for Vani museum visits

Attraction / Tourism form	Activity / general sightseeing	Strengths	Weakness	Opportunities	Threats
Culture / Arts / Archaeology	Visit museum; acknowledge to history & archaeology;	Easy access; Awareness of the museum especially among Georgian residences; information included in intern. guide books; good location, short distance from “tourists corridors”.	Less interesting for people; Lack of original objects & items displayed at the museum; low quality preservation of archeological site and items.	Consider Vani venue for events, educational seminars, study tours, conferences & scientific meetings; establish festival of archaeology	Expected queue of visitors during high season; Lack of visitors;

Can be visited



during all 4  
seasons;

Remarks / recommendations:

There are no specific restrictions from the point of view of functioning or limitations for the museum except common regulations: working hours, guides schedule.

All projects related to archaeological & cultural heritage should be discussed and agreed to MoCMP, NACHP and national museum administration.

Additional information and useful links:

[www.vani.org.ge](http://www.vani.org.ge)

[www.archaeologyhughes.wordpress.com](http://www.archaeologyhughes.wordpress.com)

<http://www.getty.edu/art/exhibitions/vani/>

<http://www.getty.edu/art/exhibitions/vani/history.html>

**Photos**







## No 6 Tskaltubo resort

*Location:* Georgia, Imereti region, Tskaltubo municipality

*Nearest settlement:* Town Tskaltubo

*Description & brief history:*

**Tsqaltubo** ([Georgian](#): წყალტუბო) is a [spa resort](#) in west-central [Georgia](#). It is located at around 42°20'23"N 42°35'57"E . It is the main town of the [Tsqaltubo district](#) of the [Imereti](#) province.

It is famous for its [radon-carbonate mineral springs](#), whose natural temperature of 33-35°C enables the water to be used without preliminary heating.

The resort's focus is on [balneotherapy](#) for circulatory, nervous, musculo-skeletal, gynaecological and skin diseases, but since the 1970s its repertoire has included "[speleotherapy](#)", in which the cool dust-free environment of local caves is said to benefit pulmonary diseases.

Tsqaltubo was especially popular in the [Soviet](#) era, attracting around 125,000 visitors a year. Bathhouse 9 features a [frieze](#) of [Stalin](#), and visitors can see the private pool where he bathed on his visits.

Currently the spa receives only some 700 visitors a year, and since 1993 many of the sanatorium complexes have been devoted to housing some 9000 refugees, primarily women and children, displaced from their homes by ethnic conflict in [Abkhazia](#).

Status of Tskaltubo: Town since 1953, located at the bank of Tskaltubostsklali River, is an important balneological resort, with humid, subtropical climate and warm, mild winters. Average temperature in Jan. 5,3°C., average temperature in Aug. 23,3°C. Annual precipitation 1820mm, relative humidity 73%, sunshine hrs per year more than 2000.

The main salutary factors are unique mineral waters, weakly radon, nitrogen, chlorides-hydrocarbonic- sulphate, with natrium-calcium- magnesium. Water mineralization 0,7-0,8 m/l. daily debit of springs 18-20 million with natural heat 33-35°C, which is used for bath taking and inhalation.

The salutary factor is also microclimate of karst caves which is good for curing hypertension maladies, hypotonia, bronchial asthma, neurosis and others.

The constructions of the resort buildings were done mainly in 1926, when 19 sanatoriums and boarding houses, and 9 baths were built. The wide-ranging research engineering and hydrological works took place in 1931-1932 years.

Tskaltubo is one of the unique resorts, which was planned and laid out with original, scientifically approved project.

Bath N1 is located in the center of balneozone. It's functioning on the base of the biggest gryphon. It has 2 pools with the volume of 87m<sup>2</sup>. The building is old, in a poor condition and needs a reconstruction, to meet the present day standards. The debit of gryphon is giving that opportunity.

Bath N2 was located in the northeastern part of balneozone. The building does not exist at present.

Bath N3 is located between the bathes N1 and N6. The supply of the water is done by the borehole N13 and 13a, and with the gryphon located in the building. The exploitation of the borehole is done with the pump.

Bath N4 is located in the northeastern part of balneozone. The building was used as a hygienic bath in past few years. The supply of the water was done with the so called N2 spring water. The building does not meet the technical standards (damaged windows, doors, roof etc.) and is closed at present. The building needs a reconstruction.

Bath N5 is located in the northeastern part of balneozone, south to bath N4. The building is completely destroyed, only reinforced concrete framework is remaining.

Bath N6 is located in the northern part of balneozone. The bath is the biggest among the functioning ones. The supply of the water is done by the group of boreholes on the depth of 7-10m and 100-120 m

Bath N7 is located in the centre of balneozone among the baths: N1, N2 and N9. The building is almost completely destroyed.

Bath N8 is located in the western part of balneozone. The building is destroyed. Only reinforced concrete framework is remaining.

Bath N9 is located in the western part of balneozone. The building is destroyed. Only reinforced concrete framework is remaining.

*Legal Status:* Unknown

*Function:* Inhabited city

*Protection zone:* Automatically approved individual protection Zone

<i>Physical condition:</i>	Different conditions of the buildings in the city
Access:	Good
Road:	Good
Attraction:	High

*Arranged works past 10 years:* rehabilitation works have been partly implemented.

*Current and future work plans:* It's planned to build tourism infrastructure in the city of Tskaltubo.

1. Rehabilitation of the central park of Tskhaltubo: protect green zone of the area; improve condition of the paths; connect paths to central entrance.
2. The area for parking:  
Improve condition of the road; connect parking site to baths entrances; arrange way for electro-mobiles; parking and ways for bicycles.
3. The area will be divided to 3 zones: a) active zone; b) recreational zone; c) SPA zone  
Details for the active zone: play ground; entertainment site – scene; fountains; green labyrinth; mini golf place; small square; café; garden.

*What to be done:*

The whole complex needs reconstruction: the buildings, pools, water supply system, pumps, hotels, restaurants, and parks. Part of rehabilitation is done, but the whole complex is to be refurbished in one style and equipped with new technologies to meet the standards of present days.

Signage; info-boards, small shops to sell snacks and non-alcohol beverages; café-restaurant designed in traditional way are also required on the territory of Tskaltubo.

Attraction / Tourism form: the area in general is unique because of micro-climate and bath-houses; Site of Tskhaltubo as SPA for treatment; Good location for tourism: combination of the tours in area of West Georgia, like cultural sightseeing; caving; adventure tourism, etc.

General sightseeing in relations to neighborhood: Cultural, historical, architectural, religious, ethnological;

Activities: Treatment, SPA & sanatorium activities, recreation, entertainment

Analyses for Tskaltubo visits

1. Strengths:
  - SPA and unique climate zone;

- Natural water springs;
- Easy access;
- Short distance from Kutaisi;
- Favorite site for national visitors – old generation;
- Known for foreign tourists from guide books and tourists from post-soviet countries;
- Secondary route tour-operators' itineraries;
- Known from GNTA's informational brochures;

2. Weaknesses:

- Poor condition and infrastructure of the resort;
- Low quality of service;
- Lack of trained staff in the area of resort and in town;
- Lack of SPA equipment;
- Lack of SPA and wellness therapy professionals;
- Less interesting site for adventurous visitors;

3. Opportunities:

- Reconstruction of the resort
- Staff Training
- Promotion of the area
- Handling the infrastructure of the town
- Increase Number of visitors and income for the area
- New jobs creation
- Good image of Tskhaltubo directly and indirectly will help to grow visitors to nearest resorts & protected areas
- Attract Adjara Sea Resort tourist to visit Tskhaltubo
- Four season SPA opportunity
- Creation of new small & medium enterprises for IDP - Internally Displaced Persons
- Sustainable economic benefit for the area
- Increase of awareness of Tskhaltubo & country in general

4. Threats:

- Pollution of the territory by visitors;
- Rubbish removal management;
- Lack of visitors;
- Unexpected number of increased visitors will make difficulties for parking;
- Risk of keeping sustainability of new infrastructure in case of wrong management of the site;
- Parking problems in case of visitors from Cruise Ships from Batumi & Poti;
- Eco disaster and natural disease

Remarks & Recommendations:

1. It is recommended to create research Tourism Reconstruction in Tskhaltubo;

2. Creation of Tourism Promotional Plan for Tskhaltubo.

The purpose of the both assessments is to identify positive & negative impacts of the visits to Tskhaltubo on the Georgian tourism industry.

On the positive side, identify new opportunities - e.g. influence the increase in awareness of Georgia and the sensitive good determination of the West toward Georgia into an economic benefit.

3. Image rebuilding and Marketing and Promotion assistance for Tskhaltubo:

- Trade & Travel fairs;
- Familiarization tours;
- Press trips;
- Promotional documentary films and video clips;
- Website upgrades;
- Linkup to tour operators working in Turkey, Armenia, Azerbaijan, CIS countries, etc.);
- Tskhaltubo promotion in time for the seasons.

4. Key infrastructure project support: infrastructure including rest stops with sanitation facilities, accommodations, and convenience shopping/ restaurants; railway improvement program; better road connections with Lechkhumi, Racha, Lower and Upper Svaneti regions.

5. New investments for the area: hotels, boutique guesthouses, restaurants, internet cafes.

6. Implementation of Cultural and Ecology protection programs (preservation and restoration of key cultural attractions including improved access, better interpretation, and shopping, restaurant, and remembrance opportunities). Other recommended product improvements including wine tourism support and development, health and wellness facilities restoration, etc.

7. Work with the Georgia tourism industry toward implementing the recommendations.

## 7. TOURISM POTENTIAL OF IMERETI REGION

This chapter describes only baseline conditions (statistics of tourist flow rates, statistics of visitors in protected areas, tourism attractions in Imereti etc.). In analytical part it only refers to the Cost Benefit Analysis (CBA) conducted by MDF, where expected trends of tourism development and economical outcomes are analyzed. The major conceptual and strategic issues are not addressed in this chapter, as they have been discussed in chapter 2 dedicated to tourism development strategy.

### 7.1 TOURIST FLOW OVERALL

Imereti is one of the most popular and attractive regions of Georgia for tourists, as well as the main “Tourism Corridor” of the country, which connects Eastern, Southern, Northern and Western Georgia. Among tourists visiting Imereti by any purposes, we consider foreign and national (Georgian) visitors interested for different forms of tourism:

- Cultural tourism: visiting historical, architectural, religious and archaeological sites.
- Culinary & Wine tourism: visiting wine related sites including wineries, family running wine cellars, cultural attractions (wine lovers, gourmards), restaurants, towns (Kharagauli, Khani, Koreti,etc) and guesthouses.
- Adventure tourism: 4WD adventure at Zekari Pass; Rafting on a river Rioni; Caving in Sataplia / Promete caves, Devis namosakhlari (Devi settlement); Trekking & Hiking in the areas of Sataplia, Sairme, Marelisi, Ajameti, Zekari, Tkibuli-Bziauri area, other.
- National Parks / Protected areas: visiting Imereti cave protected areas, Ajameti and Marelisi protected area (part of Borjomi-Kharagauli national park).
- Fishing is one of the attractions for fans in Imereti region and it can be considered as addition to recreation.
- Holiday, recreation, leisure: weekend and tours when tourists spend minimum 1 night at SPA’s of Tskaltubo, Sairme, Nunisi, villages of Imereti
- Visiting friends and relatives: those visitors who combine visiting relatives and highlights of the region within 1-2-3 days
- Business and professional visitors: different fields (culinary & wine professionals, engineers, building companies, traders)
- Transit: mainly transit passengers traveling to or from: Turkey via Adjara and Akhaltsikhe; Azerbaijan via Eastern Georgia; Armenia via Eastern & Southern Georgia; Domestic transit.
- Imereti as the main corridor visits to / from the regions of Lechkhumi, Racha, Adjara, Guria, Samegrelo, Lower & Upper Svaneti, Samtskhe-Javakheti; Imereti connects East and West parts of Georgia.
- Conferences, educational trainings: small and medium companies organizing short seminars and trainings in Kutaisi & Tskaltubo
- Events, festivals, concerts: large segment of people attending corporate events, civil and folk festivals, different concerts



- Shopping: Georgians going to Imereti to buy agricultural products and crafts at local bazaars
- Employment: Georgians seeking for employment in the cities and towns of Imereti
- Other: scientists & researchers (archeologists, ecologists, ethnologists, art historians, photographers, journalists, wine makers, investors)
- The Weakness of Imereti region is non-existence of Lakes with developed infrastructure for leisure and recreation. Water reservoirs of Tkibuli and Vartsikhe can be considered as potential destination for foreign and national tourists if elementary infrastructure will be developed: easy access by road, beaches, showers, WC, cottages, catering, parking, entertainment, rescue service, etc.



Below, in Annex 1 to chapter 7, is shown table of the most often visited sites of Imereti, which is designed according to statistics by 10 leading incoming tour operators of Georgia. These statistics are based only on organized tours and don't show general results of visits by independent travelers.

The most popular sites offered by Georgian tour operators to national and international tourists are:

1. Entire Kutaisi

Kutaisi is center of Imereti region. In addition to diverse sightseeing of Imereti, Kutaisi is a destination for many tourists traveling from Eastern Georgia to Western part, vice versa and it is considered as Transit Point for many tourists traveling to / from: Racha-Lechkhumi, Lower and

upper Svaneti, Guria, Samegrelo and Adjara. As well as for those traveling via mountain roads from Southern Georgia towards West regions of Georgia.

In addition to some Western standard hotels in Kutaisi like: Hotel Bagrati and Rcheuli Palace, chain of guesthouses is quite well developed. Guesthouses offer B&B, dinner and folklore show at extra cost for budget travelers. Tourist facilities of Kutaisi attract tour planners and travelers to stay for 1 or 2 nights in Kutaisi, because the road to mountainous regions is long and dividing tour with staying in Kutaisi makes trips easier and enjoyable.

## 2. Gelaty monastery complex

Gelati very special among all other historical sites of Imereti. It is famous, interesting, attractive from the point of view of architecture, wall paintings, history and religion. Gelati is included in the list of the sites protected by UNESCO. This fact attracts many visitors beside the architecture of the complex. Same time tourism infrastructure doesn't fit elementary tourism infrastructure such as: WC, managed parking and excursions, food corner, water supply and hygiene safety. In spite of mentioned above demand is high and Gelati has huge potential for tourism.

## 3. Imereti caves Protected area / Sataplia

Visiting Sataplia makes travel to Western Georgia diverse and interesting. For tourists it's interesting from the point of view of nature, adventure, recreation, wilderness and anthropology.

## 4. Motsameta monastery complex

Since the road towards Motsameta was reconstructed, as well as parking site, view spot and trail which leads to church, number of visitors increased. Monastery is interesting with its location, history and beautiful landscapes.

## 5. Bagrati cathedral

The main attractions of Bagrati cathedral are architecture, view over Kutaisi and pilgrimage. For the time being the scandal around reconstruction works is still noticeable, but anyway visitors are interested to visit Bagrati cathedral.

## 6. Kutaisi State Historical Museum

Historical [museum](#) in [Kutaisi](#) is a major museum, it is also considered to be one of the most important scientific-research institutions in Georgia with its extensive research library and laboratory.

The museum contains more than 16,000 exhibits, displaying the archaeological, numismatic, paleographical, ethnographical and spiritual heritage of Georgia. Kutaisi museum is interesting and valuable addition to Kutaisi highlights, which attracts foreign and national tourists especially school children from the nearest towns of Imereti.



Detailed or exact statistics for the whole region of Imereti don't exist. Hereby some of the statistics are shown based on sources of Georgian incoming tour operators association, Georgian National tourism agency, Agency of Protected areas and NACHP.

Among the most popular monuments according to Imereti districts, tour operators remarked:

1. Kutaisi (city)
2. Gelati monastery and architectural complex
3. Imereti caves protected area / Sataplia
4. Bagrati cathedral
5. Motsameta monastery complex
6. Ubisi monastery complex
7. Vani archeological site and museum-reserve
8. Tskaltubo SPA
9. Sairme SPA
10. Historical museum of Kutaisi

## 7.2 TOURISM ATTRACTIONS IN IMERETI

Many regions of Georgia prioritize tourism as a leading sector of the economy, some have truly unique to offer visitors (Upper Svaneti, Kakheti, Adjara, Samtskhe-Javakheti are in the top of the list). Imereti has to compete to other attractive regions of Georgia with an interesting cultural heritage, nice landscapes, great hospitality and a delectable cuisine. But alone or in combination, these factors are not likely to catalyze growth in absolute tourism numbers more than any other regions.

However, Imereti's nature, culture, cuisine and quality, as well as wine history and hospitable people combined do have the potential to offer a unique tourism experience that Georgia's other regions can compete with. The challenge is to exploit the opportunities that exist and prioritize them.

There are numerous attractions in Imereti, from historic, scenic and cultural sites, to recreational, wine, food, sporting and health-giving activities. Imereti has as many or more tourism magnets than some tourism destinations in Georgia. Stimulate the attractions in a way that will inspire prospective international and national tourists to visit Imereti is the responsibility of both government, local communities and private sector professionals, who, working with international tour planners, must prioritize infrastructure improvements and craft itineraries showcasing the most desirable (and easily accessible) attractions for short term tourism development.

As more countrywide infrastructure improvements are realized, the itineraries can be modified to meet a demand for more unique Georgian experiences in Imereti. Initial focus must be on the venues in proximity to the international spots of entry – Tbilisi and Adjara, because it is in these areas that the most tourism friendly improvements have already been realized or are immediately forthcoming. For the upcoming years new international airports in Kutaisi and Poti will become new spots of entry for Imereti region. Cheap flights will support tourism growth for the region.

Attempting to position Imereti attractions located three or more hours outside of Tbilisi and 2 hours outside Batumi at this time in Georgian tourism development would not be in “must to see” list of a global tour operator's business plan. The renovation of several cultural sites of Imereti is an interesting addition for new international tourism destinations and would inspire more tour planners. Domestically, the places' restoration undoubtedly will become a source of pride and inspire domestic visitation to cultural / historical sites. The amount of disposable income available to the majority of Georgian residents is currently below the level needed to affordably compensate hoteliers / restaurateurs / paid attractions in Imereti. But it is important to note, that approximately 10% - 12% of Georgian residents expenditure is quite high and will support incomes of the region during high seasons for entire Imereti and for all four seasons for Tskhaltubo SPA.

Besides of Cultural and religious tourism forms, there are other attractive less developed forms of tourism in Imereti region. These forms are excellent opportunities for future developments, increase visits and income: SPA in Tskhaltubo, which is extremely important for Imereti region; rural and eco tourism in the villages and protected areas of Imereti; MICE Tourism for Kutaisi and Tskhaltubo; Wine tourism in the

areas of Terjola and Zestaponi; 4WD adventure in the area of Sairme, Kharagauli and Zekari pass; Caving and rafting; Crafts, ceramic and Qvevri making workshops; development of Tkibuli and Vartsikhe water reservoirs will increase visits to region and income of local population.

While driving to Imereti, at the village of Shrosha, along the motorway people are selling beautiful articles made of clay. They are eager to invite enthusiasts at their workshop and demonstrate ceramic working process. This is one of the oldest and most popular handicraft in Georgia.

Important is that the population of Imereti is cheerful, industrious, creative and optimistic. These characteristic skills will support tourism development in Imereti.

The people of Imereti are very hospitable and famous of their fabulous humor, which like friendship is one of the codes by which they live.

Feasting and fun are an integral part of the life of people of Imereti, while singing is an essential element of the banquet table. The tradition of modern songs with guitar accompaniment originated in Imereti. Even now, folk polyphonic, lyric and joyful songs are performed during festivities in Imereti.

Visitors enjoy a traditional table (supra) ceremony of feasting and drinking wine, which includes eloquent toastmasters displaying great respect to guests and an incomparable sense of festivity and merriment.

Imeretian cuisine is one of the most significant attractions of the region. Besides numerous fast foods and restaurants at Rikoti pass, guesthouses offer tasteful food and diverse of local dishes.

Restaurants: Old Imereti, Zgapari, Jargvali, Oda

Guesthouses in Kutaisi: “Lalie”, “Zelimkhan”, others

Imeretian wines are worth to note, especially recently new small wineries are opened nearby the towns of Zestaponi, Bagdadi and Terjola. Among others some offer natural Qvevri made bottled wines:

Winery in town of Bagdati: Gaioz Sopromadze

Winery in village of Meore Obcha: Mamuka Chkheidze

Winery in village of Kvaliti / Zestaponi: Archil Guniava

Winery in town of Terjola: “Otskhanuri Ltd”

Winery in village of Kldeeti / Zestaponi: Amiran Vepkhvadze

Winery in village Nakshirgele / Terjola: Nikaladze family

Winery in village of Sviri: Lasha Jugeli

There still undeveloped nature spots, excellent potential for recreation, located closer to mountains and rivers: Kharagauli, Tkibuli, Ajameti, Sairme, Nunisi, Sachkhere, Bziauri area, Tkibuli water reservoir, Devis namosakhlari and other destinations.

One of the most important potential for “Imereti trails’ development” is road from Abastumani to Sairme, which at present is in a poor condition, but seems very attractive for trekkers, botanists and “Off Road” fans. This connection will make opportunity to develop combined tours: culture and adventure; eco and

nature tours. It is not recommended to reconstruct the road, but keep for 4WD adventure fans. Same time it's important to keep mentioned road open from April to December and make travel period by this road longer.

Besides from frequently visited places, which are under development of SESCHA project in Imereti, there are numerous archeological and cultural sites in sphere of interest from the point of view of tourism:

Shorapani castle & archaeological site; Old wine villages nearby Sachkhere (Koreti, Itkhvisi, Makhatauri) and Kharagauli (Marelisi, Zarani, Partskhnali); Jhruchi architectural complex; St. George's church in village Chkhari; George's church in town Terjola; George's church in village Sajavakho; George's church in Khoni; George's church in village Darkveti; Motsameta monastery complex; Jalaurta church; Trinity church in village Sormoni; The Virgin's church Khoriti; Christ's church in village Rioni; Assumption church;

Cattles and foretresses: Sulori castle; Skandi castle; Vartsikhe complex; Ruins of Geguti castle; Tsutskhvati castle; Gogia architectural complex; Modinakhe castle;

House museums of public figures, writers and poets: Akaki Tsereteli; Galaktion Tabidze; Titsian Tabidze; Niko Nikoladze.

Historical-ethnological museums in: Kutaisi, Zestaponi, Sachkhere, Tkibuli, Tskhaltubo, Chiatura, Khoni, Kharagauli.

Other attractions: Gorgi garden; Devi settlement; Vani settlement; Queen Tamar's bridge; Ruins of Okros Chardakhi palace; Sataplia and Tsutskhvati caves, many other sites of interest.

Archeological sites will be important addition to other attractions of Imereti, if even basic infrastructure (road, parking, pavilion, exposition, etc) will be constructed.

### **7.3 TRENDS AND FORECASTS**

Current and future infrastructural works and development projects by Georgian government, WB, MDF, Agency of Protected Areas, Georgian National Tourism Administration, public, private and international donor organizations will definitely increase number of visitors to Imereti region in nearest future (1-3 years). After implementing all projects it is vital to make tourism sustainable.

The following trends are noticeable:

1. Organized groups / FIT: developed tourism infrastructure will help to attract international tour operators to work more intensively with local tours operators and these efforts will increase number of group travelers.
2. Reconstructed sanatoriums, baths, SPA and other recreational places in Tskhaltubo, Nunisi and Sairme will attract more visitors seeking for recreation, treatment and entertainment.

3. It's known that young travelers and Geo tourists use internet to seek, plan and book new destinations. Numerous cultural sites of Georgia already can be seen at a Google since 2011. Among other cities Kutaisi can be discovered in Google.
4. New Parliament building and replacing parliament in Kutaisi will indirectly support tourism development.
5. Important trend and valuable supporting aspect for making right forecast - is Wine Tourism.
  - A) There is tendency to make researches for Wine Tourism development by Georgian government, wine and tourism associations and international donor organizations. The objective plans include: inventory works for describing wine tourism resources and statistics of Imereti area; strategy, promotional and marketing plans for Georgian wine tourism development.
  - B) Among new tendency it is worth noting: Branding of Georgian Wines including Imeretian wines. Wine makers and wine producers from Imereti recently joined "large family" of Georgian wine makers, wine associations and networks. They participate in national wine fairs, competitions, seminars and symposiums.
  - C) Events: different events related to culture, entertainment, wines and food of Imereti are anticipated for 2012 / 2013. Wine events will expand knowledge of Imeretian wines and establish new connections between interested parties including investors.
  - D) Investors: international and Georgian investors express interest to purchase vineyards and produce wines.
  - E) Educational literature: travel writers and bloggers describe Georgia and Imeretian wines for international magazines, as well as websites and blogs. This tendency is a good opportunity for Imereti region's popularization.
  - F) Kutaisi as city for DMO (Destination Management Organization) was chosen by Georgian government. It is planned to open DMO in Kutaisi for the nearest future by GNTA (Georgian National Tourism Administration).
  - G) Tourism informational center is functioning in the center of Kutaisi. Info center offers maps, leaflets and useful information to visitors.
  - H) Informational center exists at the entrance of Sataplia, which is managed by protected areas of Georgia.
  - I) Wineries' Projects: several investors and local enthusiasts plan to construct or reconstruct available venues that need infrastructure development at their wineries to wine tasting halls, wine bars, cafes and restaurants for tourists. Among others constructional works are started in towns of Zestaponi, Bagdati and Terjola.
6. Private sector / hoteliers:
 

The tendency of development of new hotels and guesthouses is remarkable in Imereti region: Chain of guesthouses in Kutaisi – at Debi Ishkhnelebi street, in the area of Bagrati Cathedral (there are 6 guesthouses where comfort and elementary service is guaranteed);

From 5 to 1 years old hotels in Kutaisi: Bagrati 1003, Rcheuli Palace, Imeri, Ayeti Palace, Dzveli Kalaki;

Hotels & sanatoriums in Bagdati / Sairme: Udabno, Sairme, Iberia, Imereti;

Hotels & sanatoriums in Tskhaltubo: Oasis, Nikala, Spa kurort;  
Sataplia PA hotel nearby the visitors center;

**7. Accommodation facilities in Imereti region (general):**

Total number of hotels: 33

Total number of guesthouses: 19

Sanatorium: 4

The majority of the hotels and the guesthouses are located in Kutaisi.

The sanatoriums are located in Tskaltubo, Baghdati and Nunisi.

Detailed description and locations of accommodation facilities are available in Annex 1.

**8. Private sector / restaurants: Catering is key issue and one of the top attractions for tourists, it is worth to mention that some new objects are opened in Imereti area. Among them there are significant and well reputable restaurants:**

In Kutaisi: Dzveli Kutaisi, McDonalds, Nikala, Imeruli Ezo, Tiripebi, Samta

In Zestaponi: Dzveli ezo, Khareba winery (wine tasting and meals are offered by prior arrangements, wine shop is open from 8 am to 10 pm)

In the area of Rikoti road: Zgapari, Imereti, Oda, Rikoti, Jargvali

In the area of Samtredia: Europa

In the area of Sachkhere: several small road-restaurants operate and offer exceptionally good food

In general catering at the restaurants, cafes and fast foods is well organized in Imereti area.

**9. Tourists trails (circuits) and other objects:**

The new tourism trails and routes already are in use after significant developments. Hereby are shown few examples of new routes and objects:

Route A: “Culture and nature” (all year round) 2 days / 1 night

Day 1. Tbilisi – Katskhi – Kutaisi.

Visit Katskhi church and Katshi pillar. Drive to Kutaisi and visit Ubisi monastery on the way. Visit Bagrati Cathedral. Overnight in Kutaisi.

Day 2. Kutaisi – Tbilisi

Morning visit to Gelati monastery complex and Motsameta monastery. Visit Sataplia protected area. Drive back to Tbilisi.

Route B: “Nature, adventure and culture” (End of May – October) 4 days / 3 nights

Day 1. Tbilisi - Marelisi.

Drive from Tbilisi to Marelisi. On the way visit Gori – Stalin’s birth place and Uplistsikhe cave town. Overnight in Marelisi – a perfect location for hiking in National park.

Day 2. Marelisi – Borjom-Kharagauli national park.

Hiking in National park. Overnight in Marelisi

Day 3. Marelisi – Kutaisi

Drive from Marelisi to Katskhi to Visit the church and the Pillar. Continue the way to Kutaisi to visit Ubisi monastery and Bagrati cathedral. Overnight in Kutaisi.



Day 4. Kutaisi – Tbilisi

Morning visit to Gelati monastery complex and Motsameta monastery. Visit Sataplia protected area. Drive back to Tbilisi.

Route C: “Adventure, Nature and Eco” (End of May – October) 8 days / 7 night

Day 1. Tbilisi – Mtskheta – Gori – Uplistsikhe – Borjomi

Drive from Tbilisi to Borjomi. On the way visit Mtskheta – old capital of Georgia, Gori – Stalin’s birthplace, Uplistsikhe – cave town. Overnight in Borjomi.

Day 2. – 6 Borjomi – Marelisi

Hiking Borjomi – Kharagauli national park from Borjomi to Marelisi. Overnights in the shelters of the park. Might be arranged horse riding.

Day 7. Marelisi – Kutaisi

Drive from Marelisi to Katskhi to visit the church and the Pillar. Continue the way to Kutaisi to visit Ubisi monastery and Bagrati cathedral (optional). Overnight in Kutaisi.

Day 8. Kutaisi – Tbilisi

Morning visit to Gelati monastery complex and Motsameta monastery. Visit Sataplia protected area. Drive back to Tbilisi

Route D: “Archeology and culture” 3 days / 2 nights

Day 1. Tbilisi – Mtskheta – Uplistsikhe – Shorapani - Kutaisi

Drive from Tbilisi to Kutaisi. On the way visit Mtskheta – old capital of Georgia, Uplistsikhe – cave town, Shorapani archaeological site and Ubisa monastery. Overnight in Kutaisi

Day 2. Kutaisi and its outskirts

Visit Bagrati cathedral, Gelati monastery complex, Motsameta monastery. Overnight in Kutaisi

Day 3. Kutaisi – Vani – Tbilisi

Drive to Vani archeological site. After the excursion visit Sataplia and Prometheus cave. Drive back to Tbilisi.

Route E: “Gourmet tour” (all year round) 2 days /1 night

Day 1. Tbilisi – Kutaisi

On the way to Kutaisi stop for the visits in Mtskheta – Old capital of Georgia. Visit Khareba winery and have a wine tasting. Arrive in Kutaisi for the lunch time and take a participation in Khachapuri (cheese pie), Eggplants with walnuts and Dedas Puri (bread) baking, Chuchrkhela – Georgian sweet, making. Visit Bagrati cathedral. In the evening attending to typical Georgian “supra” with traditional dishes and folk music.

Day 2. Kutaisi – Tbilisi

Visit Gelati Monastery complex and Motsameta monastery. Drive to Tbilisi. Stop to bake Nazuki (Georgian sweet bread) and visit Ubisa monastery on the way.

Route F: “Arts and crafts” (all year round) 2 days/1 night

Day 1. Tbilisi – Kutaisi

Visits Ubisi monastery to enjoy the beautiful wall paintings. Continue to village Makatubani to observe Qvevri making process; Next visit clay vessel making process in village of Shrosha at Rikoti pass. Visit family of basket makers to watch the basket spinning process. Overnight in Kutaisi.

Day 2. Kutaisi – Tbilisi

Visit craft makers family in Kutaisi, Gelati Monastery complex to observe the beautiful murals and mosaic work. Visit Vani museum. Drive to Tbilisi.

Route G: “Food & Wine” (all year round) 3 days / 2 nights

Day 1. Tbilisi to Imereti region

First visit to wine company “Otskhanuri” and Nikoladze family wine cellar in village of Nakshirgele in town of Terjola. Continue way to visit dozen of “Marani” (wine cellars) in village of Koreti, old village, tasting home-made Qvevri wine and organic food cooked by villagers. Continue to town of Sachkhere for dinner & overnight.

Day 2. Imereti area / overnight in Kutaisi: visit winery “Khareba”, tasting of rare wines and food. Continue to village Kvaliti (Zestaponi area) to taste wine of Guniava family, later on visit Vepkhvadze family wine production in village of Kldeeti (Zestaponi area);  
Cooking demonstration at the guesthouse in Kutaisi.

Day 3. Kutaisi – Bagdati – Tbilisi

Morning visit Kutaisi agricultural market; Visit Jugeli wine cellars in village of Sviri and Sopromadze wine cellar in village of Bagdati; Taste variety of mushrooms at “Zgapari” restaurant. Return to Tbilisi.

Route H: “Qvevri Route of Imereti” 2 days / 1 night

Day 1. Tbilisi to Imereti region

Visit Qvevri wine production “Otskhanuri” and Nikoladze family wine cellar in village of Nakshirgele in town of Terjola. Continue way to visit dozen of “Marani” (wine cellars) in village of Koreti, old village, tasting home-made Qvevri wine and organic food cooked by villagers. Continue to Kutaisi for dinner & overnight.

Day 2. Visit village Kvaliti (Zestaponi area) to taste Qvevri wines of Guniava family, later on visit Vepkhvadze family Qvevri wine production in village of Kldeeti; Visit Jugeli wine cellars in village of Sviri (Zestaponi area);

Visit Qvevri makers in villages of Shrosha and Makatubani, observe Qvevri making process. Return to Tbilisi.

Route I: “Adventure & Nature” 3 days / 2 nights

Day 1. Tbilisi to Sataplia. Explore caves of Sataplia.

Overnight at the hotel of APA.

Day 2. Explore Promete caves and Mgvimevi monastery complex

Overnight in Sachkhere

Day 3. Explore Katski area. Return to Tbilisi

- Route J: “Culture & Adventure” 2 days / 1 night  
 Day 1. Batumi to Imereti area  
 Visit Vani archaeological site; Gelati, Motsameta and Bagrati monastery complexes;  
 Overnight in Kutaisi  
 Day 2. Explore Sataplia caves and protected area. Return to Batumi
- Route K: “Cultural Exploration” 1 day trip from Ajara  
 Visit Gelati and Katskhi complexes
- Route L: “Recreation” 6 days / 5 nights  
 Few days spent in Tskaltubo
- Route M: “4WD Adventure & Imereti exploration tour” 3 days / 2 nights  
 Day 1. Tbilisi to Abastumani  
 Day 2. Abastumani to Sairme via Zekari pass by 4WD. Overnight in Sairme.  
 Day 3. Visit Sataplia caves, return to Tbilisi via Kharagauli road
- Route N: 1 or 2 days rafting on a river Rioni for experienced enthusiasts.

1 Day diverse trips area available all year around from the regions of Georgia towards Imereti (Kartli, Guria, Samegrelo, Lechkhumi, Adjara):

- A) Kutaisi and surroundings; B) Sataplia and Promete caves; C) Katskhi and surroundings; D) Gelati and Motsameta monastery complexes, Bagrati cathedral; E) Tskaltubo SPA visit; F) Vani archaeological site

From 2 Days diverse trips area available all year around towards:

- A) Kutaisi and surroundings; B) Tskaltubo SPA; C) Cultural and Pilgrimage Tours in Imereti area including visits to Gelati and Motsameta monastery complexes, Bagrati cathedral and Ubisi church; D) Visiting Chiatura-Sachkhere area including visits to Katskhi & Mgvimevi monastery complexes;

From 2 Days trip from March to December to Imereti (Sataplia) caves protected area

From 3 to 5 Days and more diverse trips are available from April to November to cultural highlights and other tourist destinations of Imereti

Current and future infrastructural development will change Itineraries dramatically and make destinations of Imereti region more diverse, especially through via Chiatura-Sachkhere road towards Katskhi church and pillar. Sightseeing of Imereti loaded with attractions and the most important issue for the region – make tourist season longer than ever.

Recommendations for tourism growth in Imereti:

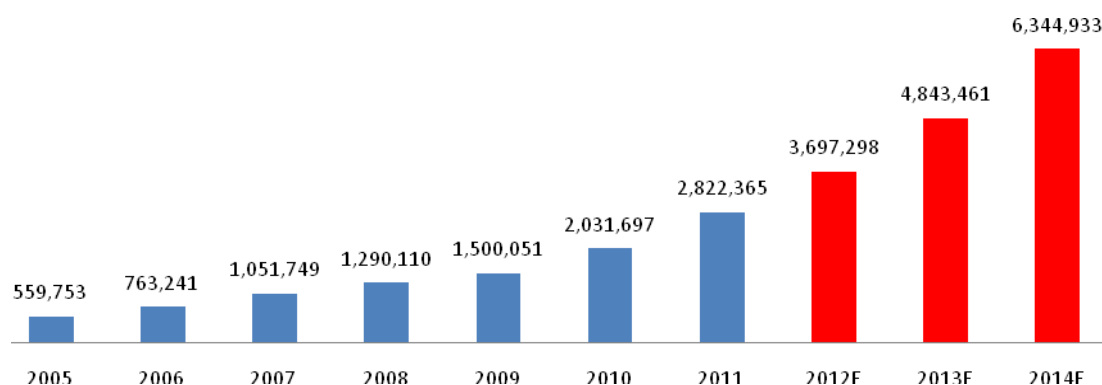
- Position and promote Imereti as cultural heritage destination

- Increase the proportion of international leisure tourists visiting Georgia for culture and participating in cultural activities
- Have 5 family wineries open 7 days a week (without appointment) for wine tasting
- Increase Imereti hotels, rooms and quality within 2 years

## 7.4 PROJECTED TOURISM GROWTH IN IMERETI

According to the Georgia National Investment Agency, the number of visitors to Georgia increased from 560,000 in 2005 to 2.7 million in 2011, with a projection to reach about 6.3 million by 2014 (see Figure 1.1). Nonetheless, the Government recognized that restoration of buildings and municipal infrastructure alone was not sufficient condition to trigger and sustain local economic transformation. An integrated and demand-driven approach to regional development was seen as critical to spurring growth in secondary and historic cities.

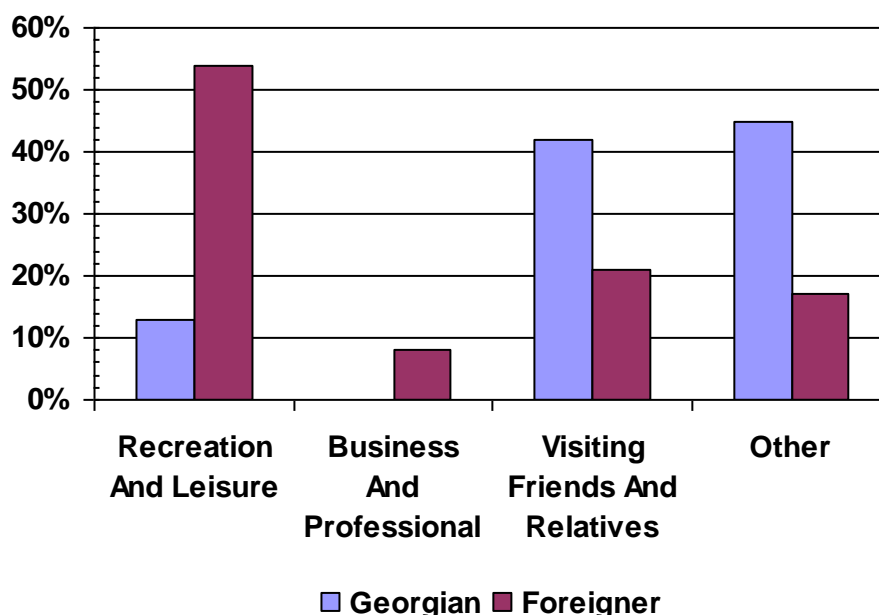
**Figure 1.1: Current and Projected Tourism Growth in Georgia**



Source: Georgia National Investment Authority (2012)

With the implementation of an integrated approach to tourism development in Imereti, and the operation of Kutaisi international airport, the tourism strategy projects that the annual number of visiting tourists is expected to increase from 740,000 (585,000 Georgian visitors and 155,000 foreign visitors) in 2010 to 1.20 million by 2016 and to 2.00 million by 2020. The number of beds in hotels, guest-houses and family-houses is projected to grow from 2,661 in 2010 (in 34 hotels and 34 guest and family houses) to about 3,193 in 2016—to serve an expected increase in number of tourists with at least one night stay from 32,500 in 2010 to 110,000 by 2016 and to 300,000 in 2020. The number of tourists with at least one night stay is projected to reach 300,000 by 2020. About 23 percent of visitors to Imereti are international (the UK, the Netherlands, France, Italy and Israel), while 11 percent are regional (Ukraine, Armenia, Turkey and Azerbaijan). Most tourists do report enjoying the region’s rich nature and cultural heritage and leave with very high level of satisfaction (8.5/10). Figure 1.2 shows the shares of visitors by purpose of visit. With urban regeneration activities and improvement of the spa infrastructure in Tskaltubo, GNAT projects an increase of the number of visitors started to increase in the number of spa tourists from 7,000 in 2011 to 15,000 in 2012 and to 32,000 by 2020. Beyond spa tourists, around 200,000 visitors visited Sataplia and Prometheus caves in 2011 and this number is expected to double by 2020.

**Figure 1.2: Purpose of visit to Imereti**



Source: GNTA (2012)

## 7.5 ECONOMIC AND FINANCIAL ANALYSIS

For the RDP II economic and financial analysis, a cost-benefit assessment (CBA) was carried out in 2012 by MDF.<sup>17</sup> Benefit streams were calculated based on the following available data and assumptions.

Increase in tourists, overnight stays and spending. The Project-supported improvements to critical infrastructure needs and destination management strengthening is expected to translate into (a) an average increase in domestic and international tourism arrivals to Imereti by 5 percent per annum during the life of the Project and thereafter (the tourism strategy projects 10 percent increase per annum, but the economic analysis assumes only half of such an annual growth is attributed to the project investments) ; (b) based on the configuration of the tourism circuits, average overnight stays are projected to increase from 3.8 days in 2010 to 4.5 in 2016 and to 5.5 by 2020; and (c) spending on food, lodging, and new activities (e.g., guided tours), and local products/handcrafts is projected to increase by 5% per annum during the life of the project and 2% thereafter.

Increase in number and profitability of economic enterprises. The development of tourist attractions and geo-tourism maps, destination management and marketing/promotion of Imereti as a new quality destination, along with the improved infrastructure are expected to attract private investors, who will create new enterprises or expand existing ones. The leverage factor for private investments attracted by the public expenditures is assumed to be 3 to 1 based on data from other Georgian cities where similar urban renewal projects were implemented, i.e., old Tbilisi, old Mtskheta and Signagi. Subject to Government’s investments in improved municipal infrastructure and urban regenerating under the Project, some private

<sup>17</sup> The Project economic and financial analysis is complemented by spatial economic analysis and ICOR (investment to capital output ratio) analysis looking at the relationship between public and private investment trends in Georgia generally. Full analysis is available in Annex 8.

sector entities expressed interests to investment in Tskaltubo during 2013. Their indicative planned investment amounts are presented in Annex 8. It is expected that additional private sector investments will be leveraged during subsequent years of the Project.

The number of beds in hotels, guest-houses and family-houses is expected to grow from 2,661 in 2010 to about 3,193 in 2016—to serve an expected increase in number of tourists with at least one night stay from 32,500 in 2010 to 110,000 by 2016. The number of tourists with at least one night stay is projected to reach 300,000 by 2020. Also, based on data from other Georgian cities where similar urban renewal projects occurred, new enterprises and increased profitability are assumed to raise the amount of corporate taxes collected by 15 percent, the VAT by 18 percent, and personal income tax by 20 percent.

Property and rental value appreciation. Tourism development and improved infrastructure will create more opportunities for businesses to invest and will increase demand for real estate, which should cause real estate and rental values to appreciate. Based on data from other Georgian cities where similar urban renewal occurred, i.e., old Tbilisi, old Mtskheta and Signagi, the following assumptions are made for Imereti: (a) Property values are assumed to appreciate by 60 percent and rental values by 20 percent; (b) property tax revenues are expected to increase by 20 percent; and (c) income tax revenues from increased rental fees is projected to rise by 20 percent.

Temporary job creation. It is expected that while the Project is being implemented, temporary jobs will be created. Based on analysis of MDF infrastructure projects over the past five years, as well as global experiences in similar projects, the following assumptions were made. A large proportion of conservation/restoration works (30 percent of the expenditures) are assumed to cover the cost of labor. Thus, it is assumed that the government will obtain income tax (20 percent) from labor wage.

The cost-benefit analysis was prepared for the entire Project, rather than for each component. The Net Present Value (NPV), Financial Internal Rate of Return (FIRR) and Economic Internal Rate of Return (EIRR) were calculated for the next 20 years from 2012 up to 2031, including four years of Project implementation. For the economic analysis, financial costs were corrected and conversion factors were applied. The analysis assumed a 12 percent discount rate.

Secondary data was collected from various government entities, including the GNTA, Ministry of Finance, Revenue Service, Public Register, GeoStat, as well as from real estate brokers and studies from similar projects, e.g., USAID-funded Georgia Economic Prosperity Initiative. Primary data was collected from small-scale surveys, using structured questionnaires that were administered to various stakeholders (restaurants, cafes, hotels, guest-houses, and domestic and foreign visitors). It also obtained information from in-depth interviews.

Overall, the Project is projected to yield net economic benefits from the following benefit streams: An increase in tourist overnight stays and spending, the number and profitability of enterprises, increased property values and temporary jobs.

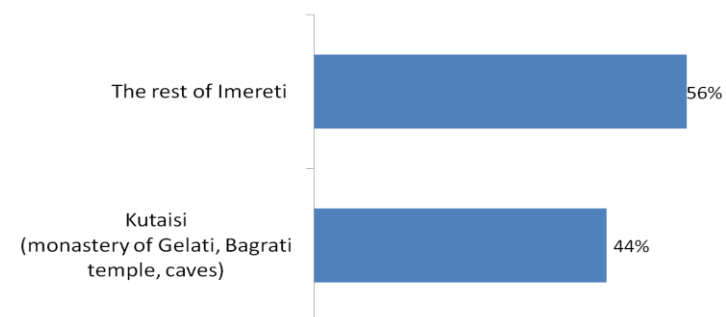
**Results:** The economic and financial analysis shows that the Project's NPV at a 12 percent discount rate amounts to US\$10.45 million, with a Financial Internal Rate of Return (FIRR) of 19.10 percent, and an Economic Internal Rate of Return (EIRR) of 31.05 percent.

**Statistical Data Related to Tourism Development in Georgia**

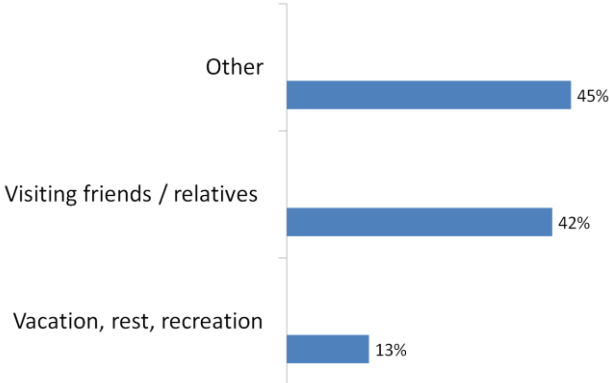
STATISTICS & ANALIZES - GEORGIA: FORECAST 2012

YEAR	ARRIVALS	FORECASTED QUANTITY	INCREASE COMPARED TO 2011
2009	1,500,049	1,265,000	11%
2010	2,032,586	1,666,000	43%
2011	2,820,185	2,565,000	39%
2012	.....	3,567,000	27%

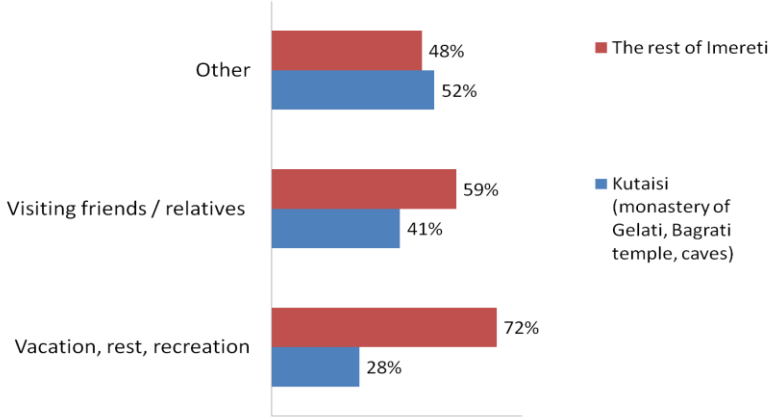
The places visited by Georgian visitors:



### The aim of Georgian visitors:

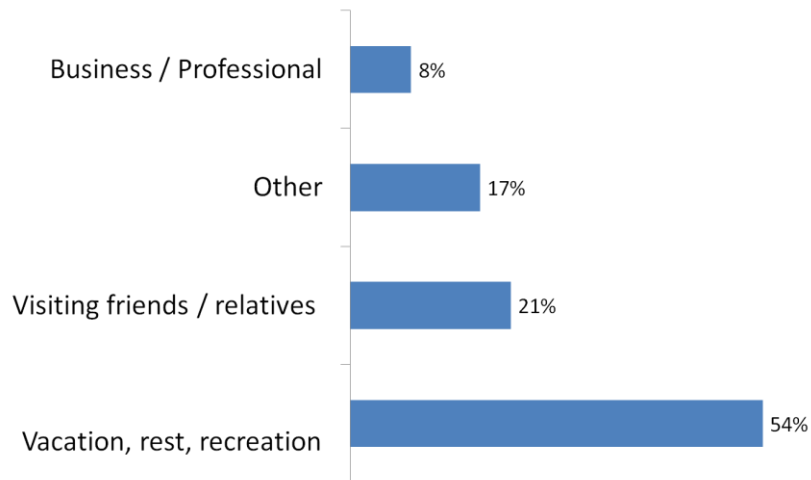


### Georgian visitors reasons by visited places:





## The aim of Foreigner visitors:



## Foreigner visitors reasons by visited places:

	Vacation, rest, recreation	Visiting friends / relatives	Other
<b>Kutaisi (monastery of Gelati, Bagrati temple, caves)</b>	83%	83%	73%
<b>Tskaltubo</b>	5%	5%	0%
<b>Sairme</b>	4%	0%	5%
<b>Samtredia</b>	3%	5%	0%
<b>Chiatura</b>	2%	2%	11%
<b>Zestaponi</b>	2%	2%	6%
<b>The rest of Imereti</b>	2%	4%	4%

### KEY Assumptions

#### Macroeconomic Indicators

Exchange rate US\$/GEL	\$1.60
Discount rate, %	12%
Operation and Maintenance costs, % of investment	1.00%
GDP growth rate, %	6%
Incremental Capital Output Ratio - ICOR	2
Private Investment Leverage Factor	3.0

#### Tourism Indicators

Number of Visitors in 2010 (source: GNTA)	740,000
Number of tourists (> 1 night) (average GNTA, survey)	35,000
Number of Beds in Imereti	2,661
Tourist arrivals growth rate forecast in 2014-2017	10(5)%
Tourist arrivals growth rate forecast after 2017	5%
Current Average stay, days (source: GNTA)	3.80
After Project Average stay, days from 2017 (source: GNTA)	4.50
After Project Average stay, days from 2020 (source: GNTA)	5.50
Average daily spending per tourist, GEL (source: survey)	118.50
Current Average stay (Tskaltubo), days	10.00
After Project Average stay (Tskaltubo), days	10.00
Average daily spending per spa visitor (Tskaltubo), GEL	75.00
Local share in tourist spending	90%
Hotel occupancy rate	60%
Secondary Sales Multiplier factor	2.00

#### Breakdown of the tourist spendings

Personnel Salary (net)	20%
Food, utilities & other (local)	30%
Food, liquor (Imported)	10%
Taxes	20%
Investor Profits	20%

#### Taxes

VAT	18%
Corporate Income Tax (CIT)	15%
Personal Income Tax (PIT) before Jan 1, 2014	20%
Personal Income Tax (PIT) after Jan 1, 2014	15%
Property Tax	1%

#### Disbursement of Project Funds

	GEL	USD
Year 2012	14,400,000.00	9,000,000.00
Year 2013	15,200,000.00	9,500,000.00
Year 2014	15,200,000.00	9,500,000.00
Year 2015	15,200,000.00	9,500,000.00
Total	60,000,000.00	37,500,000.00

#### Project Indicators

Share of Labor costs in Capital Expenditures (Public)	25%
Share of Labor costs in Leveraged Capital Expenditures	20%

#### Increase in number and spending of Tourists

Year	% increase	No. of Tourists	% increase	Tourist Spending, USD
2012	0%	35,000	0%	281
2013	5%	36,750	0%	281
2014	5%	38,588	5%	296
2015	5%	40,517	5%	310
2016	5%	42,543	5%	326
2017	5%	44,670	5%	342
2018	2%	45,563	2%	405
2019	2%	46,475	2%	413
2020	2%	47,404	2%	421
2021	2%	48,352	2%	515
2022	2%	49,319	2%	525
2023	2%	50,306	2%	536
2024	2%	51,312	2%	547
2025	2%	52,338	2%	558
2026	2%	53,385	2%	569
2027	2%	54,452	2%	580
2028	2%	55,541	2%	592
2029	2%	56,652	2%	604
2030	2%	57,785	2%	616
2031	2%	58,941	2%	628
2032	2%	60,120	2%	641

Source: CBA (2012)

<b>IMERETI CAVES PROTECTED AREAS</b>																
	<b>2007</b>			<b>2008</b>			<b>2009</b>			<b>2010</b>			<b>2011</b>			
	<b>GE O</b>	<b>FOR</b>	<b>TO TA L</b>	<b>GE O</b>	<b>FOR</b>	<b>TO TA L</b>	<b>GE O</b>	<b>FOR EIGN</b>	<b>TO TA L</b>	<b>GE O</b>	<b>FOR EIGN</b>	<b>TO TA L</b>	<b>GE O</b>	<b>FOR EIGN</b>	<b>TOT AL</b>	
JAN			0			0			0			0			0	
FEB			0			0			0			0			0	
MA R			0			0	647	27	674			0			0	
AP R			0			0	136 1	75	143 6	163	5	168			0	
MA Y			0			0	903 4	115	914 9	351 9	17	353 6	103 98	635	110 33	
JUN E			0			0	220 70	119	221 89	120 16	40	120 56	305 29	935	314 64	
JUL Y			0			0	299 4	235	322 9	109 0	48	113 8	724 9	1296	854 5	
AU G			0			0	381 0	322	413 2	119 0	82	127 2	936 9	1249	106 18	
SEP T			0			0	108 0	168	124 8	115 3	64	121 7	437 7	619	499 6	
OC T			0			0	458 7	199	478 6	955	40	995	656 6	883	744 9	
NO V			0			0	191 8	42	196 0	145 1	24	147 5	104 6	80	112 6	
DE C			0			0	640	59	699	157 9	2	158 1	0	76718	767 18	
TO TA L	<b>0</b>	<b>0</b>	<b>119 00</b>	<b>0</b>	<b>0</b>	<b>423 50</b>	<b>481 41</b>	<b>1361</b>	<b>495 02</b>	<b>231 16</b>	<b>322</b>	<b>234 38</b>	<b>695 34</b>	<b>82415</b>	<b>151 949</b>	
			<b>0</b>				<b>0</b>	<b>49502</b>			<b>23438</b>			<b>151949</b>		

**Number of Visitors for Imereti Caves Protected Areas**

<b>SATAPLIA (APA)</b>		
<b>2009</b>	<b>2010</b>	<b>2011</b>
49 502	23 438	75 231

*(International & Local)*

<b>KUMISTAVI (PROMETE CAVE)</b>	
2011	76 18

## 8. OVERVIEW OF THE ENVIRONMENTAL BASELINE CONDITIONS

### 8.1 PHYSICAL-GEOGRAPHICAL DESCRIPTION OF THE PROJECT AREA

#### 8.1.1 GENERAL PHYSICAL GEOGRAPHICAL CHARACTERISTICS

Imereti region occupies a central part in Georgia. It has clear natural boundaries isolating it from the east (Shida Kartli) with Likhi ridge, from the north (Racha, Kvemo Svaneti) with Khvamli and Racha-Imereti ridges, from the south with Ajara-Imereti ridge and from the west (Guria-Samegrelo) with Guria depression and Guria-Samegrelo administrative border.

The region is made up of 12 administrative units, including one city of Kutaisi, three territorial units subordinate to the city boards (Tkibuli, Chiatura and Tskaltubo) and 8 municipalities: Khoni, Samtredia, Tskaltubo, Vani, Bagdati, Zestaponi, Terjola, Kharagauli and Sachkhere municipalities. The area of Imereti region is 6,4 thousand km<sup>2</sup> and its population according to the census of 2000, amounts to 700.000 people. The region has 161 *Sakrebulo*s and 544 villages. Imereti is quite densely populated with the population density of 120 people/km<sup>2</sup>. The most densely populated areas are Kolkheti Plain and hilly piedmont with the population density of 100-300 people/km<sup>2</sup>.

**Table 8.1 Data on Municipalities**

No	Municipality	Municipality area (km <sup>2</sup> )	Number of populated areas	Population	Density per km <sup>2</sup>
1	Bagdati	815.4	34	29235	35.85
2	Vani	557.0	61	34464	61.84
3	Zestaponi	423.7	74	76208	179.8
4	Terjola	357.4	63	45496	127.3
5	Samtredia	364.0	67	60456	166.1
6	Sachkhere	768.5	64	46846	60.96
7	Tkibuli	542.0	76	56341	103.95
8	Chiatura	478.2	55	31132	65.1
9	Tskaltubo	700.1	65	73889	105.54
10	Kharagauli	913.6	96	27885	30.52
11	Khoni	428.5	50	31749	74.09
Total		6400	705	5013701	109.3

Imereti region has humid subtropical climate, i.e. high air humidity, bulk atmospheric precipitations and not so wide range of temperature change. In the warm season of the year, the winds are of a monsoon nature. While humid west winds are dominant in summer, dry east and north-east winds dominate in winter. The mean annual velocity of winds is 4-5 m/sec.

Imereti region is distinguished for high average air temperature (13,9-14,5°C).

The average annual air temperature in the coldest months (December-January) of the year is 5-5,8°C and it is 26,3-26,9°C in the warmest months of the year (July-August). The temperature over the ridges bordering Kolkheti Plain sharply reduces and goes down to 10°C at 1000 m above sea level and to

40°C at 2000 m above sea level. The lowest temperature in the region is fixed at its northern border, in the environs of Nakerala ridge.

The average annual precipitations based on multi-year data is 1692 mm in Tskaltubo, 1646 mm in Khoni, 1221 mm in Kharagauli, 1375 mm in Samtredia, 1342 mm in Tkibuli, 1190 mm in Sachkhere and 1380-1490 mm in Kutaisi.

**Table 8.2 Atmospheric precipitations in Imereti region, mm (2009)**

No	Weather sta	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Total	Average multi-year norm	Deviation from the average multi-year norm
1	Kutaisi	121.0	99.8	149.1	73.0	47.0	96.0	264.2	54.0	167.8	75.4	222.6	111.0	1481	1394	+87
2	Mount Sabu	116.1	102.7	153.5	60.6	71.5	36.3	112.8	84.1	159.2	57.2	207.0	70.0	1231	1166	+71
3	Zestaponi	113.1	103.2	131.4	91.5	52.1	41.8	141.5	83.3	111.1	69.2	253.9	97.6	1290	1288	+2
4	Sairme	90.4	72.9	129.9	116.8	85.1	116.5	145.1	117.9	91.1	48.7	99.0	0	1113	1165	-52
5	Sachkhere	119.3	81.6	70.5	27.2	90.9	80.3	76.9	76.0	84.6	62.0	198.0	77.8	1045	910	+135

The table shows that the sum of precipitations fallen in Imereti region in 2009 does not exceed the total background value. Downpours (falling of 30 mm or more precipitations) were fixed at some locations, in particular the amount of precipitations fallen in Sachkhere region in June (on 18.06.09) amounted to 47,0 mm and it was 36-42 mm in November (23.11.09).

Downpour was fixed in the city of Kutaisi on 21.07.09 (33,6-58,0 mm), in September (20.09.09), (32,0-41,8 mm) and in November (26.11.09) (34-45 mm).

As a result of the great amount of precipitations fallen in the city of Kutaisi individual places were flooded, but the city was not seriously damaged.

## 8.1.2 GEOMORPHOLOGY, GEOLOGY AND RISKS RELATED TO HAZARDOUS GEOLOGICAL PROCESSES

### Morphological, geological, tectonic and hydrogeological conditions

Four geomorphological regions may be identified in Imereti region:

1. Kolkheti Plain, 2. hilly piedmont of Guria-Imereti ridge, 3. high-mountainous zone of Imereti mountainous region, and 4. average-mountainous plateau of Imereti.

1. Kolkheti Plain occupies the central part of Imereti region. It covers Kolkheti Plain and a wide piedmont strip (terrace stairs). The Plain was originated as a result of the actions of the rivers Rioni, Tskhenistskali, Kvirila, Khanistskali and others. Kolkheti Plain runs for almost 45 km

eastwards up to the city of Zestaponi and wedges there as a triangle. The relief is almost flat and slightly bogged at some places. The absolute levels vary from 18 m (in Samtredia) to 150 m (in Zestaponi). The territory is slightly dissected with flat-bottomed dry gullies and stream gorges. The cutting depth of the gullies is 8-20 m.

The elevated terrace lowland with minor inclination covers the river Rioni and over-floodplain terraces of its tributaries.

2. The hilly piedmont covers the above-mentioned sloping plain and lowland from the northern, eastern and southern sides. The given location is a set of individual hills and hills with flat plateau-like crests. The absolute levels vary from 70-80 m to 250-370 m. The surface is dissected with gorges, dry gullies and streams with the cutting depth of up to 10-30 m.

The inclination of the slopes varies and increases depending on the inclination of gullies. The inclination mostly varies from 8-10 to 20-25°.

3. Imereti mountainous region covers quite a large area in the region and covers Ajara-Imereti (Meskheti) ridge in the south. The absolute levels at these locations are 2000-2580 m (Didmagali and others). The northern slope of the ridge is dissected with deep V-shaped gorges of the rivers. These rivers are the Sakraula, Khanistskali, Koristskali and others, with their erosive cutting depth of 15.0-70.0 to 150-200 m.
4. The eastern part of the region is occupied by Zemo Imereti plateau. It is an elevated part of Georgian block located in the intermontane of Georgia, where there runs the watershed of the Black Sea and Caspian Sea basins. The major part of this plateau is located in the basin of the river Kvirila and its tributaries. Its length from south to east is up to 30 km and its width from north to south is up to 40 km. The absolute level of the highest point of the plateau reaches 1500 m. The territory is crossed with rivers with deeply cut, mostly canyon-like gorges. Their cutting depth is 600-800 m. The watersheds of the rivers at this location are flattened or slightly wavy and are the remnants of the ancient peneplain.

Westwards, the height of the plateau reduces gradually and imperceptibly merges with the piedmont strip.

The northern part of the region is occupied by Okriba mountainous massif, which is situated within the limits of Terjola and Zestaponi. It sinks gradually from east westwards and the absolute level at the city of Kutaisi equals to 710.0 m. Its northern slope is inclined and scarp-like and wavy-stepwise at some places.

The watershed of the river Rioni and Tskhenistskali is Samguruli ridge, which is crossed with the tributaries of the same rivers. The inclination of the slopes is very great (40-65°), the gorges are short, with V-shaped cutting. Their cutting depth varies from 40-60 to 650-700 m.

According to the tectonic zoning of Georgia (Gamkrelidze E., 2000), Imereti region is mainly located in western molassa depression and central elevation zones of Trans-Caucasian intermontane zone.

The geology of Imereti region is presented by the rocks of almost all ages, starting from the Palaeozoic through Quaternary deposits.

The Palaeozoic deposits are spread on Dzirula massif. The deposits are presented by biotite gneisses, quartz-diorite gneisses, granites and granitoids. The deposits on the surface are strongly weathered, cliffy and half-cliffy. The Jurassic deposits in Imereti region are mostly spread on the territories adjacent to Tkibuli basin, on Dzirula massif and Zhoneti-Mekvena-Derchi territory. The deposits are rocky and half-rocky, strongly weathered and are lithologically presented as tuffa-breccias, tuffa-sandstones, argillites, clays and sheet slates. The Upper Jurassic deposits on the territory of Okriba

are presented by Qimerij-Titon red clays. The rocks are characterized by average sensitivity. Landslides, rockfalls and mudflows are spread within these deposits.

The deposits of Cretaceous Age are spread on Imereti Plateau, Khvamli Kedi, in Okriba basin, over Khvamli ridge, on the territory of Tskaltubo and in the gorge of the river Tskhenistskali, on the territory of village Gordi. In respect of development of exogenous geological processes, cliffy and semi-cliffy rocks are characterized by low sensitivity. The landslides spread in these deposits cover wide areas, and rockfalls and mudflow manifestations are also typical to these regions, particularly to the zones of tectonic faults.

The most widely spread in Imereti region are Paleogenic deposits. These deposits build the northern slope of Guria-Imereti ridge and part of its adjacent hilly zone. The deposits are presented by volcanogenic and sedimentary rocks - tuffa-breccias, tuffa-sandstones, sandstones, thin-layer limestones, marls, marl sandstones with conglomerates and clay with loam.

Mostly landslide processes are typical to these deposits. Mudflow currents are formed in the tectonically faulted zones. The rocks are characterized by average sensitivity.

The Quaternary deposits are widely spread in the region. These deposits are presented as alluvial, alluvial-delluvial and colluvial deposits, clays and clay-and-detritus material. Alluvial deposits are widely spread along big rivers forming their terraces. Such rivers are the Rioni, Tskhenistskali, Kvirila, Dzirula, Chkherimela, Sulori and others. The terraces are built with boulder and shingle, sand, clays and loamy admixtures. These deposits build the major part of Kolklehti Plain.

Elluvial-delluvial deposits at different altitudes of the slopes are spread discontinuously and unevenly, with greatly varying strengths. Their strength varies from 1,0 m or 20 m or more.

### **General assessment of hazardous geological processes**

Almost all kinds of hazardous geological processes are frequent in Imereti region. Out of these processes, the landslides, bank washout, flooding, rockfalls, rock avalanches and areal erosion are worth mentioning and similarly important are the processes resulting from the human's engineering activities (cavings at mining locations, erosion, landslide and gravitational processes, etc.). In the accumulated rocks at the mining locations erosion is developed, mudflow currents are formed, etc. The risk of origination and activation of the above-listed hazardous geological processes is intensified by 8-9 point earthquakes.

Out of the hazardous geological processes in Imereti region, most widespread are landslide processes with their intensity depending on the surroundings. It is the landslide processes inflicting the greatest damage. There are also old landslide bodies in the region, but their activity has not been observed so far; however, in terms of supporting natural conditions the landslide process is supposed to be activated posing a significant threat to the populated areas and other industrial and engineering objects.

## MAP OF SEISMIC HAZARD ASSESSMENT OF GEORGIA

Macroseismic Intensities, having 2% probability of being exceeded in 50 years (MSK scale)

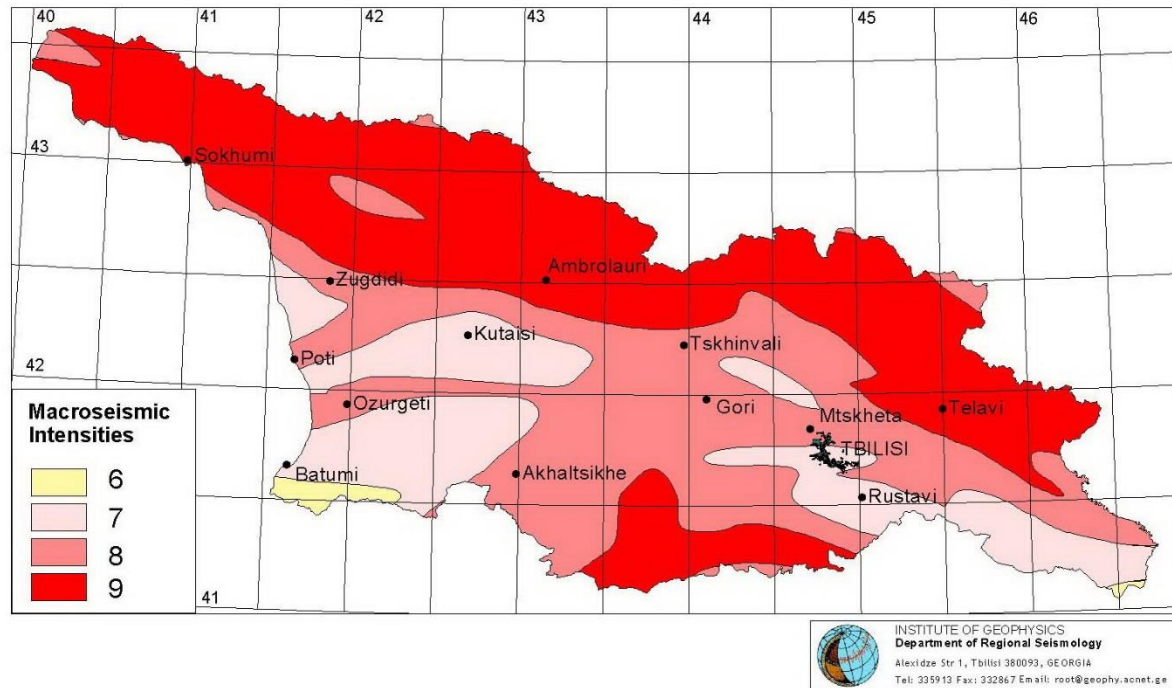


Figure 8.1 Seismic Hazard Map indicating maximal horizontal acceleration and intensity

### 8.1.3 HYDROGEOLOGICAL CONDITIONS

According to the hydrogeological zoning of Georgia (Buachidze I., 1970), the study territory is included in the artesian basin of porous, fracture and fracture-karstic waters of Tskaltubo and Argveti of Georgian Block artesian basin, in the region of fracture and fracture-karstic waters of the Dzirula crystal massif and in the area of porous, fracture and fracture-karstic waters of Kolkheti basins.

The rocks spread within the limits of the study territory, due to their high porosity and fracturing are more or less water-bearing. The water-bearing rocks, according to the location and movement of the underground waters and similarity of their hydro-chemical types, are divided into individual complexes and horizons.

According to the type of formation, the underground waters are divided into two groups: the waters of deep circulation and the waters of non-deep circulation. The latter are presented as the ground waters of the Quaternary deposits (alluvial-delluvial) and waters of the fracture-depleted zone of bedrocks. The waters of deep circulation are presented as the waters forming in the sunk sections of the structures.

Based on tectonic, geomorphologic and lithological peculiarities, the following water-bearing complexes may be identified within the study area:

- (1) a water-bearing complex of alluvial-delluvial deposits of the Quaternary period
- (2) a water-bearing complex of deposits of the Middle and Upper Miocene age
- (3) a water-bearing complex of the deposits of the Oligocene-Lower Miocene (Maykop series) age
- (4) a water-bearing complex of the Paleocene-Eocene Age deposits
- (5) a water-bearing complex of carbonaceous deposits of the Palaeogene-Upper Cretaceous Age, and
- (6) a water-bearing complex of Dzirula crystal massif.



The expansion areas of the underground waters of **the water-bearing complex of alluvial-delluvial deposits of the Quaternary period** cover the gorges of the rivers Kvirila, Cholaburi, Dzusa, Chkhara, Tskaltsitela and Rioni and adjacent slopes.

The alluvial deposits are mainly presented as shingle, sands and loams. These deposits are mainly spread in the floodplains and riverbeds and are characterized by high water content. According to their chemical composition, the waters are hydrocarbonate-calcium-magnesium or hydrocarbonate-sulphate-calcium ones. The flow rate of the springs varies between 0,01 and 0,5 l/sec, and the water temperature is 11-18°C. The springs are mainly fed with the atmospheric precipitations and therefore, have a varying duty.

The delluvial deposits are mainly spread along the slopes and are characterized with a great degree of depletion. Therefore, the atmospheric precipitations easily penetrate them and expand along the water-proof horizon located underneath, where they are accumulated, or discharge onto the surface as springs. According to their chemical composition, the waters in the delluvial deposits are hydrocarbonate-sulphate-calcium-magnesium or hydrocarbonate-calcium-magnesium. The springs of the described complex have quite high flow rates of 0,2-0,7 l/sec, although some of them have low flow rates of 0,01-0,04 l/sec. The water temperature usually varies between 10 and 18°C.

The water content of delluvial deposits is strongly dependent on the atmospheric precipitations. In addition, they are fed with karstic waters discharging in the lower sections of the walls.

The waters of the alluvial-delluvial complex have good drinking qualities, but are of the local designation only. Particularly worthwhile are the filtrates of the rivers Rioni and Tskhenistskali supplying the water to many populated areas in the region.

The deposits of **the water-bearing complex of deposits of the Middle and Upper Miocene age** are mainly presented as clays, aleurites, sandstones, marls, oolite and pelitomorphous limestones and conglomerate interlayers.

Fracture and fracture-interstitial waters circulate in the Miocene age deposits and are mainly related to sandstones, conglomerates and limestones. The formation of most underground waters is related to the zones of active circulation, and under certain terms those waters flow out onto the surface as springs. Because the degree of fracturing and porosity of the Miocene deposits is different on different sites, their water content varies within a great range. According to their chemical composition, the waters are mainly hydrocarbonate-sulphate-calcium or hydrocarbonate-calcium-magnesium. The flow rate of the waters is 0,02-0,1 l/sec. The water temperature varies between 10 and 18°C. The given water-bearing complex is mainly fed with atmospheric precipitations. The waters have favorable qualities and are used for the water-supply purposes for the local population.

**The complex of the deposits of the Oligocene-Lower Miocene (Maykop series) age** in a lithological respect is mainly presented by non-carbonate clays, quartz sandstones and spongolites. These deposits are in fact water-proof and show resistance to the waters of the water-bearing horizons located above them. The circulation of the underground waters in the given deposits is very complicated and therefore, the water content of the complex is very low. At some locations, the waters are related to the sandstone layers of minor bed thicknesses forming individual springs with minor flow rates. All springs in these deposits are of a fracture or fracture-interstitial type. According to their chemical composition, the waters are hydrocarbonate-sulphate-calcium. The flow rate of the waters is 0,01-0,2 l/sec. The water temperature varies between 10 and 18°C. The underground waters are mainly fed with atmospheric precipitations. Their duty is very unstable. The waters have no drinking qualities and therefore, are not used for the water-supply purposes.

The deposits of **the water-bearing complex of the Paleocene-Eocene Age (Palaeogene)** in a lithological respect are presented as marls, marl sandstones, marl limestones and pelitomorphous limestones. The given horizon is represented by several water-bearing layers – karstic, fracture-karstic and fracture-stratified underground waters. The formation of the fracture-stratified waters is mainly related to the clay and marl limestones of the Paleocene and marl limestones of Eocene. The atmospheric precipitations penetrate the rocks and are accumulated there. They move through the fractures and under certain terms discharge onto the surface as springs. They have little flow rates and are of a limited expansion. According to the chemical composition, the underground waters of the described complex are slightly mineralized and are hydrocarbonate-sulphate-calcium-magnesium or hydrocarbonate-calcium-magnesium. Their flow rates vary from 0,015 to 0,7 l/sec. The water temperature varies between 11 and 16°C. The underground waters of the given complex are mainly fed with the atmospheric precipitations and partly, with the river waters.

The waters of **water-bearing complex of carbonaceous deposits of the Palaeogene-Upper Cretaceous Age** are mostly of a karstic and karstic-fracture type. The karstic waters in the study area of a particular practical importance and are used for drinking. Particularly worthwhile are the karstic springs in the limestone massif of Zemo Imereti (Ghrudo, Pasknara, Ordoka, etc.) supplying the populated areas with water. According to the chemical composition, the waters are hydrocarbonate-sulphate-calcium-sodium, with the general mineralization of 0,5 mg/l. The water temperature varies between 9 and 11°C.

The deposits of the **water-bearing complex of Dzirula crystal massif** are less water-encroached. They are mostly spread in the zone of intense weathering and fracturing of the rocks of fracturing waters. The waters mostly outflow at the bottoms of the slopes. The flow rates of the springs change from 0,01 to 0,2 l/sec. The short way of filtration supports the changing flow rates. This fact and the lithological composition of the rocks result in the low mineralization of waters, which is up to 0,2 mg/l. According to the chemical composition, the waters are hydrocarbonate-calcium-magnesium-sodium. The waters of crystal slates and phyllites slightly differ from the waters of granites and granitoid complex. Despite the magnesium content of the waters, they are used for drinking.

#### **8.1.4 BRIEF DESCRIPTION OF HYDROGRAPHICAL NETWORK IN IMERETI REGION**

Imereti region is rich in surface water resources. Brief hydrographical description of the principal rivers in the region is given below.

**The river Rioni** heads at mount Phasi, on the southern slope of the main dividing ridge of Caucasioni, at 2620 meters above sea level and flows into the Black Sea at the city of Poti. The length of the river is 327 km, its mean slope is 7,2‰, the area of the catch basin with its mean height of 1084 m, is 13 400 km<sup>2</sup>.

The river is flown by great and important tributaries where it flows out across Kolkheti Plain. Its principal tributaries are: the Jojora (with the length of 50 km), Kvirila (140 km), Khanistskali (57 km), Tskhenistskali (176 km), Noghela (59 km), Tekhuri (101 km), Tsivi (60 km). The length of eight tributaries is from 25 to 50 km. The length of 14 tributaries is from 10 to 25 km, and the lengths of the rest of 355 tributaries do not exceed 10 km individually, totalling to 720 km.

The catchment basin of the river occupies half of the territory of west Georgia. Its major part (68%) is located on the southern slope of the main dividing ridge of Caucasioni. 13% of the river basin is situated on Ajara-Imereti northern slopes and 19% is situated on Kolkehti Plain.

The river Rioni is fed with glaciers, snow, rain and ground waters. Its water regime is characterized by spring flood and year-round freshets. A relatively stable low-water period is registered in winter. The river Rioni is widely used for power generation and irrigation purposes. A water reservoir of Gumati of the power generation designation is created by means of a 30-meter-high concrete gravity dam at the village Zhoneti, above the city of Kutaisi. The total design volume of the water reservoir does not exceed 39,0 million m<sup>3</sup> and its conservation zone is 13,0 million m<sup>3</sup>. At present, the water reservoir is almost filled up with the solid matter and as a result, its volume does not exceed 1,2 million m<sup>3</sup>. Therefore, Gumathesi-I and Gumathesi-II dependent on it, function only through the river flow.

There is a head structure of Rionhesi (Rioni Hydropower station) located at about 12 km from Gumati water reservoir, at the city of Kutaisi. This has been put into exploitation since 1934. Water from the mentioned head structure through the derivation tunnel and channel is supplied to Rionihesi at the village of Rioni. The total length of the derivation is approximately 9600 meters, its delivery value up to the daily regulating basin arranged at the village Sarbevi is 80,0 m<sup>3</sup>/sec and that of the pressure pipes is 100 m<sup>3</sup>/sec. The width of the channel bed varies from 5,4 to 10,5 meters and its velocity is from 1,53 to 2,0 m/sec. The water generated by the hydropower station flows into the river Tskaltsiteli.

There is a head structure of the irrigation system 'Mashveli' constructed from the head structure of Rionhesi to the aggregate works of the hydropower station, on the derivation section, in the city of Kutaisi serving the purpose of irrigation of the agricultural plots of land in Tskaltubo and Samtredia Regions.

South of the city Kutaisi, where the rivers Rioni, Kvirila and Khanistskali join, there is Vartsikhe water reservoir of a power generation designation constructed, and the water regulated with it is delivered to Vartsikhe series of hydroelectric power plants via a derivation channel. The derivation channel discharges in the river Rioni at the confluence with the river Gubistskali.

**The river Kvirila** heads from Ertso basin on the southern slope of Racha Ridge. It flows out of Ertso Lake at 1711 m altitude and into Vartsikhe water reservoir. Before the water reservoir was created, it flowed into the river Rioni from its left bank. The length of the river is 140 km, its total fall is 1628 m, its mean slope is 11,6‰, the area of the basin is 3598 km<sup>2</sup> and the mean height of the basin is 790 m. The river is flown by 2906 tributaries of different ranges with the total length of 5254 km.

The upper part of the basin is located on the southern slope of Racha ridge and western slope of Surami ridge, its middle course is located over Kartli-Imereti crystal massif, while the lower reaches flow across Kolkheti Plain. The upper part of the basin is characterized by deep gorges and gullies typical to the mountainous region. There are milder relief forms spread over the crystal massif, and the river flows out across Kolkheti Plain past Zestaponi.

The upper part of the Kvirila basin is structured with the Upper and Middle Jurassic limestones, marls, sandstones, porphyries and slates. The Upper and Middle Miocene clays, marls, sandstones and conglomerates dominate in the middle part. The Upper and Middle Jurassic rocks are spread in the environs of Zestaphoni, and there are Cretaceous limestones, marls and sandstones spread over

the same location and past it. The part of the middle course of the basin and surface of its lower course is mostly covered with the Quaternary deposits, which are partially presented by alluvial and fluvio-glacial deposits. Alluvial and alluvial-proluvial deposits are also in bulk.

The humus calcareous soils are spread over Racha ridge. A great part of the basin is occupied by brown forest soils, and zheltozem dominate on Kolkheti Plain. The percentage of forest land in the basin is over 50%.

The river is fed with rain (45,0%), snow (31,8%) and underground (23,2%) waters. The water regime of the river is characterized by spring floods, autumn-and-winter freshets and summer unstable low-water periods. Floods mainly start at the beginning of March, reaching their maximum at the end of April or at the beginning of May and are over at the end of June. The course of floods is frequently disturbed by the freshets caused by rains. The freshets caused by rains are quite frequent even during the summer low-water periods. Particularly intense freshets are observed in autumn as a result of continuous rains. Such cases take place 4 or 5 times annually and last from 2 to 15 days. The level of the autumn freshets in the lower reaches of the river exceed that of spring floods, with their annual maximums more frequently fixed in autumn. In winter, the river has unstable levels due to rainfalls and warming. 24,3% of the annual flow flows in spring, 24,4% flows in summer, 22,1% flows in autumn and 29,2% of the annual flow flows in winter.

The average annual discharge of solid drift as the river reaches Kolkheti Plain varies between 50 and 60 kg/sec (with 1,5-2,0 mln. tons annually). The annual amount of bed drift is approximately 350 thousand tons. The average turbidity at the same locations varies between 600 and 800 gr/cm<sup>3</sup>. The maximum amount of solid drift occurs during the spring flood, while its minimum amount is fixed during the low-water seasons in summer and winter.

No icy events are fixed in the lower reaches of the river Kvirila, but only occasionally are there icy edges fixed.

The river Kvirila is used for irrigation and power engineering purposes.

**The river Dzirula** heads at 1252 m height where several brooks merge on the western slopes of Surami ridge and flows into the river Kvirila from its left bank at km 47 from its confluence. The length of the river is 89 km, its total fall is 1052 m, its mean slope is 12,7 ‰, and the area of its catch basin is 1270 km<sup>2</sup> and the average altitude of its basin is 850 m.

The river is flown by 1386 tributaries with the total length of 1677 km. The major tributaries are the Dumala (34 km), Chkherimela (39 km) and Khelmosula (16 km).

The river basin is located on Imereti Plateau and is bordered by Surami ridge from east and south-east and by the river Kvirila basin from north and north-west. The river basin is well developed in the lower zone due to the confluence with the river Chkherimela. The relief of the river basin within the limits of Surami ridge is strongly dissectioned with deep gorges of the river tributaries. The geology of the river basin is represented by granites, gneisses, limestones and sandstones. The soil cover of the basin is represented by loamy soils, and the vegetation cover in almost all basin is presented as a dense hardwood forest.

The river gorge is winding and mostly V-shaped. The width of the gorge bed varies from 20-25 m to 300-350 m. The slopes of the river gorge merge with the slopes of the adjacent ridges. The river

has terraces only in its middle and lower reaches. The width of the terraces varies from 50 to 400 m; their height is from 2-3 m to 7-8 m. The river floodplain is weakly developed.

The river bed is moderately winding and mostly non-branched. The bed in the upper reaches is stony giving the current a mountainous character. The width of the current varies from 10 to 30 m, its depth is 0,5-1,8 m, and its speed is within the limits of 0,8 and 1,5 m/sec.

The river is mostly fed with snow and rain waters. Its water regime is characterized by spring flood often accelerated by freshets caused by rains, non-stable low-water periods in summer and freshets in autumn and winter caused by rains and rapid air warming. The yearly distribution of the river flow is extremely uneven. On average, 48% of the annual flow flows in spring, 9-12% flows in summer and autumn and 30% flows in winter. Short icy events mostly as icy edges are fixed only at the river mouths.

The river is used to run the village mills.

**The river Dumala** heads at the altitude of 960 m, from the spring outflowing on the northern slope of mountain Dzira, at Surami ridge and flows into the river Dzirula from its right side, at village Boriti. The length of the river is 34 km, its total fall is 676 m, its mean slope is 19,9‰, the area of its catch basin is 124 km<sup>2</sup>, the mean altitude of the river basin is 730 m. The river is flown by 157 tributaries of different ranges, with the total length of 189 km.

The river basin is located over the western slopes of Surami ridge, between the catch basins of the rivers Dzirula and Kvirila. In a geomorphological respect, the river basin is divided into two zones - the upper hilly zone and the lower mountainous zone. The upper hilly zone, which is located between the river mouth and village Mandaeti, is characterized by relatively smoother relief forms, while the relief in the lower mountainous zone has high slopes and clear contours.

The geology of the basin is presented by granites, limestones and sandstones, which are covered with loamy soils. Hardwood forest grows all along the river.

The river gorge from its mouth to village Mandaeti is a box-like. Below, to the confluence, it is V-shaped. The width of the gorge bed varies from 10-15 m to 70-80 m. The gorge slopes are dissectioned with the gorges of tributaries and gullies. The river bed is winding and mostly non-branched. The width of the current is from 2 to 16 m, its depth is 0,2-0,7 m and its velocity changes from 0,4 m/sec to 1,0-1,5 m/sec.

The river is fed with rain and ground waters. Its water regime is characterized by spring floods, autumn freshets and summer and winter instable low-water periods. A relatively more stable low-water period is fixed in August and September. Icy events as an 0,2-0,3-metre-thick icy cover from the river mouth to village Karbouli is fixed from December through February. The river is used to run the village mills.

**The river Chkherimela** heads at 1150 m height on the western slopes of Surami ridge, 5 km north of village Tsipa and flows into the river Dzirula from its left side, at village Ajara. The length of the river is 39 km, its total fall is 950 m, its mean slope is 24,7‰, the area of its catch basin is 490 km<sup>2</sup>, and the average height of the basin is 1000 m. The river is flown by 656 tributaries of different ranges with the total length of 757 km. The major tributaries are the Vakhani (with the length of 10 km), the Bzholiskhevi (21 km), the Legvana (10 km) and Khaneba (14 km).

The river basin, which is dissected with deep gorges of the river tributaries and dry gullies, is totally located on the volcanic elevation of Kartli-Imereti Plateau. The depth of the gorges of tributaries, particularly of left tributaries reaches 500-700 m. The right side of the basin has relatively smoother forms. Its geology is presented by crystal slates, gneisses, quartzites and granites. The bedrocks are covered with loamy soils. The vegetation cover of the basin is represented by hardwood forest, which changes for sub-forest and bushes below, towards the confluence. A major part of the basin is cultivated as arable plots. 80% of the basin is covered with forest.

All the length of the river gorge is V-shaped. The width of the river-bed bottom varies from 5 to 50 m, and it reaches 100-120 m at some places. The terraces on the both banks of the river alternate all along the river. The width of the terraces varies from 30 to 200 m. The surface of the terraces is mostly cultivated as arable lands. The river has a floodplain past the village Tsipa. The floodplain alternates along both banks of the river. Its width is 20-60 m and its height is 0,3-0,8 m. During the floods and freshets, the floodplain is covered with a 0,5-1,0-meter-high water layer. The river bed is moderately winding and non-branched, with rapids and smooth currents alternating in every 50-500 m. At the confluence, the river bed is deformed. The width of the current varies from 2 m (at the mouths) to 25 m, its depth is from 0,6 to 1,5 and its velocity varies from 1,5 m/sec to 0,7 m/sec. The river is fed with snow, rain and ground waters, with the rainwater playing the primary role contributing to 50% of the river feed. Its water regime is characterized by spring floods, autumn freshets and winter and summer non-stable low-water periods. The yearly distribution of the river flow is uneven. In spring 46-50% of annual flow flows, 14-17% in summer, 13-16% in autumn and 20-22% in winter.

Out of icy events, only speck and icy edges are fixed with their maximum duration of 10-22 days in the coldest winter.

During the low-water periods, the water in the river is clean, transparent and drinkable. It is used to run the village mills.

**The river Cholaburi** heads at the confluence of the rivers Buja and Dzusa, at the village Chalatke, at 170 m altitude and at the village Bardubani, joins the river Kvirila from its right bank. The river length is 20 km, its total fall is 55 m, its mean slope is 2,7‰, the area of the catch basin is 565 km<sup>2</sup>, and the average altitude of the basin is 590 m.

The river is flown by 402 tributaries of different ranges with the total length of 672 km. The most important tributaries among them are the rivers Buja (42-km-long), Dzusa (25 km-long), Chkhara (22 km-long) and Dzevrula (31-km-long).

The river basin is located in the western part of Racha Ridge and in the eastern part of Kolkheti Lowland. The geology of the basin on Racha Ridge is dominated by limestones, and that on Kolkheti Lowland is presented as strong alluvial deposits. The soil cover of the basin is made up of humus carbonate and brown soils with a loamy content. In the mountainous part of the basin, there grows a dense hardwood forest, and the majority of its lower part is cultivated with agricultural crops.

The river gorge is not clearly expressed along the river length and blends with Kolkheti Lowland. The river bed is winding and mainly non-branched. The length of the current is 10-20 m, its width is 0,2-0,8 m and its velocity is 0,3-0,8 m/sec.

The river water regime is characterized by summer and autumn freshets, and well-expressed spring floods in some years. The low-water periods of the river are fixed in winter months.

The river is used to run village watermills.

**The river Buja** heads from the spring outflowing on the southern slopes of Racha ridge and flows into the river Cholaburi from its right side, at village Chalatke. The length of the river is 42 km, its total fall is 1290 m, its mean slope is 31,0‰, the area of the catch basin with its mean height of 700 m, is 186 km<sup>2</sup>. The major tributaries of the river are the Ghvitori (12 km), and Madzarula (14 km).

The catchment basin of the river is located over the southern slopes of Racha ridge. The relief of the river basin is hilly, and its geology is presented by granites, limestones, sandstones and other sedimentary rocks, which are covered with loamy and clay soils. Bushes and sub-forest grow all over the basin area. A certain part of the basin near the populated areas is cultivated as arable lands and planted with vineyards.

The river gorge from the river mouth to village Khreiti is not clearly expressed; below, it comes as a deeply cut gorge of a box-like shape here and there. The width of the gorge bed varies from 5-10 m to 15-30 m. The gorge slopes are dissected with deeply-cut gorges of tributaries and gullies. The river floodplain is slightly formed, with its width amounting to 30-40 m and height not exceeding 0,2-0,5 m.

The river bed is winding and mostly non-branched. The width of the current is from 2-3 m to 12-15 m, its depth is 0,2-0,6 m and its velocity changes from 0,5-0,7 m/sec to 3-4 m/sec. The riverbed at the river mouths is uneven and rocky and is burdened with rock talus, while it is gravely below.

The river is fed with snow, rain and ground waters, with the latter playing a minor role. The water regime of the river Buja is characterized by slight spring floods, summer and autumn freshets and summer and winter instable low-water periods. The lowest levels are fixed in September and at the beginning of February. Icy events as icy edges are fixed in January. The river is used to run the village mills.

**The river Dzusa** heads at the altitude of 520 m, where several streams merge over the southern slope of Racha ridge and flows into the river Cholaburi from its right side, at village Chalatke. The length of the river is 25 km, its total fall is 350 m, its mean slope is 14,2‰, the area of the catch basin with its mean height of 720 m, is 111 km<sup>2</sup>.

The catch basin of the river is located on the southern slope of Racha ridge, between the catch basins of the rivers Buja and Chkhara. The relief of the river basin is hilly, with its levels reducing from 1000-1100 m to 200-250 m. The geology of the river basin is presented by limestones, conglomerates and sandstones, which are covered with humus-calcareous soils of a loamy content. A dense hardwood forest and sub-forest grows in the river basin, with agricultural crops dominating near the populated areas.

The river gorge from the river mouth to Skande is a V-shaped, while it is box-like below. The slopes of the V-shaped gorge at the riverbed are demolished and vertical (with the height of 10-15 m) narrowing the riverbed to 5-10 m. Below, within the limits of the box-like gorge, there is a series of wide and high terraces running along the river. The width of the terraces varies from 100 to 400 m. The terrace surface is even and cultivated as arable lands and planted with vineyards. The width of the river floodplain along the same section varies from 20-40 m to 60-80 m.

The riverbed at the river mouths is narrowed by the rocky slopes of the river gorge and it widens below. It is winding and mostly non-branched. The width of the river current varies from 2-5 m to

10-15 m; its depth is from 0,1-0,2 to 0,5-0,10 m and its velocity changes from 0,5-0,6 m/sec to 3-4 m/sec. The river bed is rocky at the river mouths and it is gravelly below.

The river is fed with snow, rain and ground waters. The water regime of the river is characterized by slight spring floods, summer and autumn freshets and winter instable low-water periods. The lowest levels in the river are fixed in August and September. Icy events mostly as icy edges are fixed in December and January.

The river is used to run the village mills and for irrigation purposes, and there are several primitive irrigation channels made across it.

**The river Dzevrula (Tkibuli)** heads on the southern slopes of Nakerala Ridge, at 110 m altitude and flows into the river Cholaburi from its right bank at village Sviri. At the village of Gogni, the river disappears in a karst cavity with its 2-km-long section flowing underground. Afterwards, at the village of Chkhari, the river flows out on the land surface and is called the river Dzevrula from this point.

The river length is 31 km, its total fall is 990 m, its mean slope is 32‰, the area of the catch basin is 146 km<sup>2</sup> and the mean height of the basin is 640 m. The principal tributaries are the rivers Skipi (12-km-long) and Kveruna (12-km-long). The length of other tributaries does not exceed 3-5 km.

The river basin is located on the southern slopes in the western part of Racha ridge characterized by high, rocky vertical slopes. The middle part of the basin is located in Tkibuli basin, which is bordered by relatively lower ridges. Its height changes from 1000-800 m in the north to 500-400 m in the south. The geology of the river basin is mostly represented by limestones with clay slates and sandstones at some places. The bedrocks are covered with clay and loamy soils. The vegetation cover in the basin is presented as a mixed forest and bushes. The lower part of the basin is almost totally cultivated with agricultural crops. 50% of the basin is covered with forest.

The river gorge is mostly of a trapezoid shape along its whole length, and is of a box shape from the city of Tkibuli to Akhalsopeli only. The width of the trapezoidal gorge bed is 0,5 km, while that of the box-shaped gorge bed is 100-200 m. The river has terraces along its both banks. The width of the terraces varies from 150-200 m to 0,5-0,8 km and their height is from 2,5-5 m to 10-20 m. The terrace surfaces are cultivated with agricultural crops and are used as arable plots. The river floodplain is formed at the city of Tkibuli and alternates along the both banks of the river to village Akhalsopeli. The width of the floodplain is 20-60 m and its length is 30-150 m. There is no floodplain in the environs of village Gogna, but appears past village Dzevri up to the confluence. The width of the floodplain here varies from 40-80 m to 100-150 m. The floodplain with its height of 0,5-1 m gets flooded with a 0,5-1,5-metre-high water layer during the floods and freshets.

The riverbed is moderately winding and branched at some places. The width of the current varies from 6 to 15 m, its depth varies from 0,2 to 1 m and its velocity varies from 1,2 m/sec to 0,8 m/sec. The river is fed with snow, rain and ground waters. The water regime of the river is characterized by all-year-long freshets. The river Shaori contributes to the formation of the Dzevrula river flow. The Shaori flowed into the river Sharaula in the past, but since the construction of Shaori water reservoir the river Shaori flow accumulated in the water reservoir has been delivered to Tkibuli hydropower station first and then to the river Dzevrula bed.

The river Dzevrula is used for irrigation and power engineering purposes. In 1956, a 36-metre-high and 1605-metre-long fill dam was used to make Tkibuli water reservoir with the power engineering designation in Tkibuli basin delivering the water to 80MW Tkibuli hydropower station.



There is Etseri irrigation system across the river Dzevrula delivering the water to 559 ha of agricultural plots of fields in Terjola municipality.

**The river Khanistskali** heads at the altitude of 2280 m, on the northern slope of Ajara-Imereti ridge and flows into Vartsikhe water reservoir from its left side.

The length of the river is 57 km, its total fall is 2000 m, its mean gradient is 35,1 ‰, its catch basin area is 914 km<sup>2</sup>, and the mean altitude of the basin is 1180 m. The river is flown by 413 tributaries of different ranges with the total length of 858 km. The largest tributaries are the Laishura (with the length of 18 km), the Kershaveti (21 km), the Tsablaristskali (29 km) and the Sakreula (52 km). The river basin is of a symmetrical shape with the length of 47 km and mean width of 19,4 km.

Approximately 10% of the basin is located at the altitude of 1000 to 2600 m. Within this zone, the relief of the river basin is mountainous and strongly gullied with deep gorges of the tributaries. In the piedmont with the largest part of the river basin, the relief is of a relatively smooth shape, and a small zone of the river basin at the confluence is spread over Kolkheti Plain.

The geology of the mountainous zone is presented by andesites, basalts and sandstones. The geology of the piedmont zone and in Kolkheti Plain is mostly represented by old conglomerates. Mostly loamy soils are spread in the basin and at the altitude of 2000-2600 m in the mountainous zone of the basin, there are alpine meadows. The meadows are changed for a mixed forest at lower altitudes. The lowland zone of the basin is almost totally cultivated with agricultural crops. 89% of the river basin up to village Didveli is covered with forest.

The bed of the river is V-shaped from the river mouth to the city of Bagdati and has no clear shape past Bagdati. The width of the gorge bottom varies from 5-10 m (at the mouths) to 500-700 m (at the city of Bagdati). Past village Kakashidi, the river has terraces on its both sides with their width of 140-500 m. The river floodplain is small and its width is 20-50 m. Its height is 0,4-0,6 m. During the floods and freshets, the floodplain is covered with a 0,4-0,9-meter-high water layer.

The river bed is moderately winding and is mostly non-branched. At the mouths, the bed is stony and it is gravely in the lower reaches. The current width varies from 3-5 m to 20-25 m, its depth is from 0,4 to 1,5 m and its velocity is 2,6-0,5 m/sec.

The river is fed with snow, rain and ground waters. The water regime of the river is characterized by clear spring flood, autumn freshets and non-stable summer and winter low-water periods. In spring 47% of the annual flow flows, 20% of the annual flow flows in summer, 16% flows in autumn and 17% flows in winter.

In the low-water periods, the river water is clear, transparent and drinkable. The river is used to run village mills, and for the irrigation and power engineering purposes.

**The river Tsablarastskali** heads from the spring at the altitude of 2200 m, on the northern slopes of Ajara-Imereti ridge and flows into the river Khanistskali from its left side at village Tsablaraskhevi.

The length of the river is 29 km, its total fall is 2058 m, its mean gradient is 71,0 ‰, its catch basin area is 230 km<sup>2</sup>, and the mean altitude of the basin is 1600 m. The hydrographic network of the river is made up of small tributaries with the total length of 102 km. The river basin has a pear-like shape and is directed from south to north for 30 km. The mean width of the river basin is 7-8 km.

The basin is characterized by strongly dissected mountainous relief. The gorges of the river and its tributaries here are narrow and deeply cut. Steep slopes are vertical and denuded at some locations. The geology of the basin is presented by andesites, basalts, sandstones and slates, which are covered with loamy soils. 90% of the basin is covered with mixed forest, which above 2000 m altitude is changed for alpine meadows.

The riverbed is V-shaped all along the river. The width of its bottom fully occupied by the river current varies from 5 to 20 m. The river terraces are spread past resort Sairme up to the confluence. The width of the terraces is 40-100 m, their length is 150-200 m and their height is 3-7 m. The river has a small floodplain at the confluence only.

The river bed is moderately winding and is mostly non-branched. The whole of the river current is of a mountainous type. The current width is 4-16 m, its depth is 0,3-1,0 m and its velocity is 1,6-0,8 m/sec.

The river is fed with snow, rain and ground waters. The water regime of the river is characterized by spring floods, autumn freshets and non-stable summer and winter low-water periods. Short icy phenomena, such as icy edges are fixed only in January and February.

During the low-water periods, the water in the river is clear, transparent and drinkable. The river is not used for industrial purposes.

**The river Sulori** heads on the northern slopes of Tapelovani ridge, at 2140 m altitude, 1 km east from mountain Tapelovani (2322,6 m) and flows into the river Rioni from its left side, north-west of the city of Vani.

The length of the river is 34 km, its total fall is 2100 m, its mean slope is 61,8%, the area of the catch basin with its mean height of 800 m, is 189 km<sup>2</sup>. The river is flown by five tributaries of the first grade: the river Dzulukhira (12,6 km), Zemo Lokhnari (6,20 km), Lokhnari (7,90 km), Gelaskuri (7,8 km) and nameless river (8,4 km). The total length of other small tributaries is 144 km.

The river basin is of an asymmetrical shape. Its upper zone from the river mouth to village Sulori has a mountainous relief, which is strongly dissected with deep gorges of the tributaries. Past village Sulori, the river basin clearly shifts into Rioni lowland. The geology of the upper part of the basin is presented by sandstones, marls and clay slates, with limestones, tuffas and basalts at some places. As for the upper zone of the basin, it is structured with old alluvial mantles. Brown forest soils are spread in the upper zone, while zheltozem is spread in the lower zone of the river basin. The lower zone has alpine vegetation and evergreen bushes and there is alder forest growing in the river basin. A great part of the lower basin is cultivated with agricultural crops.

The river gorge is a V-shaped in the river mouths; it is of a trapezoidal shape from village Isriti to village Tsikhe-Sulori and has no clear shape below.

The width of the gorge bed at the mouths is 2-8 m; it is 600-700 m past village Tsikhe-Sulori and it is 1,5-2,0 km at some places (in the environs of villages Dikhashkho and Salkhino). The terraces on the both sides of the river are cultivated as arable lands and planted with gardens. The height of the terraces from the gorge bed varies from 2 to 50 m and its width is from 100 to 500 m. Loamy soils are spread over the terraces.

The width of the river floodplain is 40-50 m; its height is 0,2-0,3 m. The floodplain is formed on the territory of village Sulori only. During the floods and freshets, the floodplain is covered with a 0,7-0,9-metre-high water layer.

The riverbed is moderately winding and mostly non-branched. The rocky bed of the river at the mouths forms several waterfalls, with the waterfall in 3 km from the mouth being the highest one (10-12 m). Below, the river flows through the bed burdened with rock talus and large blocks and forms rapids in every 10-30 m. After the river flows out over Rioni lowland, it flows through a single bed, with its bed being gravely. The width of the current varies from 1-2 m (at the mouths) to 20 m (at the confluence); its depth is from 0,2 m to 2,0 m and its velocity is 2,5-3,0 m/sec to 1,0-0,7 m/sec.

The river is fed with snow, rain and ground waters. Its water regime is characterized by spring floods and freshets over the year. In addition, the levels of freshets caused by rains often exceed the flood levels caused by melting snow.

The river is used for irrigation and power engineering purposes. There is Sulori hydropower station and Tsikhe-Sulori irrigation system across it.

**The river Tskaltsitela** heads on the south-western slopes of Nakerala Ridge, 3 km east of the village Sochkheti, at 1080 m altitude and flows into the river Kvirila from its right bank, at the station Rioni.

The river length is 49 km, its total fall is 992 m, its mean slope is 20.3‰, the area of the catch basin is 239 km<sup>2</sup> and the mean height of the basin is 440 m. The river is flown by 196 tributaries of different ranges with the total length of 318 km. The principal tributaries are the rivers Tischala (12-km-long) and Chala (18-km-long).

The upper part of the basin is mountainous, its middle part is hilly and its lower part is lowland. The upper and middle sections of the basin are built with limestones and sandstones, and its lower part is built with strong alluvial mantles. The basin is dominated by loamy grounds. The vegetation cover in the upper part of the basin is presented by dense hardwood forest; the middle part of the river basin is grown with sparse forest and the area past the village Gelati is mostly cultivated with agricultural crops.

The river gorge, from the mouth to the city of Kutaisi, is a V-shape one and is of a trapezoid shape even below. The terraces along the both banks of the river are well developed along this section. There is no floodplain along the river. The river bed is winding, with no branches. The width of the current varies from 3 to 30 m, the depth of the current is 0,2-1,0 m and its velocity is 1,0-0,6 m/sec. The water regime of the river is characterized by freshets over the year caused by rains. Freshets are most common in spring. Spring floods are frequently concomitant with freshets caused by rains. Unstable low-water periods are fixed at the end of summer and at the beginning of autumn.

Icy events as icy edges are fixed only in the upper course of the river.  
The river is used to run village mills.

**The river Gubistskali** heads at the confluence of two small rivers of Kumi and Usakhelo, 2,5 km north-east of the village Dedalauri, at 105 m altitude and flows into the river Rioni from its right bank at the village Akhalsopeli.

The length of the river is 36 km, its total fall is 83 m, its mean slope is 2.3‰, the area of the catch basin 442 km<sup>2</sup>, the average altitude of the basin is 150 m. The river is flown by 122 tributaries of different ranges with the total length of 363 km. The most important tributaries are the rivers Semi (24-km-long), Shua-Kukhi (18-km-long), Tskaltubo (21 km) and Oghaskura (20-km-long).

The catch basin of the river is located in the north-eastern part of Kolkheti Plain and between the catch basins of the rivers Rioni and Tskhenistskali. The basin relief is mostly lowland with hilly relief at the river mouths only, which is broken with the gorges of small river tributaries and gully gorges.

The geology of the hilly part of the basin is presented by limestones characterized by karst events. The lower part of the basin is built with strong layers of alluvial mantles. The basin is dominated by loamy grounds. The major area of the basin is cultivated with agricultural crops.

The river gorge is not clearly expressed along its length. The river has a floodplain in its middle and lower reaches. The width of the floodplain varies from 20-30 m to 80-150 m; its height is from 0,3-0,4 m to 1,0-1,5 m. During the floods and freshets, the floodplain is covered with a 0,2-1,8-metre-high water layer. The bed of the river is moderately winding and mostly non-branched. The width of the river current is from 4 to 25 m; its depth is from 0,2-0,5 m to 0,8-1,4 m and its velocity is from 0,2 m/sec to 0,5 m/sec. The bottom of the bed is even; it is gravely at the mouths and is muddy at the confluence.

The river is mostly fed with rainwater. Its water regime is characterized by freshets caused by rains all over the year. The freshet maximum is usually fixed in autumn and rarely in summer. Maximum intervals between the freshets are 20-30 days and are mostly fixed in February. The lowest levels are fixed in August and rarely in September. There are no icy events fixed in the river.

The river is used for village watermills and for irrigation purposes. There is one primitive, local irrigation channel across the river.

**The river Kumuri** heads at the altitude of 1680 m on the northern slope of the northern branch of Ajara-Imereti ridge and flows into the river Rioni from its left side, at village Chkvishi.

The length of the river is 28 km, its total fall is 1633 m, its mean slope is 58,3‰, the area of the catch basin with its mean height of 452 m, is 83,7 km<sup>2</sup>. The hydrographic network of the basin is presented by small tributaries with the total length of 121 km.

The upper zone of the basin is located in northern piedmonts of Ajara-Trialeti ridge and its lower zone is located on Kolkheti Plain. The basin relief is strongly dissected with deeply-cut gorges. The geology of the upper zone of the basin is presented by quartz sandstones, clay slates and volcanic rocks, and there are alluvial mantles spread in the lower zone. The bedrocks are covered with loamy soils. A mixed forest grows in the upper zone of the basin, while hardwood forest and bushes grown in the lower zone. The major part of the lower zone is cultivated as arable lands.

The river gorge from its mouth to village Tobanieri is a V-shaped, while it is of a trapezoidal shape to village Shuamta. The river gorge has no clear shape across Kolkheti Plain. The slopes of the river gorge are steep at the mouths and are sloping below. The slopes within the limits of the trapezoidal gorge are cultivated as arable plots and planted with gardens, and are covered with a dense forest in the upper part.

The terraces along the both sides of the river are mostly spread between the villages Tobanieri and Shuamta. The width of the terraces is 0,2-1,2 m; their height is 3-6 m. The terrace surfaces are even and cultivated with agricultural crops. The river has a floodplain only past village Mikelponi. The width of the floodplain is 20-70 m; its height is 0,3-1,2 m. During the freshets, the floodplain is covered with a 0,3-1,5-metre-high water layer.

The riverbed is moderately winding and mostly non-branched. The surface of the riverbed is mostly stony-gravelly and it is sandy and gravelly across Kolkheti Plain. The width of the current varies from 3 m to 12 m; its depth is from 0,4 m to 0,9 m and its velocity is 1,5 to 3,0 m/sec.

The river is fed with snow, rain and ground waters. Its water regime is characterized by freshets over the year, and this is why its flow is distributed unevenly in different seasons. The water peak discharges are mostly fixed in spring and autumn, while the low-water discharges are fixed in summer.

The river is used for irrigation purposes. There were two small hydropower stations operating across it in the past.

**The river Kvintskali** heads at the altitude of 1925 m, 1 km north-east from mountain Kvinistavi (1982,2 m) on the northern slope of Ajara-Imereti ridge and flows into the river Rioni from its left side, 2 km north of village Amagleba.

The river basin is divided into mountainous, piedmont and lowland zones. The geology of the mountainous and piedmont zones of the river basin is presented by sandstones, marls, basalts and andesites. The lowland zone is built with old alluvial mantles. The soil cover in the basin is presented by brown forest and zheltozem soils. Approximately 85% of the mountainous zone of the basin is covered with dense hardwood forest, while the major part of the lowland zone is cultivated with agricultural crops.

The river gorge from the river mouth to village Zeda Gorda is V-shaped; it is of a trapezoidal shape below and has no clear contours on the left river terrace. To village Kveda Gorda, the river is a typical mountain river. There are large treated stones in the river bed drifted by the river current. The maximum diameter of the stones is 1 m. The width of the current varies from 3-4 to 7-8 m; its depth is from 0,3 to 0,8 m and its velocity varies from 1,2 m/sec to 0,9 m/sec.

The river is fed with snow, rain and ground waters. Its water regime is characterized by spring flood and freshets over the year. The low-water period is mostly fixed in summer months.

The river is used to run the village mills and for irrigation purposes.

**The river Koristskali** heads at the altitude of 1720 m, 4 km south from mountain Kvinistavi, on the western slope of Keri ridge and flows into the river Rioni from its left side, 2 km past the village Amagleba.

The total length of the river is 28 km, its total fall is 1665 m, its mean slope is 59,1%, the area of the catch basin with its mean height of 462 m, is 178 km<sup>2</sup>. The river is flown by the tributaries of different ranges with the total length of 226 km.

The river basin is divided into mountainous and lower zones. The mountainous zone is located over the northern slope of South mountainous region of Georgia, while the lower zone of the river basin is located in the south-eastern part of Kolkheti Plain. The relief of the mountainous zone from the river mouth to village Persati is strongly dissectioned with the gorges of the river tributaries. The

heights of some mountains here reach 1000-1600 m. Below, the relief lowers to 500-600 m, and changes for the hilly relief past village Persati. Past village Zeindari, the river flows across the lowland with its maximum levels of 60-65 m.

The geology of the mountainous zone is mostly presented by sedimentary rocks, while the lower zone is built with old alluvial mantles. Loamy soils dominate in the basin. Approximately 50% of the basin is occupied by hardwood forest. A great part of the lower zone is cultivated as arable lands and with agricultural crops.

The river gorge from the river mouth to village Persati is V-shaped; it is of a trapezoidal shape below, to village Rokha and has no clear contours across the lowland. The width of the gorge bed varies from 2-3 m (at the mouths) to 0,4-1,0 km. The terraces along the both banks of the river are formed past village Persati. The width of the terraces is 0,3-0,4 km to 0,8-1,0 km; their height is 2,5-10 m. Floodplain is formed past village Tsitelskehvi. The width of the floodplain is 30-40 m to 100-150 m. During the floods and freshets, the floodplain is covered with a 1-1,3-metre-high water layer.

The whole of the riverbed is moderately winding and mostly non-branched. At some places (at village Rokha), the river has two branches and forms a small instable island. The width of the current varies from 1 m to 10 m; its depth is from 0,2 m to 1,0 m and its velocity is 0,6-0,8 m/sec to 0,1-0,3 m/sec.

The river is fed with snow, rain and ground waters. Its water regime is characterized by freshets over the year. No icy events are fixed across the river.

The river is used to run the village mills and for irrigation purposes.

**The river Tskhenistskali** heads at the altitude of 2700 m, south of Sharivtsek passage in the central part of the Caucasioni ridge and flows into the river Rioni from its right side, at village Sajavakho.

The length of the river is 176 km, its total fall is 2684 m, its mean slope is 15,0‰, the area of the catch basin with its mean height of 1660 m, is 2120 km<sup>2</sup>.

The river is flown by the tributaries of different ranges with the total length of 897 km. The most important tributaries are: the Zeskho (19 km), Gobishuri (12 km), Laskanura (20 km), Kheledula (34 km), Lektareshi (24 km) and Janaula (21 km). As for other tributaries, the length of 13 such rivers exceeds 10 km. The area of the glaciers in the basin is 12,9 km<sup>2</sup>.

A great part of the river basin is located over the southern slopes of Caucasioni ridge, while its small lower part (30-35 km) is located on Kolkheti Plain. The basin is clearly divided into high-mountainous, mountainous and lowland zones. The high-mountainous zone is located at the altitude of 2200-4000 m and has rocky relief. The mountainous zone occupies a large area of the river basin and is characterized by deeply-cut gorges and dissectioned relief. The given zone is located at the altitude of 2000-3000 m. The lowland zone is characterized by lowland relief with its levels not exceeding 15-18 m.

The geology of the mountainous zone is presented by granites, sandstones, limestones and conglomerates. The geology of the lowland zone is presented by new alluvial mantles. Mostly loamy soils are spread in the basin. The vegetation cover in the river basin has vertical zoning. A hardwood forest grows up to 800 m altitude, in the lowland zone of the basin; there grows mixed forest from 2100 to 2300 m altitude and there grow mountain meadows even higher. A great area of Kolkheti Plain within the limits of the river basin is cultivated with agricultural crops.

The river gorge at the river mouths is V-shaped; it is of a box from settlement Tsageri below and has no clear contours on Kolkheti Plain. The terraces along the both banks of the river are formed from village Mele to village Sakdari. The width of the terraces is 50-100 m to 500-700 m; their height is 4-8 m. The width of the river floodplain is 10-20 m to 200-400 m.

The riverbed is winding and non-branched at the river mouths; it branches from settlement Tsageri to village Larchvali and from village Matkhoji to village Khunjulori. The riverbed runs as one branch across Kolkheti Plain. The width of the current across Kolkheti Plain varies from 20 m to 120 m; its depth is from 0,6 m to 1,5 m and its velocity is 0,8-1,5 m/sec.

The river is fed with snow, rain, ground and glacier waters. Its water regime is characterized by spring and summer floods and clear winter low-water period. 70-75% of the annual flow flows in spring and summer, 18-20% flows in autumn and 8-10% flows in winter.

The river is used for irrigation and power engineering purposes. From the left bank of the river, above the city of Tsageri, there is a 6,5-km-long tunnel built supplying the water from the river Tskhenistskali to Lajanuri power engineering water reservoir at the rate of 60,0 m<sup>3</sup>/sec. The water reservoir across the river Lajanuri receiving additional supply from the river Tskhenistskali is used to operate Lajanurhesi (Lajanuri hydropower station) with its wastewater flowing into the river Lajanuri and then into the river Rioni. Thus, the water from the river Tskhenistskali is discharged into the river Rioni basin.

There is Khoni-Samtredia irrigation system headworks built across the river, at village Matkhoji. The irrigation system is used to irrigate 1200 ha in Imereti region.

### **Major hydrological properties of the rivers in Imereti region**

The observations of the river Rioni flow in the region were undertaken from 1911 through 1933 in the sections of hydrological station Kutaisi, from 1936 through 1958 in the sections above the headworks of the hydrological station Rionhesi and in 1937 only in the sections of hydrological station Samtredia. From 1962, the observations of the river Rioni flow were carried out only in the sections of hydrological station Gumathesi and from 1978 in the sections of the hydrological station Vartsikhehesi. The observations in the mentioned sections were undertaken up to 1991, but the official data were published only through 1986.

The observations of the river Kvirila flow were undertaken from 1935 through 1991 in the sections of hydrological station Sachkhere and in the sections of hydrological station Zestaponi from 1930 through 1992. In 1940-1966, the flow of the river Kvirila was discontinuously studied in the sections of the hydrological station Chiatura and hydrological station Ajameti in 1972-1978.

The flow of the river Dzirula was studied from 1930 through 1991 in the sections of hydrological station Tseva.

The flow of the river Chkherimela was studied from 1970 through 1990 in the sections of hydrological station Kvebi and it was studied from 1932 through 1992 in the sections of hydrological station Kharagauli.

The flow of the river Dzevrula (Tkibuli) was studied from 1956 through 1991 in the sections of hydrological station Tkibuli.

The flow of the river Khanistskali was studied from 1936 through 1990 in the section of hydrological station Bagdati and was studied from 1972 through 1978 in the sections of hydrological station Rokiti. The flow of the river Tsablarastskali, which is the tributary of the river Khanistskali, was studied from 1963 through 1991 in the sections of hydrological station Sairme.

The flow of the river Sulori was studied from 1970 through 1991 in the sections of hydrological station Salkhino.

The flow of the river Tskaltsitela was studied from 1972 through 1978 in the sections of hydrological station Kvekhchiri.

The flow of the river Tskhenistskali in Imereti region was studied from 1930 through 1991 in the sections of hydrological station Khidi.

Despite the observations of the most of the above-listed rivers undertaken up to the 1990s', the data were officially published only through 1986. No observations of any other rivers in Imereti region described above were carried out and therefore, their major hydrological properties have been difficult to determine.

The average monthly and annual discharges of the hydrologically studied rivers of Imereti region in the multi-year respect fixed by using the mentioned officially published data, are given in Table 8.3 below.

**Average monthly and annual discharges of the rivers in Imereti region in multi-year respect**  
**Table 8.3**

River	Hydrological station	$F$ km <sup>2</sup>	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Year
Rioni	Gumathesi	3510	61.9	69.6	113	221	263	236	196	137	96.8	107	90.1	87.7	140
Rioni	Vartsikhehesi	8100	141	179	199	266	284	286	206	140	103	96.5	116	124	178
Kvirila	Sachkhere	533	8.30	12.4	20.0	42.3	32.1	22.0	13.8	11.6	8.92	14.0	11.0	13.2	17.4
Kvirila	Zestaponi	2490	45.3	70.6	104	126	83.0	55.7	35.3	26.5	23.6	39.2	45.6	53.7	59.4
Kvirila	Ajarneti	3270	114	154	195	200	142	128	91.8	73.5	55.4	81.4	97.1	123	121
Dzirula	Tseva	1190	21.6	33.5	54.0	58.2	29.8	19.4	13.5	9.59	8.93	16.0	20.1	25.9	26.0
Chkherimela	Kvebi	149	3.22	4.44	7.71	9.42	4.90	4.07	2.71	2.14	2.22	3.18	3.76	3.98	4.31
Chkherimela	Kharagauli	398	8.77	11.5	19.1	26.5	15.2	10.5	7.14	5.88	5.75	7.88	8.90	9.36	11.5
Dzevrula	Tkibuli	31,5	7.54	7.89	7.43	6.80	5.69	5.40	4.79	4.69	4.50	4.91	5.63	7.26	6.04
Khanistskali	Bagdati	655	8.90	12.4	19.9	35.1	31.3	18.7	10.6	7.86	7.15	11.2	11.5	11.5	15.4
Khanistskali	Rokiti	898	11.8	19.9	29.5	50.0	36.4	22.9	12.2	9.56	8.57	11.9	15.4	16.2	20.1
Tsablara	Sairme	102	1.11	1.27	2.70	6.91	6.91	4.27	2.40	1.65	1.46	1.99	2.11	1.52	2.82
Sulori	Salkhino	154	3.65	3.80	4.26	4.90	5.18	5.10	4.08	3.35	3.18	3.72	3.88	3.86	4.08
Tskaltsitela	Kvakhchiri	221	7.26	9.07	10.1	8.23	3.57	5.49	4.79	2.49	2.42	4.16	4.35	7.04	5.28
Tskhenistskali*	Khidi	1950	13.0	14.8	22.2	60.0	107	89.0	52.1	30.0	17.7	20.4	15.6	18.2	38.6

\* The data of the river Tskhenistskali do not consider the values of the water discharged from the river to Lajanuri water reservoir

The peak discharges of different recurrences of the same rivers in the same sections specified by using different empirical formulae are given in Table 8.4.



**Peak discharges of different recurrences of the rivers in Imereti region in the hydrological station sections**

**Table 8.4**

River	Hydrological station	$F$ km <sup>2</sup>	Reoccurrence $\tau$ Year					
			1000	100	50	20	10	5
Rioni	Gumathesi	3510	2480	1770	1535	1180	1000	830
Rioni	Vartsikhehesi	8100	3960	2830	2450	1885	1605	1320
Kvirila	Sachkhere	533	680	470	405	320	270	220
Kvirila	Zestaponi	2490	2130	1430	1245	1000	850	695
Kvirila	Ajameti	3270	2820	1890	1645	1325	1125	920
Dzirula	Tseva	1190	965	670	575	455	380	315
Chkherimela	Kvebi	149	380	265	230	180	150	125
Chkherimela	Kharagauli	398	590	410	355	280	235	195
Dzevrula	Tkibuli	31,5	185	130	110	88.5	74.5	61.0
Khanistskali	Bagdati	655	470	325	280	220	185	155
Khanistskali	Rokiti	898	540	375	325	255	215	175
Tsablara	Sairme	102	200	140	120	95.5	80.0	66.0
Sulori	Salkhino	154	430	310	270	205	175	145
Tskaltsitela	Kvakhchiri	221	525	375	325	250	215	175
Tskhenistskali	Khidi	1950	1720	1195	1030	815	680	560

The low-water discharges of different provisions are given in Table 8.5.

**Low-water discharges of different provisions of the rivers in Imereti region in the hydrological station sections**

**Table 8.5**

River	Hydrological station	$F$ km <sup>2</sup>	Provision $P$ %						
			75	80	85	90	95	97	99
Rioni	Gumathesi	3510	8.06	7.67	7.15	6.58	5.82	5.33	4.48
Rioni	Vartsikhehesi	8100	15.7	15.0	14.0	12.8	11.4	10.4	8.75
Kvirila	Sachkhere	533	2.41	2.28	2.10	1.93	1.68	1.52	1.26
Kvirila	Zestaponi	2490	3.56	3.30	3.02	2.72	2.31	2.04	1.62
Kvirila	Ajameti	3270	4.43	4.10	3.76	3.38	2.87	2.54	2.01
Dzirula	Tseva	1190	2.66	2.53	2.35	2.16	1.90	1.73	1.45
Chkherimela	Kvebi	149	2.16	1.82	1.65	1.43	1.20	1.08	0.88
Chkherimela	Kharagauli	398	5.77	4.85	4.41	3.81	3.21	2.89	2.36
Dzevrula	Tkibuli	31,5	3.13	2.86	2.61	2.34	2.08	2.08	2.08
Khanistskali	Bagdati	655	3.96	3.69	3.43	3.12	2.78	2.57	2.29
Khanistskali	Rokiti	898	5.10	4.75	4.41	4.02	3.58	3.31	2.95
Tsablara	Sairme	102	0.38	0.35	0.31	0.28	0.23	0.20	0.15
Sulori	Salkhino	154	0.51	0.40	0.38	0.35	0.30	0.28	0.25
Tskaltsitela	Kvakhchiri	221	0.63	0.50	0.46	0.43	0.37	0.35	0.31
Tskhenistskali	Khidi	1950	9.28	8.72	7.95	7.54	6.67	6.16	5.49

The observations of the water quality of the rivers in Imereti region were undertaken only for the rivers Rioni (hydrological station Gumathesi), Khanistskali (hydrological station Bagdati) and Tskhenistskali (hydrological station Khidi). The values of the chemical composition of the given rivers specified for the most sensitive, the winter low-water period are given in Table 8.6 below.

## Quality indicators of the rivers in Imereti region in summer low-water period in the hydrological station sections

**Table 8.6**

River-Hydrological station	pH	Ion content, mg mg/l								P mg/l	Si mg/l	Fe mg/l
		Ca <sup>2+</sup>	Mg <sup>2+</sup>	Na+K	HCO <sub>3</sub>	SO <sub>4</sub> <sup>2-</sup>	CL	NO <sub>3</sub>	NO <sub>2</sub>			
Rioni-Gumathesi	7.10	45.2	6.6	21.2	143.4	56.9	4.1	–	–	–	–	–
Khanistskali-Bagdati*	6.99	22.1	3.8	7.2	89.7	7.3	2.6	.65	–	–	4.0	–
Tskhenistskali-Khidi	7.60	45.2	7.9	17.2	166.5	38.6	2.2	0.50	0.002	0.004	4.3	0.04

\* The Khanistskali data are taken for the most sensitive, the summer low-water period.

### The use of the water resources in Imereti region

Imereti region, as it is known, is located in west Georgia, with high annual values of atmospheric precipitations. The yearly distribution of the atmospheric precipitations is extremely uneven, as more precipitations fall in the cold season of the year and fewer precipitations are fixed in the warm season of the year. The little amount of the precipitations fallen in the warm season of the year and background winds dominating in the region makes the irrigation of the agricultural plots of fields necessary.

There are several major irrigation systems operating in the region to irrigate agricultural plots of fields. They are listed in Table 8.7.

### Major irrigation systems in Imereti region

**Table 8.7**

Water intake source	Irrigation system	Irrigation area, th. ha	Water intake annual value mln. m <sup>3</sup>	Note
Rioni	Mashveli	25,5	29,6	
Kvirila	Ajameti	1,368	24,8	including 13.3 „Pheros”
Kvirila	Khodabuni	0,390	0,946	
Dzevrula	Etseri	0,559	0,174	
Sulori	Tsikhe-Shulori	0,307	0,370	
Tskhenistskali	Khoni-Samtredia	13,734	22,5	
Khanistskali	Dimi-Gokiti	0,837	–	

The technical state of the channels is definitely unsatisfactory. Most of them need cleaning or repairing. At present, the efficiency of these channels does not exceed 0,5 resulting in the loss of great amounts of water and irrational use of water resources. In addition, almost all manifolds of the II and III ranges at all systems are out of order complicating the delivery of the minimum amount of water to the plants received by the mains from the river.

High potential of the surface water resources in Imereti region is widely used for the power engineering purposes. In the region, there are 2 Gumati, Rioni and Vartsikhe hydropower stations operating across the river Rioni, Shaorishesi and Dzevrishesi operating at the city of Tkibuli and there is Sulori hydropower station operating across the river Sulori.

## Hydropower stations in Imereti region

**Table 8.8**

Water intake source	Irrigation system	Installed capacity, th. KW	Annual output mln. KW	Note
River Rioni	Gumati-I	44.0	249	
River Rioni	Gumati-II	22.8	127	
River Rioni	Rionhesi	48.0	289	
Vartsikhe water reservoir	Vartsikhe	4•44=176.0	1020	4 drop hydropower plant
Shaori water reservoir	Shaorhesi	38.4	138	
Tkibuli wyl.s.	Tkibulhesi	80.0	140	
River Sulori	Sulorhesi	–	–	

In addition to the surface waters in region, the outcrops of the springs with high flow rates, karst springs and mineral springs with different contents are quite frequent. There are balneal resorts at the mineral waters, with Tskaltubo, Zvare, Nunisi, Kvereti, Sairme, Zekari and many others being most popular of them.

The balneal resort Tskaltubo is located 12 km north-west of Kutaisi, at 90-100 m above sea level. The curing properties of its mineral springs have been known since the ancient times, and were mentioned in written sources as far back as in the XII century.

The mineral water of Tskaltubo belongs to the slightly mineralized radon thermal type of water with the general mineralization of 0,8 gr/l; the temperature of the mineral water is 34-34,8°C; the daily flow rate is 21,5 mln. litres. The mineral waters of Tskaltubo are used to cure rheumatics and nervous and cardiovascular systems, as well as gynecological diseases.

Resort Zvare is located south of Ajara-Imereti, on the slope covered with coniferous forests, on the left bank of the Zvare, which is the left tributary of the river Chkherimela, 4 km from the railway station Moliti. There are two types of springs with carbonic acid flowing out in Zvare: 1) chloride-hydrocarbon sodium water, with relatively high degree of mineralization (4-5 gr/l) and 2) chloride-hydrocarbon sodium with the mixed hydrogen sulfide with the mineralization exceeding 1,5-2,0 gr/l. The daily flow rate of the water is 15 thousand litres. Zvare mineral water is used for drinking to cure gastric diseases and they are used as baths to cure rheumatics and nervous system diseases.

The curing properties of the balneal resort Nunisi have been known since the ancient times. The resort is located on the left side of the river Zvare gorge, 3 km south of the resort Zvare, 7 km from the station Moliti. According to their mineral composition, Nunisi mineral waters are chloride-carbonate containing 4-6 mg/l hydrogen sulfide. The total daily rate flow of the springs is 20 thousand litres. The water temperature is 27°C. The waters are used to treat mostly the patients with dermal diseases.

The resort Kvereti is located in the gorge of the Chikhura, which is the right tributary of the river Kvirila, 7 km from Sachkhere. The mineral waters containing hydrogen sulfide with their composition as chloride-calcium-sodium outflow here. The total mineralization of the water is 0,6 gr/l and the water contains 20-25 gr/l of hydrogen sulfide. The daily flow rate of the mineral waters is 30 thousand litres. The water temperature is 15-17°C. The patients with rheumatics, cardiovascular and nervous system and gynecological diseases come here to be cured. In addition to Kvereti springs,

the mineral waters (Karistskali, Lese, Kavelashvilebi spring and others) flow at many sites in the gorges of the tributaries in the upper reaches of the river Kvirila, but they are of local significance and we do not consider their description here reasonable at this point.

The balneal resort Sairme is located in the gorge of the river Tsablarastskali, 25 km from the city of Bagdati. Here flow carbonic acid hydrocarbonate sodium-calcium mineral springs with the total daily flow rate of over 100 thousand litres. The general mineralization of the mineral waters is 2,5-3,0 gr/l to 8-9 gr/l. The water temperature is 10-10,5°C.

Springs Nos. 1, 2 and 3 are famous for their curing properties. They are used to cure gastric diseases; however, Sairme mineral waters are most effective to cure urinary tracts and kidneys. They help decomposition and release of the salts accumulated in a human body. The patients drink the water from the natural springs on site and those with nervous system diseases take the baths.

The balneal resort Zekari is located on the left side of the river Khanistskali, at 600 m above sea level, near village Zekari in Bagdati region. There are several thermal hydrocarbon springs outflowing in the environs of village Zekari. The most important of them is spring No 1 with the daily flow rate of 280 thousand litres. The water temperature is 36°C and its general mineralization does not exceed 0,15 gr/l. The hydrocarbon content is 8 mg/l. The thermal sulphur mineral springs of Zekari are used to cure joint rheumatics, nervous system diseases and gynecological diseases. The infrastructure in most of the balneal resorts is at present demolished or damaged preventing them from operating with full load.

## 8.2 LANDSCAPES AND ECOLOGICAL RESOURCES

The specificity of Strategic Environmental Assessment of regional development projects requires overview of environmental features of a broad geographic area and identification of zones sensitive against typical direct, indirect and cumulative impacts associated with the development program. Therefore, description of environmental settings in the main body of this SECHSA report is focused on spatial ecological characteristics of the planned development area and description of habitats and ecosystems, rather than details of species composition.

In paragraph 8.2.1 we will provide description of landscape subtypes presented within the project area. Landscape subtypes are identified on the basis of morpho-structural peculiarities and the prevailing type of relief (erosive, karst, erosive-accumulative, etc.). It is also based on prevalence of one or several geological formations or groups of vegetation formation, concrete hydrological conditions, microclimate and finally because of complex and diverse morphological structures. Landscape subtypes define the character of vegetation cover and specific features of the area as a habitat.

In paragraph 8.2.2 we will address overview of general zoo-geographical aspects and fauna characteristics of the project area.

In paragraph 8.2.3 we will identify natural environmental complexes, distinguish valuable habitats and ecosystems, describe their protection status and sensitivity against the development project related impacts.

Floristic description of the landscapes and sensitive ecosystems and protected areas is included in p. 8.2.1 and 8.2.3. However, more detailed description of flora and vegetation is given in **Annex to chapter 8**.

## 8.2.1 LANDSCAPE, PHYTOLANDSCAPE, HABITATS

### **Plain-Lowland Accumulative Landscape with Imeretian Oak Forests, at Some Areas with Evergreen Undergrowth (Landscape 2)**

**Location.** It is located in the periphery of Kolkheti lowland. To the east its border reaches Zestaponi, the eastern edge of Kolkheti lowland.

**Administrative Districts.** Samtredia, Tskaltubo, Terjola, Zestaponi.

**Orographic Units.** Kolkheti Lowland.

**Hydrographic Units.** Lower reaches of Rioni, Abashistskali, Texura, Kvirila, Khanistskali.

**Relief.** Accumulative. Submerges. The submersion rate in the northern and southern parts of the coastline is 0.5-1 mm per year. To the west it represents very slightly inclined lowland. In comparison with the previous landscape (#1) it is characterized with more inclination of the surface and better drainage conditions. Ground waters are relatively deeper. Rivers flow in more cut beds. Due to the above wetlands are less abundant. The height increases to the east, although is insignificant along r. Rioni and Pichori. As regards the north-western part of the distribution of these landscapes (Enguri and Ghalizga vicinities), absolute height increases relatively faster in the area.

**Climate.** Subtropical humid marine with warm and snowless winter and hot summer. Climate conditions are identical to landscape located to its west (Landscape 1), but the thermal regime is slightly different.

**Annual Precipitations.** The precipitations are abundant and are not less than 1370 mm. In some areas the amount reaches 1670 mm. The southern part of the mentioned landscape is relatively more precipitations. The maximum precipitations fall in autumn and winter, minimum – in spring. Precipitations are relatively evenly distributed throughout the year along Abkhazia coastline, although summer minimum is still prominent, which resembles the Mediterranean climate.

**Temperature.** The average temperature of the coldest month is positive and exceeds 4,2<sup>0</sup>C. It reaches 6,2<sup>0</sup>C-along Abkhazia coastline (Gulripshi). Temperatures below 0<sup>0</sup>C occur only from December to March. Summer is very warm. The temperature of the warmest month is 22,8-23,5<sup>0</sup>C.

**Other Meteorological Parameters.** Sunshine - 1815-2260 hours annually; total radiation - 110-125 kkal/cm<sup>2</sup> annually; sum of active temperatures - 3660-4525; hydro-thermal rate - 1,59-3,67; dryness index - 0,3-0,65, which favors high productivity of vegetation; average annual humidity 75 %; albedo - 25 %; evaporation - 1100 m annually.

**Soils.** Meadow boggy subtropical podzols and gley podzols, alluvial. It is characterized with clayey and heavy clayey composition, compaction of alluvial horizon (in some areas with Ortstein layer). Average humidity of soil is 35 %.

**Vegetation.** In historical past it was covered with healthy forests. Due to anthropogenic influence vegetation has been modified in the majority of the area. Due to relatively deeper location of groundwater the share of hydrophilic vegetation is reduced. The share of bog grasses is decreased in the grass cover, while the share of forest grasses is increased. The distributional area of oak, hornbeam, beech is relatively widespread. Evergreen understory is common. Imeretian oak forests and remnants of Colchic forests are dominant from natural

vegetation. Alder formations with grass cover and meadows occur in floodplains and above floodplain terraces. Oak upshot is observed in areas, where grazing does not occur.

### **Foothill Landscape (Undulating) with Denudational-Accumulative Polydominant Leaved Forests (Landscape 5)**

**Location.** It is located in the northern foothills of Kolkheti, on Central Odishi plateau. It comprises territory between Chkhoushi and Tekhura gorges.

**Administrative Districts.** Khoni.

**Absolute Height.** (150) 200 - 350 (450) m.

**Orographic Units.** Central Odishi Plateau – m. Urti, Unagira hill, Bia upland.

**Hydrographic Units.** Water catchment basins of the middle reaches of r. Enguri, Khobi, Tekhura.

**Relief.** Denudational-accumulative. It represents the periphery of the southern slope of Caucasus ridge and structural plain located at lesser altitude. Flat slightly inclined surface is typical only for the bottom of large gorges with terraces. Other territories of the landscape are represented with steep slopes. Erosive hills are characterized with almost even height: in the southern part - 150-200 m and in the northern part - 350-400 m.

**Geological Structure.** Quaternary and Neogenic, rarely – Paleogenic sediments: clays, sandstones, conglomerates, alluvial layers.

**Climate.** Subtropical humid marine with hot summer and maximum of precipitations in summer and autumn.

**Annual Precipitations.** Significant and does not fall below 1540 mm. It exceeds 2000 mm in the vicinities of Caucasus highlands. The territory is evenly and abundantly moisturized throughout the entire year, although summer maximum is still prominent.

**Temperature.** The average temperature of January is positive and exceeds 4,2<sup>0</sup>C, at some areas reaches 5,8<sup>0</sup>C (Ureki). The winter temperature is especially high at the coastline. Due to marine breezes the summer temperature is relatively low. The temperature of the warmest month is 22,6-22,9<sup>0</sup>C.

**Soils.** Red soils.

**Vegetation.** Polydominant forests occur on the hills, while alder forests with grass cover are mainly present on floodplains and adjacent terraces.

### **Lowland and foothill Erosive-Accumulative Landscape with Hornbeam-Oak, Oak-Zelkova, Beech-Chestnut and Polydominant Leaved forests (Landscape 6)**

**Location.** It is distributed in the eastern part of Kolkheti lowland and surrounds the lower part of the lowland. It comprises both sides of r. Rioni and spread over two belts: to the north of Likhi ridge foothills till r. Tskhenistkali gorge (intermittently) and to the south almost till r. Supsa gorge.

**Administrative Districts.** Khoni, Tskaltubo, Terjola, Zestaponi, Baghdati, Vani.

**Area.** 0,81 thousand km<sup>2</sup> (1,2 % of total area of Georgia).

**Absolute Height.** 100 - 250 (500) m.

**Orographic Units.** Kolkheti Lowland, adjacent hilly plain.

**Hydrographic Units.** Water catchment basins of upper reaches of r. Tskhenistkali, Rioni, Dzirula, Khanistkali, Sulori.

**Relief.** Denudational-accumulative. It steeply inclines towards Caucasus and Lesser Caucasus upland and is dissected with erosive beds. Due to relatively better drainage there are almost no bogs.

**Climate.** Subtropical humid slightly continental.

**Annual Precipitations.** Significant – almost never fall below 1200 mm and at some areas exceed 1300-1500 mm. The maximum falls in winter, minimum – in summer. Despite the abundance of precipitations, subtropical cultures suffer from lack of moisture in spring.

**Temperature.** The average temperature of the coldest month is positive (3,7-4,4<sup>0</sup>C). The temperature of the warmest month is 23,0-23,6<sup>0</sup>C. The vegetation period lasts for 200-230 days.

**Soils.** Yellow soils, alluvial.

**Vegetation.** Colchic mezophytic forests were dominant in the past. They are almost entirely destroyed now and preserved only in the form of degraded stands.

### **Foothill Undulating Erosive-Denudational Landscape with Colchic Hemihylaea (Landscape 7)**

**Location.** It is distributed in the south-eastern part of Kolkhet lowland.

**Administrative Districts.** Vani.

**Absolute Height.** 100-400 m.

**Orographic Units.** Kolkheti Lowland, Adzhara coastal plain – Gonio, Kakhaberi.

**Hydrographic Units.** R. Supsa.

**Relief.** Erosive-denudational.

**Geological Structure.** Quaternary and Paleogenic volcano sediments and terrigenous layers.

**Climate.** Subtropical humid marine.

**Annual Precipitations.** Significant and almost nowhere falls below 1440 mm, at some areas exceeds 2000 mm. Maximum of precipitations falls in winter, minimum – in summer.

**Temperature.** The average temperature of the coldest month is positive (3,5-6,5<sup>0</sup>C) and is maximal for the coastline of the Black Sea. The temperature of the warmest month is 23,0-23,6<sup>0</sup>C.

**Other Meteorological Parameters.** Stable snow cover is not formed at the coastline. The snow lies only in the continental part, at the altitude exceeding 250-300 m for more than three months, although the thickness is low (average of 15-25 cm). Due to cloudiness total radiation is relatively low (110-119 kkal/cm<sup>2</sup> annually); sunshine period 1815-1960 h; radiation balance - 52-54 kkal/cm<sup>2</sup>; hydro-thermal rate- 3,8-3,7; evaporation- 900 mm annually; sum of active temperatures - 3360-4120; albedo - 24 %; dryness index - 0,3-0,44.

**Soils.** Red soils. Average annual soil humidity- 60 %.

**Vegetation.** Colchic forests are typical along with Hemihylaea, where almost all layers are represented with evergreen vegetation.

### **Foothill Undulating Karst Landscape with Oriental Hornbeam-Oak, Hornbeam-Oak and Polydominant Leaved Forests (Landscape 8)**

**Location.** Comprises territory from r. Tskhenistskali gorge to Tkibuli reservoir.

**Administrative Districts.** Khoni, Tskaltubo, Tkibuli.

**Area** 0,25 thousand km<sup>2</sup> (0,4 % of total area of Georgia).

**Absolute Height.** 200-400 m.

**Relief.** Karst. Slopes of medium and slight inclination are dominant (10-20<sup>0</sup>).

**Geological Structure.** Cretaceous, Neogenic and Quaternary, partially Paleogenic sediments, mainly carbonate formations.

**Climate.** Subtropical humid slightly continental.

**Annual Precipitations.** Significant and almost nowhere falls below 1200 mm, at some areas exceeds 1300 mm. Maximum of precipitations falls in winter, minimum – in summer.

**Temperature.** The average temperature of the coldest month is positive (3,4<sup>0</sup>C). The temperature of the warmest month is 21,5<sup>0</sup>C.

**Other Meteorological Parameters.**Total radiation- 120-150 kkal/cm<sup>2</sup>; radiation balance - 55-56 kkal/cm<sup>2</sup>; albedo - 24 %; evaporation- 1100 mm annually; stable snow cover lies for more than 2 months, although it is characterized with insignificant thickness (generally does not exceed 20 cm).

**Soils.**Yellow soils, humus-carbonate red. It is washed out in many areas and rocky. The average soil humidity is 40 %.

**Vegetation.** In the past the area was covered with Colchic broad leaved forests (oak, hornbeam, chestnut, beech) with evergreen undergrowth and lianas. At present these forests are destroyed at many areas.

### **Foothill Undulating Erosive-Denudational Landscape with Hornbeam-Oak, Oak-Chestnut Forests and Evergreen Undergrowth (Landscape 9)**

**Location.** It is distributed in the south-western foothill of Nakerala ridge.

**Administrative Districts.**Tskaltubo, Tkibuli.

**Area**0,33 thousand km<sup>2</sup> (0,47 % of total area of Georgia).

**Absolute Height.** 250 - 600 (650) m.

**Surrounding Landscapes.**Plain-lowland and foothill undulating (81 %), lower mountain forest (19 %).

**Orographic Units.** Foothill of Nakerala ridge.

**Hydrographic Units.** Water catchment basins of lower reaches of r. Tskhenistskali, Gubistskali and Rioni; the northern, western and southern banks of Tkibuli reservoir.

**Relief.** Alluvial-accumulative, erosive-denudational. The surface is severely dissected with erosive-landslide processes.

**Geological Structure.** Tertiary volcano sediments and molasse layers – marls, sandstones, conglomerates, clays, which are covered with alluvial and deluvial layers.

**Climate.** Subtropical humid slightly continental.

**Annual Precipitations.** Significant and almost nowhere falls below 1200 mm, at some areas exceeds 1300 mm. Maximum of precipitations falls in winter, minimum – in summer. However, the precipitations are evenly distributed throughout the year.

**Temperature.** The average temperature of the coldest month is positive (3,7-4,4<sup>0</sup>C). The temperature of the warmest month is 23,0-23,6<sup>0</sup>C. The average annual temperature is 11,5-13,0<sup>0</sup>C.

**Other Meteorological Parameters.**Total radiation-130140 kkal/cm<sup>2</sup>;radiation balance- 50 kkal/cm<sup>2</sup>; albedo - 30 %; evaporation- 1200 mm annually; stable snow cover lasts for 3 months. The thickness of the snow cover generally exceeds 20 cm in III decade of January and I decade of February.

**Soils.**Yellow-brown forest.

**Vegetation.** Colchic forest occurred in the past, at present it is very modified and only forest derivatives have been preserved.

### **Plateau Erosive-Denudational Landscape with Hornbeam-Oak, Oak-Beech-Chestnut forests and Evergreen Undergrowth (Landscape 10)**

**Location.** It is developed in the western foothills of Likhi ridge.

**Administrative Districts.**Tchiatura, Sachkhere, Kharagauli.

**Area**0,41 thousand km<sup>2</sup> (0,59 % of total area of Georgia).



**Absolute Height.** 300 (450) - 600 (800) m.

**Orographic Units.** Imereti upland.

**Hydrographic Units.** Water catchment basins of lower reaches of r. Dzirula, Chkherimela and Dumala.

**Relief.** Erosive-denudational. Slopes of medium and steep inclination are dominant (10-20°). Landslides are common.

**Geological Structure.** Neogenic, Jurassic, Upper Cretaceous, at some areas – Paleozoic volcano sediments, terrigenous carbonate and terrigenous carbonate layers. Basis of Paleozoic gneiss-metamorphic nature is exposed on the surface.

**Climate.** Subtropical humid slightly continental. In comparison with other landscapes of Colchic forests warmer and drier summer is typical.

**Annual Precipitations.** Abundant and reach 1890 mm. Maximum precipitations fall in winter, minimum – in summer.

**Temperature.** The average temperature of the coldest month is positive (2,6-4,4°C). The temperature of the warmest month is 21,6°C.

**total radiation**-130-140 kkal/cm<sup>2</sup>; radiation balance- 50 kkal/cm<sup>2</sup>; albedo - 30 %; evaporation- 400 mm annually; stable snow cover- 1 month, the thickness of the snow cover is very insignificant. Its average thickness in III decade of January is 17 cm.

Average annual discharge- 20-30 l/sec from 1 km<sup>2</sup>.

**Soils.** Yellow brown forest.

### **Karst Landscape of Lower Mountains with Hornbeam-Oak and Beech Forests and Evergreen Undergrowth (Landscape 63)**

**Location.** It is developed in Western Georgia, Samegrelo and Imereti. It is represented in the form of a narrow stripe.

**Administrative Districts.** Tskaltubo, Tkibuli, Terjola, Tchiatura, Sachkhere.

**Area** 0,81 thousand km<sup>2</sup> (1,2 % of total area of Georgia).

**Absolute Height.** 400-600 (800) m.

**Relief.** Karst. Slopes with steep and medium, at some areas slight inclination are typical. Deep gorges with steep slopes occur in limestone distribution areas. The gorges are characterized with intensive disintegration and rock-avalanches, which is also caused by steep inclination and dissected limestones.

**Recent Geomorphological Process.** Karsting, surface and strata erosion, landslides.

**Geological Structure.** Upper Jurassic, partially Cretaceous and Tertiary gypsum clays, sandstones, limestones.

**Climate.** Moderately warm humid, slightly continental.

**Soils.** Humus-carbonate. In areas without vegetation soils are thin and severely washed out.

**Vegetation.** Oak, hornbeam-oak and beech forests with Colchic undergrowth and boxwood forests in gorges are typical. Similar to Landscape 62, vegetation common on limestone substratum is developed in the area and oriental hornbeam forests typical for the eastern part of Southern Caucasus are frequent, although the species composition of the latter is different, as boxwood, box butcher's broom, Phyllirea, rhododendron and other Colchic elements are observed.

### **Mountain Depression and Lower Mountain Erosive-Accumulative Landscape with Mixed Oak, Hornbeam and Beech Forests (Landscape 64)**

**Location.**It is developed in Western Georgia, in latitudinal gorge of the middle reaches of r. Rioni (Racha Depression).

**Administrative Districts.**Tskaltubo.

**Relief.**Mountain depressions and river gorges with terraces.

**Recent Geomorphological Processes.**Surface wash out, surface and ground erosion, landslides, mudflows.

**Geological Structure.**Molasse, terrigenous and volcano-sediment formations.

**Natural Disasters.**Easily disintegrated strata and abundant precipitations result in landslides.

**Climate.**Moderately warm humid, slightly continental with short winter and long hot summer, which is caused by depression relief and winds.

**Precipitations.**The maximum falls in spring and II half of autumn, minimum – in II half of summer and beginning of autumn. Precipitations regime is favorable for agriculture, although the precipitations differ by years. In some years they are only 670-700 mm and in some – 1200-1300 mm.

**Other Meteorological Parameters.**Sum of active temperatures 2900-3200 h, sunshine period- 2000-2200 h, total radiation- 130-140 kkal/cm<sup>2</sup>; annual balance- 50 kkal/cm<sup>2</sup>; albedo - 35 %; evaporation- 720 mm annually; vegetation period lasts for 7 months. The total number of snowy days is 30-40 annually, while snow thickness- 20-30 cm, average wind velocity-< 2 m/sec.

Average annual discharge- 30-40 l/sec from 1 km<sup>2</sup>.

**Soils.**Humus-carbonate, average soil humidity- 42-43 %.

**Vegetation.**Oak forests are dominant. Oak and oak-hornbeam forests with second layer of oriental hornbeam and other plants are observed. Hornbeam and beech forests also occur.

**Floristic Composition.** *Edifiers:* Imeretian oak (*Quercus imeretina*), Georgian oak (*Quercus iberica*), Colchic oak (*Quercus hartwissiana*), chestnut (*Castanea sativa*), hornbeam (*Carpinus caucasica*). *Other species:* oriental hornbeam (*Carpinus orientalis*), Pontic oak (*Quercus pontica*), medlar (*Mespilus germaniana*), sycamore (*Acer velutinum*), yew (*Taxus baccata*), elm (*Ulmus foliacea*), chestnut (*Castanea sativa*), elm (*Ulmus minor*), Caucasian maple (*Acer laetum*), wild pear (*Pyrus caucasica*), wild apple (*Malus orientalis*), prune (*Prunus divaricata*), wild cherry (*Cerasus silvestris*), Cornelian cherry (*Cornus mas*), checker tree (*Sorbus torminalis*).

*Shrubbery:* Hawthorn (*Crataegus caucasica*), hawthorn (*Crataegus colchica*), dogrose (*Rosa canina*), Black Sea dogwood (*Thelycrania australis* = *Cornus australis*), checker tree (*Sorbus torminalis*), bladder nut (*Staphylea colchica*), bladder nut (*Staphylea pinnata*), mock orange (*Philadelphus caucasicus*), hazel nut (*Corylus avellana*), hazel nut (*Corylus pontica*), scarlet firethorn (*Pyracantha coccinea*), smoke tree (*Cotinus coggygria*), elme leaved summach (*Rhus coriaria*), spindle tree (*Euronymus ketzkhoveli*), buckthorn (*Rhamnus cathartica*), spurge (*Polygala amoenissima*), pea shrub (*Caragana grandiflora*).

*Lianas:* Ivy (*Hedera helix*), Pastukhov's ivy.

*Grasses:* Lily (*Convallaria transcaucasica*), bird's nest orchid (*Neottia nidus-avis*), laSqara (*Symphytum caucasicum*), comfrey (*Symphytum asperum*), periwinkle (*Vinca pubescens*), Echium (*Echium maculatum*), ivory bells (*Campanula alliariifolia*), sanicle (*Sanicula europaea*), orchid (*Orchis amblyoloba*), wiwinauri (*Polygala amoenissima*), woodruff (*Asperula odorata*), fescue (*Festuca montana*).

### **Erosive-Denudational Landscape of Medium Mountains with Beech Forests and Evergreen Undergrowth (Landscape 70)**

**Location.**It is represented with two belts: the first – on the southern slope of Caucasus, from Likhi ridge to Enguri gorge and the second – on the northern slopes of Lesser Caucasus, from Likhi ridge to Supsa gorge.

**Absolute Height.**(600) 700 - 1500 (1700) m.

**Relief.**Erosive-denudational.Slopes of medium and steep inclination are dominant, river gorges with terraces are also observed.

**Recent Geomorphological Processes.**Territory is composed of easily disintegrated strata. As a result, deluvial cover is well developed, which is related to landslide processes.

**Geological Structure.**Terrigenous, volcano sediment and intrusive strata, rarely – carbonate formations.

**Climate.**Moderately warm humid, slightly continental. Summer is warm, winter – cold and long.

**Temperature.**Average January temperature is 0,1--0,3<sup>0</sup>C, at relatively higher altitudes –3,6<sup>0</sup>C (m. Sabueti), July- 19,6-20,8<sup>0</sup>C (15,6<sup>0</sup>C m. Sabueti). Cold period, when the average monthly temperature is negative, lasts for 1-4 months.

**Annual Precipitations.**The influence of marine masses is weaker, so, in comparison with landscapes of medium mountain forests, the amount of precipitations is less (1100-1300 mm), the maximum of which falls in winter, minimum – in summer and more or less evenly distributed throughout other seasons. Towards Imereti upland the precipitations eventually decrease. Inversion is prominent in Enguri gorge and Imereti upland.

**Other Meteorological Parameters.**Total radiation- 130-140 kkal/cm<sup>2</sup>; radiation balance- 50 kkal/cm<sup>2</sup>; albedo - 35 %; evaporation- 720 mm annually; average wind velocity- 4-6 m/sec. Stable snow cover lasts for 3-4 months. 0,25-0,35 m high cover can be established only in January and February. The share of snow in precipitations is 30-40 %. The interval of avalanche is from III decade of December including III decade of April.

**Soils.**Acid brown forest with slight or medium thickness. It is formed on non-carbonate substratum, often podsolized. It is characterized with slightly differentiated profile, lump-cloddy structure, medium or heavy loams, skeletal, soil humidity during 5G stacks is 25-40 %.

**Vegetation.**Beech forests are frequent, which are sometimes substituted with mixed subtropical or chestnut forests from 1000-1100 m altitude. From 1500-1600 m they change into spruce-fir formations. Evergreen shrubbery occurs in the forests, mainly in gorges and on humid slopes of the western and southern exposition. The forests are mainly represented with hornbeam-oak-deciduous shrubbery and grass cover.

### **Medium Mountain Karst Landscape with Beech Forests and Evergreen Undergrowth (Landscape 71)**

**Location.**It is developed on the southern slope of Caucasus from Tekhura gorge to Shaori reservoir and comprises the south-westernmost slopes of Lechkhumi ridge, eastern part of Egrisi ridge and western part of Racha ridge (Nakerala ridge).

**Area**0,72 thousand. km<sup>2</sup> (1 % of total area of Georgia).

**Absolute Height.**700 - 1600 m, almost absent at higher altitudes.

**Surrounding Landscapes.***Lower border:* lower mountain forest (12 %), lower mountain meadow (63 %), plain-foothill (25 %); *Upper border:* medium mountain beech-dark coniferous (51 %), high mountain meadow (49 %).

**Relief.**Karst with dominance of slopes of medium and steep inclination, which are interchanged with slightly inclined slopes. Rock exposures are frequent. Depressions and plateaus are observed at some areas. Rivers flow in narrow and steep karst gorges.

**Geological Structure.**Cretaceous with carbonate series (limestones and marls).

**Climate.** Moderately warm humid; total radiation- 130-140 kkal/cm<sup>2</sup>; radiation balance- 48-50 kkal/cm<sup>2</sup>; albedo - 35-40 %; evaporation- 560 mm annually; average wind velocity-< 2 m/sec. The interval of snow avalanche is from III decade of November including III decade of April. Average annual discharge- 40-50 l/sec from 1 km<sup>2</sup>.

**Soils.** Humus-carbonate soils are most abundant. On slightly inclined slopes, where strong deluvial horizon is formed and soil does not directly interact with ground layers, mountain forest brown soils are formed. On steep slopes soils are significantly washed out. The mechanical composition of soils, despite terrain diversity, is relatively homogenous. 80 % soils are characterized with medium loamy and 20 % - with light loamy mechanical composition. Soils formed on limestones have darker humus horizon and better structure. They are subject to less erosion than humus-carbonate soils formed on marls.

**Vegetation.** Beech forests with evergreen understory (rhododendron, cherry laurel, holly) are most abundant. Hornbeam-beech forests with deciduous shrubbery are mainly developed on crowns and slopes of the southern exposition.

### **Medium Mountain Karst Landscape with Beech-Dark Coniferous and Dark Coniferous (Oriental Spruce, Caucasian Pine), at Some Areas – Pine (Caucasian Pine) Forests (Landscape 126)**

#### **Name of Landscape**

**Location.** It is developed on the southern slope of Racha ridge and Askhi massif.

**Administrative Districts.** Khoni, Tskaltubo, Tkibuli.

**Absolute Height.** 1000 (1500) - 1800 (1900) m.

**Relief.** Karst. Slopes of steep and medium inclination are dominant.

**Climate.** Moderately cold humid marine and slightly continental. Summer is warm, winter – cold and long. Total radiation -140-150 kkal/cm<sup>2</sup>; radiation balance -45 kkal/cm<sup>2</sup>; albedo-40 %; evaporation-680 mm annually; average wind velocity -2-4 m/sec.

**Soils.** Humus-carbonate of slight or medium thickness, formed on carbonate substratum. Average soil humidity- 45-50 %.

**Vegetation.** Beech-spruce-fir and spruce-fir forests are abundant. In comparison with the previous landscapes pine forests are developed on larger areas.

**Threats.** Similar to the previous landscape the main threat is determined by the fact that it is characterized with slopes of medium and steep inclination. In case of intensive economic activities (especially – timber logging) the risk of ecosystem disruption and degradation increases. Yet another condition plays negative role – limestone substratum, which causes intensive surface wash out in case of strong anthropogenic press, lack of moisture and unfavorable conditions for your growth. As a result, self-restoration processes are more difficult in ecosystems spread on limestone substratum. It is the main threat to the landscape.

### **Medium Mountain Erosive-Denudational Landscape with Beech-Dark Coniferous, at some Areas Pine (Caucasian Pine) Forests (Landscape 127)**

**Location.** It is developed on the western and northern slopes of Trialeti ridge.

**Administrative Districts.** Kharagauli, Sachkhere.

**Area** 0,87km<sup>2</sup>.

**Absolute Height.** 1100 (1300) - 1800 (1900) m.

**Relief.** Erosive-denudational. Slopes of medium and steep inclination are dominant.

**Geological Structure.** Paleogenic sandstaons, at some areas – Neogenic-Quaternary andesites, basalts and Cretaceous limestones, dolomites, sandstones, conglomerates.

**Climate.** Humid slightly continental. Summer is warm and winter cold and long.

**Annual Precipitations** 600-900 mm, the maximum of which falls in spring-summer (May-June). The precipitations are more or less evenly distributed throughout the other seasons of the year.

**Soils.**Forest brown, forest brown-black with slight or medium thickness – 60-90 cm; slightly differentiated; very deep humification (40-50 cm); humus – 4-9 %; fulvatic; heavy loamy mechanical composition; lump-granular, lump-cloddy structure; slightly acid, neutral 6.0-7.0; soil forming processes – humus formation, humus accumulation, alkalization.

**Vegetation.**Beech-spruce-fir and spruce-fir forests are abundant. In comparison with the previous landscape pine forests are more widespread.

### **Upper Mountain Erosive-Denudational, Rarely Paleoglacial Landscape with Birch, at some Areas Pine (Caucasian Pine, Kokh's Pine) Forests and Pontic Oak Low Stem Forests (Landscape 129)**

**Location.**It is developed mainly in Western Georgia, Imereti.

**Administrative Districts** –Sachkhere, Baghdati.

**Absolute Height.**1700 (1900) - 2000 (2200) m.

**Relief.**Erosive-denudational, at some areas erosive-accumulative and Paleoglacial. Slopes of medium and steep inclination are dominant, at some areas – flattened crowns.

**Climate.**Moderately cold humid.Total radiation- 140-150 kkal/cm<sup>2</sup>; radiation balance-45 kkal/cm<sup>2</sup>; albedo - 45 %; evaporation- 100 mm annually; average wind velocity- 2-4 m/sec. Stable snow cover is formed from III decade of December till the end of April. Lack of moisture was not observed.

Average annual discharge- 60-80 l/sec from 1 km<sup>2</sup>.

**Soils.**Mountain-forest-meadow.

**Vegetation.**Birch and pine formations are typical, at some areas with low stem oak forests. They do not form whole areas and often interchange with shrubbery and meadows (as well as forb grass meadows).

F3к,н; F5к,н –Crook and low stem beech-birch forests; they cover 60 % of the landscape and are most abundant. They comprise the entire height spectrum including gorges and slopes of the northern exposition. They are more characteristic to slopes of the eastern and southern expositions above altitudes of 2100-2200 m.

T5p -Pine forests with grass cover comprises relatively smaller area of the total landscape.

F5n,i–Beech forest with forest litter covers 1 % of the landscape. The length of productive stacks – 50 %.

### **High Mountain Denudational and Paleoglacial Landdscape with Tall Grass and Dense Grass Meadows, Shrubby and Crook Stem Forests (Beech and Birch) (Landscape 135)**

**Location.**It is developed in Western Georgia.

**Administrative Districts** –Sachkhere, Java, Kharagauli, Baghdadi, Vani, Chokhatauri.

**Absolute Height.**1800 (2000) - 2200 (2400) m.

**Relief.**Denudational, Palaoglacial and erosive-denudational. Slopes of steep and medium inclination are dominant with precipitous rocks. Remnants of Quaternary Glaciations – circuses, doors, troughs, moraines – have been preserved, although wide trough gorges are also present. On areas composed of easily disintegrable strata, where weathering products have been accumulated, geodynamic processes are active. As a result of torrential rain mudflows are

formed. Due to abundance of snow avalanches are frequent. “Avalanche fissures” are formed on steep slopes, which often descend to forest landscapes.

**Geological Structure.**Fairly diverse, Paleozoic-Proterozoic, crystal slates, granites, diabases, Upper Carbonate flysch series, non-karst limestones, sandstones, bayoss porphyrites.

**Climate.**Typical high mountain, cold humid, marine. Summer is cool and short, winter – cold and long.

**Annual Precipitations.**They are more or less evenly distributed throughout the year and are about 1500 - 2000 (2700) mm.

**Temperature.**Average January temperature –5,0-7,1°C, July - 12-13°C. Average daily amplitude of the temperature is small resulting in physical weathering. Vegetation period lasts for 2-2.5 months.

**Other Meteorological Parameters.**Total radiation-> 150 kkal/cm<sup>2</sup>; radiation balance -38-40 kkal/cm<sup>2</sup>; albedo-50 %; evaporation-90 mm annually; average wind velocity -4-6 m/sec. Average humidity is high and is 70-75 %. Stable snow cover is established from September-October till June.

Average annual discharge- 80-100 l/sec from 1 km<sup>2</sup>.

**Soils.**Mountain-meadow soddy. Average soil humidity is 35 %. Soils contain humus in large amount with well developed humus horizon, although it is frequently under developed and washed out. It is characterized with weakly differentiated thin profile (50-80 cm), well developed medium or little humification (10-20 cm), in peat types – 15-20 %, light loamy mechanical composition, fine granular, fine cloddy structure, skeletal.

**Vegetation** is represented with subalpine crook stem forests (beech, birch, maple), shrubbery (rhododendron, hazel nut, willow) and meadows (tall grass, grain, forb grass, legume-grain-forb grass, forb grass-grain).

**Floristic Composition.***Tall Grasses:* Cowparsnip(*Heracleum Augelica*), *Agasyllis caucasica*, *Cephalaria*, woundwort, dusty miller (*Senecio cineraria*), milky bellflower (*Campanula lactiflora*), bellflower (*C. latifolia*), etc. *Shrubbery:* *Rhododendron caucasicum*. *Grasses:* Bluegrass(*Poa pratensis*), bent, gentian (*Gentiana*), sea spurge (*Euphorbia*), ferns occur in gorges.

Average amount of phytomasses is 30-32 t/ha, but the value fluctuates within large range. In crook stem forests it is 75 t/ha, tall grasses - 30 t/ha, meadows - 15-18 t/ha. The interval of variation of phytomasses is 10-50 t/ha. The relation between absolute height and amount of phytomasses is not present.

### **High Mountain Karst Landscape with Forb Grass (Sedge-Avens Meadows and Crook Stem Forests (Beech and Birch) (Landscape 136)**

**Location.**It is developed in Western Georgia.

**Administrative Districts -**

**Absolute Height.**1800 (2000) - 2200 (2400) m.

**Relief.**Karst, steep and medium slopes are dominant at some areas with rocky surfaces. Remnants of Quaternary glaciation have been preserved – circuses, doors, small troughs (length – 3-4 km), moraines.Karst cones, wells, quarries, caves, precipices, etc. are common from karst forms of terrain.

**Geological Structure.**Upper Jurassic and Cretaceous limestone, porphyrite series, Jurassic slates.

**Climate.**Moderately cold humid, marine. Cold winter masses are accumulated in wells and quarries resulting in preservation of snow. Precipitations are abundant, but they seep into karst cones and fissures, so there is more lack of moisture than in Landscape 135. Total radiation-

150 kkal/cm<sup>2</sup>; radiation balance- 38-40 kkal/cm<sup>2</sup>; albedo - 50 %; evaporation- 90 mm annually; average wind velocity-4-6 m/sec.  
Average annual discharge- 80-100 l/sec from 1 km<sup>2</sup>.

**Soils.** Mountain meadow soddy with medium thickness, humus horizon is deep. It contains large amount of carbonates, C horizon is characterized with gley soil. Average soil humidity is 35 %.

**Vegetation** is represented with meadows, rarely – shrubbery and crook stem birch forests (birch - *Betula litwinowii*). Calcephyte vegetation is abundant. Rhododendron formations are almost absent. Relict species of flora are abundant.

**Floristic Composition.**

*Shrubbery:* Whortleberry (*Vaccinium myrtillus*), alpine currant (*Ribes alpinum*), cherry laurel (*Laurocerasus officinalis*), daphne (*Daphne glomerata*), whitebeam (*Sorbus graeca*), whitebeam (*Sorbus velutina*, *S. colchica*, *S. subfusca*).

*Grasses:* Sedge (*Carex pontica*), (*Campanula dzaaku*), (*Campanula bzybica*), skullcap (*Scutellaria helenae*), (*Kemulariella colchica*), Inula (*Inula grandiflora*), anemone (*Anemone fasciculata*), globeflower (*Trollius patulus*).

*Other species:* Gentian (*Gentiana bzybica*), gentian (*Gentiana paradoxa*), betony (*Betonica abchasica*), savory (*Satureia bzybica*), cyclamen (*Cyclamen abchasicum*), sweet woodruff (*Asperula abchasica*), Saxifraga (*Saxifraga abchasica*), Bupleurum (*Bupleurum abchasica*), sedge (*Carex pontica*), sedge (*Carex medwedewi*), woodrush (*Luzula pseudosudetica*), buttercup (*Ranunculus helenae*), grape hyacinth (*Muscari alpanicum*), betony (*Betonica abchasica*), Woronowia (*Woronowia speciosa*), (*Ligularia correvoniana*), betony (*Betonica abchasica*), bluegrass (*Poa alpina*), gentian (*Gentiana angulosa*), spurge (*Polygala alpicola*), fescue (*Festuca ovina*).

**High Mountain Denudational-Paleoglacial Landscape with Alpine Meadows, Frequently in Rhododendron Complex (Landscape 144)**

**Location.** It is developed in Western Georgia.

**Administrative Districts**

**Area** 1,17 km<sup>2</sup>.

**Absolute Height.** 2200 - 2700 m.

**Surrounding Landscapes.** *Lower border:* beech forests of medium mountains (41 %); beech-dark coniferous forests of medium mountain (30 %); *upper border:* high mountain alpine meadow (29 %).

**Relief.** Denudational, steep slopes are dominant at some areas with rocky surfaces. Remnants of Quaternary glaciation have been preserved – cirques, doors, small troughs (length – 3-4 km), moraines. Moraine hills and trough gorges are frequent. They are often changed as a result of exogenic processes. Periglacial forms of terrain are common.

**Geological Structure.** Old crystal strata – granites, gneisses, diabases, at some areas – carbonate flysch, sandstones, non-karst limestones, the debris of which is transferred to the bottom of slopes via glaciers.

**Climate.** Severe long and cold winter and short cool summer. The average January temperature is 12-14°C, July - 5-7°C. Annual Precipitations are 900-1100 mm, the majority of which falls in the form of snow. Stable snow cover is present for about 7 months. Total radiation-> 150 kkal/cm<sup>2</sup>; radiation balance-30 kkal/cm<sup>2</sup>; albedo - 50 %; evaporation- 70 mm annually; average wind velocity- 2-4 m/sec.

**Soils.** Mountain meadow soddy, mostly thin and primitive, non-differentiated with thin profile – 50-80 cm, fairly conspicuous medium or slight humification (till 10-20 cm) – 5-10 %, in peat species – 15-20 %, loamy and light clayey mechanical composition, fine, fine-lumpy-fine granular structure, acid or slightly acid reaction – 5.0-6.0, soil forming processes – humification, humus establishment, compaction, structuring, pastures, hay meadows, average soil humidity – 30 %.

Vegetation is represented with meadows and subalpine crook stem forests, rarely – shrubbery. Calciphyte vegetation is widespread. Rock, stone and badland (petrophyle) vegetation is common. It mainly grows in fragments. It does not form a whole large area and is spread sporadically on the background of alpine and subalpine meadows. Vegetation is scarce in the debris area. Vegetation is characterized with high endemism. Grasses form compact formations, which protects the surface from erosion.

### **Floristic Composition.**

*Edifiers:* Betony (*Betonica grandiflora*), Inula (*Inula orientalis*), gymnosperm geranium (*Geranium*), Georgian geranium (*Geranium ibericum*), lady's mantle (*Alchimilla*), bellflower (*Campanula*), Sibbaldia (*Sibbaldia*), bluegrass (*Poa alpina*), foxtail (*Alopecurus*).

*Other species:* chamomille (*Anthemis rudolphina*), dandelion (*Taraxacum steveni*), painted daisy (*Pyrethrum roseum*), bellflower (*Campanula rapunculoides*), gentian (*Gentiana*), buttercup (*Ranunculus sivaneticus*), buttercup (*Ranunculus lojkae*), primrose (*Primula meyeri*), Sibbaldia (*Sibbaldia semiglabra*), Sibbaldia (*Sibbaldia parviflora*), woodrush (*Luzula*), fescue (*Festuca ovina*), fescue (*Festuca varia*), (*Phleum alpinum*), woodrush (*Luzula pseudosudetica*), carum (*Carum carvi*), bellflower (*Campanula tridentata*), (*Veronica gentianoides*), chamomille (*Antemis rudolphiana*), Georgian geranium (*Geranium ibericum*).

## **8.2.2 ZOO-GEOGRAPHICAL AND GENERAL FAUNISTIC CHARACTERISTICS OF IMERETI**

### **Physical-geographic regions of Caucasus**

Geographically, the Caucasus isthmus is recognized as a land from the southern borders of Armenia, Azerbaijan, and Georgia in the south to the Kuma-Manych depression in the north. It borders with the Black and Azov Seas in the west and the Caspian Sea in the east. Close neighborhood of areas with different natural conditions is typical for the Caucasus. Distances between high mountains and coastal lowland or humid and arid subtropics and coniferous forests are rarely more than dozens of kilometers, and frequently less than ten kilometers. The isthmus has historically served as transit territory for many species in the process of exploring new areas and as a migration corridor for many animals.

The territory of Georgia, lying in the western-central part of Caucasus, is the most diverse in terms of climate and landscape, among Caucasian countries. Georgia covers both Caucasian mountain systems (southern slopes of Great Caucasus as well as northern part of Lesser Caucasus). At the same time, all types of Caucasian landscapes are represented in the country. Humid sub-tropical landscapes with predominance of autochthonous Caucasian (or Colchic) fauna and flora are in the western part of the country. The alpine landscapes with abundance of East-European elements are spread in the northern and north-eastern part. The typical Middle East treeless uplands occur in the southern Georgia, as well as a barren semi-desert of Turanian type is spread in the south-east of the country.



From the physical-geographic point of view, the Project area - Imereti Region lies within the Rioni River catchment in the western part of the Transcaucasian depression. This depression is located between mountain ridges of the Great Caucasus and the Lesser Caucasus that are bordered with the large region of Middle East Uplands from the North. Western part of the Transcaucasian depression covers the Colchic province (Kolkheti), including two sub-provinces - of Colchic (Kolkheti) lowland and Colchic (Kolkheti) foothills. All rivers and streams in the area belong to the basin of the river Rioni and the basin of the Black Sea.

Central part of the Transcaucasian depression, situated in the eastern and central parts of Georgia, belong to the Kura physical-geographic province, Kura-Alazani sub-province (another sub-province of this province, Kura-Arax lowland, is located in Azerbaijan). All rivers and streams in this region belong to the basin of the river Mtkvari (Kura) and, thus, the basin of the Caspian Sea.

The Middle East physical-geographic province is situated to the south from the Transcaucasian depression and consists of the Lesser Caucasus and Javakheti Plateau (Upland). One can divide Lesser Caucasus in three sections. Western part - Meskheta ridge and western slopes of Trialeti ridge are quite humid and high, covered with broad-leaved forest. Hard rocks form mountain relief. Eastern part – Trialeti ridge is more arid and low, than western part, covered with deciduous forest. The southern part consists of the Javakheti Plateau (Upland), Javakheti, Samsari and Erusheti ridges. Relief is levelled (smoothed) and consists of rocks volcanic and deluvium. This part is mainly covered with treeless, open grassy landscape. Forests are observed only on the Erusheti ridge. All rivers and streams, located on this territory, except for the rivers on the northern slopes of Meskheta ridge, belong to the basin of the river Mtkvari and, thus, the basin of the Caspian Sea. Rivers on the northern slopes of Meskheta ridge belong to the basin of the river Rioni and Black Sea.

### **Zoogeographic Characteristics of the Caucasus**

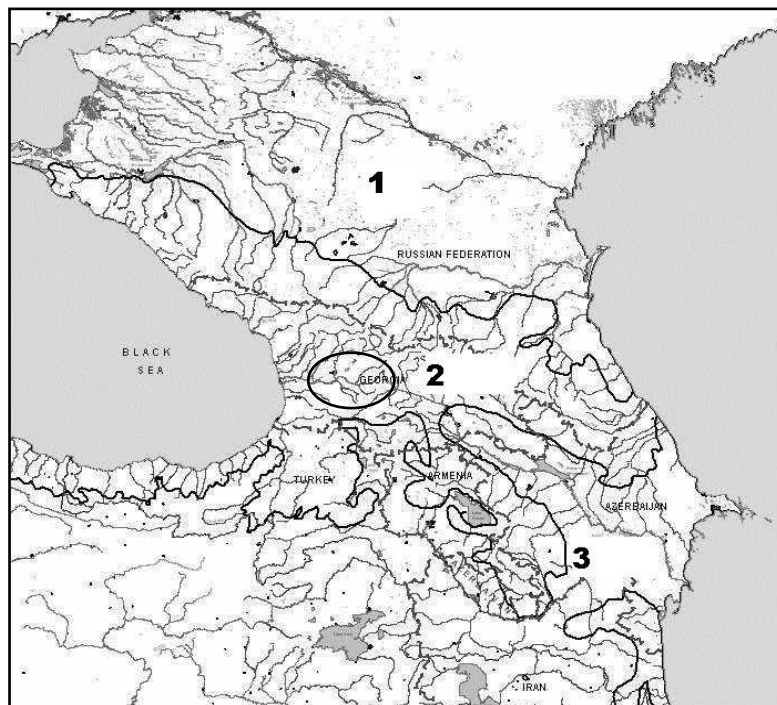
In terms of zoogeography, the entire Caucasus lies in the Holarctic or Palaearctic kingdom or zone, depending on the terminology used by experts in zoogeographic zoning. The zoning of the World Geographic Atlas of 1964 published in Moscow<sup>18</sup> is used in the report. According to Vereshchagin map (1964), the Caucasus includes several zoogeographic sub-zones. Two districts of the Kazakhstan-Mongolian province of the Central Asian sub-zone are located in the north of the region. The middle of the Caucasus is formed by mountains of the Greater and Lesser Caucasus and Talish that belong to the Caucasus district of the circumboreal sub-zone isolated from the main part of the sub-zone by steppes. The circumboreal sub-zone is sometimes referred to as the sub-zone of Western Eurasia, which in principle does not change its characteristics and boundaries in the Caucasus (World of Geography 1984). Southern boundaries of the Caucasus Ecoregion lie within the Anterior Asia district of the Mediterranean province and Kura district (almost entire Azerbaijan) of the Iran-Turan province. Both these provinces belong to the Mediterranean sub-zone. Thus, three zoogeographic sub-zones and four zoogeographic provinces neighbor in the Caucasus. Map fig 8.2 clearly shows that in some locations boundaries of the zoogeographic sub-zones come very close to each other.

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<sup>18</sup> We refer to the zoning presented in the World Physical-Geographic Atlas (1964) first of all because one of the map authors was N.K. Vereshchagin, author of *The Mammals of the Caucasus; a History of the Evolution of the Fauna* (1959), a fundamental monograph also including a detailed map of the Caucasus zoogeographic zoning based on theriology data.

Fig .8.2. Boundaries of Zoogeographic Sub-zones  
 1. Central-Asian; 2. Circumboreal; 3. Mediterranean; Solid line is the zoogeographic sub-zone boundary; Dash line is the state border; Oval – the Project area

**Fig.8.2 Zoo-geographical Subzones**



The Caucasus is a homeland to species typical for all the three sub-zones, which results in the rich diversity of flora and fauna.

Territory of Georgia spreads on almost all biogeographic regions represented throughout Caucasus isthmus. It is rather difficult to delineate correct border between faunistic regions represented throughout Georgia due to the mutual penetration of species between them. Complicated, sometimes mosaic spatial structure of biological communities representing different biogeographic regions is specifics of Caucasus, from the biodiversity point of view.

Two areas with important landscape differences could be distinguished throughout Georgia. The first - Caucasus district, including Colchic and Caucasus regions, unifies forest landscapes with plenty of autochthonous animals and representatives of European fauna. The second - the Mediterranean sub-zone is composed of two other types of biological communities. One of its is Anterior Asia district with highlands of Lesser Caucasus (landscapes very similar to those in Turkey and the most part of Middle East), another one - arid, semi-desert landscapes in Kura district with many elements of Turanian fauna (this region, also is genetically connected with biological communities typical for countries of Central Asia). Significant part of Georgian territory (northern slopes of Trialeti ridge and part of southern slopes of Great Caucasus in East Georgia) are covered with forest areas with communities including elements of Colchic, East-European, Middle East and Turanian fauna.

In contrast with other Caucasian countries, communities of mixed origin, which could not be unified with any enumerated districts, occur throughout the significant part of Georgia. Relief

creates relatively clear borders between some biogeographic districts, but these borders remain conditional. E.g., the whole Colchic district is situated in the basin of the Black Sea, whereas most of the other districts (except for the western part of Caucasian) - in the basin of the river Kura, flowing into the Caspian Sea. However, Colchic elements are found along southern slopes of Great Caucasus up to the eastern border of Georgia and in Borjomi Gorge, which belongs to the basin of Kura; Turanian elements are found in the valley of Alazani, which belongs, in general, to the Caucasian district etc.

The project area is situated within the Colchic and Caucasus regions of the Caucasus district of the Circumboreal sub-zone.

Fauna of the lowland and foothill part of the project area is severely degraded as a result of long time agricultural utilization, cattle grazing, and due to dense human population.

### *General fauna characteristics*

There are 108 species of mammals that are found in Georgia. These species are classified in 64 genera of 28 families that belong to 7 orders. 12 of mammals are included in the Red Data List of Georgia as a Vulnerable, three as Endangered, two as Critically Endangered. Nine mammal species are endemic to Caucasus.

There are about 390 recorded bird species that belong to the Georgian avifauna. More than 220 of these species regularly breed in Georgia, and others appear in the country during migrations or in wintertime. Georgian territory is important in terms of Western Palaeartic birds' migration. Diversity of bird species and numbers of each species greatly increase in spring and autumn during seasonal transit migrations and also in winter. Two bird species occurring in the Imereti region are endemic to Caucasus. 13 species of birds are included in the Red Data List of Georgia as a Vulnerable, five as Endangered and one as Critical Endangered.

One of very important phenomena is bird migration across the project area. Bird migration and nomadic movements take place in Georgia throughout the whole year. However, two migratory periods could be clearly distinguished – spring and autumn passage. The important Euro-African and Euro-Asian migratory fly-ways from their nesting sites to the wintering areas and back of many bird species cross the territory of Georgia. About 215 species, or more than a half of bird species of Georgia, are migratory birds, which are absent in the winter. About 230 species are regularly noted at the period of seasonal migrations in the spring and autumn. Also, about 40 species are irregular migrants. The fly-ways of migratory birds' on the territory of Georgia are linked with natural “guiding” lines – with the outlines of the Black Sea coast line, valleys of the large rivers (Rioni, Mtkvari and with their tributaries), mountain ranges, mainly within the Greater Caucasus Chain and its spurs, and at lesser extent within the Surami ridge and ranges of the Lesser Caucasus. Primary, secondary and additional flyways are known, as well as concentration places of migratory flocks, so-called “migratory bottle-necks” and stop-over sites (resting areas). The “bottle-necks” are situated on the passes in mountains (especially passes of the Great Caucasus) and in valleys of large rivers – Mtkvari, Rioni, Tergi (Terek), Alazani, and valleys of some of their tributaries. The most important bottle-neck is located in south-western part of Kolkhida Lowland on the coastal lowlands of Ajara (Adzharia).

The most numerous fly-way within the project area is going transversely the Rioni valley (north-south) from mountain passes on the Greater Caucasus range, through the Kolkhida

Lowland and valleys of Kvirila and Rioni rivers, crossing the Meskheta mountain range, to Ajara, and via Chorokhi River valley further to the South. Another numerous fly-way lies lengthways the Rioni River valley (east-west), going from Mtkvari River Valley to the Black Sea coast.

Spring (second decade of March – first decade of May). General direction of the migration is from the South to the North. The birds use all suitable valleys of the rivers and the coast of the Black Sea. Transit migrants are dominating. Their species composition and numbers are greatly unstable, sometimes varying in a very short period of time. There are four waves of the birds' migration on the territory of Georgia in spring - from the beginning of March till the middle of March, in second half of March, from the first week of April till the third week of April, from the end of April till the second week of May. Arrivals of the migrant birds, which are nesting in Georgia, continue from late April to 20-25 May, with peak between 10 and 20 May. The most important factors of intensification of spring migration are the meteorological conditions on the plains of the North Caucasus and the existence of favorable conditions in Transcaucasia. The soaring birds (e.g. large birds of prey) are in need of the "thermals" - well warmed grounds with the ascending flows of air.

Autumn (September – end of October). General direction of the migration is from the North to the South. The birds' flocks cross the Great Caucasus Ridge through the passes in the gorges of the main rivers and go down to the Kolkhida Lowland. They do not follow the bends of these riverbeds. The main part of the birds flies along the coastline of the Black Sea and above the sea. Birds gather in large flocks in the Kolkhida/Colchic Lowlands. In the river Rioni valley birds fly from the East to the West. Transit migrants are dominating, their species composition and numbers are greatly unstable, sometimes varying in a very short period of time. Autumn passage is longer and more active than the spring passage. The first autumn migrants appear even in the beginning of August. The autumn passage ends at the turn of November. There are three waves of the autumn migration - in the beginning of September, from the second week of September till the first week of October, at the end of October. The most numerous groups are passerines (*Passeriformes*), waders (*Charadriiformes*), birds-of-prey (*Falconiformes*), geese (*Anseriformes*). The cold snaps on Russia territory, as well as weather conditions (direction and force of winds, intensity and character of precipitation, height and density of the clouds) in some regions of Georgia and in adjacent regions of Russia and Turkey influence the intensity of the autumn passage.

Number of the migrants varies noticeably from year to year. Unfortunately, the available data does not allow defining an exact number of the birds, which are flying during the seasonal migrations through the territory of Georgia. General estimations of the number of the migratory and wintering birds are as follows:

About 250 bird species - from 25 up to 40 millions of individuals, (depends on the weather conditions) migrate along the Black Sea coast.

More than 120 species (about 1 million of individuals) migrate into the both sides along the valley of the Mtkvari river, in Georgia. Part of them continues the migration through the Rioni River valley.

Winter (December – February). This period is characterized by poor species structure, limited territorial distribution of large aggregations of birds, high numbers of some wintering species' and substantial fluctuations of birds number from year to year. In the late winter (the last weeks of February) the increase of the diurnal activity of all species and some revival of activity in

the movements of both flocks of wintering species and resident breeders are noted. The territory of Georgia is important for wintering birds. More than 130 species are wintering in the country and more than 40 of them gather in numerous flocks. Birds are distributed unevenly in the places of wintering. Mostly, they prefer the open and semi-open areas on the plains in the regions with generally warm and snowless winters. The most important wintering areas are situated:

- In Western Georgia - at Kolkhida (Colchic) Lowland, coastal lowlands, in flood-plains of large rivers of Black Sea basin and of their inflows (e.g. Rioni, Kvirila etc);
- In Eastern Georgia - in lower and pre-mountain parts of the flood-plains of the large rivers of Caspian Sea basin (Mtkvari, Alazani, Khrami, Iori and their inflows), semi-deserts of Iori Upland, at lowlands, hills and belt of low mountains, around large non-freezing lakes.

Numbers of birds fluctuate during the wintering season, usually reaching maximum in the middle of 1st – the beginning of 2nd decades of February.

The greatest aggregation of wintering birds occurs on Kolkhida Lowland, where up to 60 % of birds wintering in Georgia are recorded during the some years. Seaside lowlands also play the important role as wintering habitat, up to 10-25% of the birds wintering in Georgia are recorded here in different years. Up to 15-20 % of birds, wintering in Georgia, are recorded in open landscape of Eastern Georgia (mainly in semi-desert landscapes of the Iori Upland).

The central part of the area under consideration (municipalities of Samtredia, Vani, Bagdati along the Rioni river valley and western edge of Zestafoni municipality) is of importance for number of bird species migrating there and wintering in the floodplain of rivers Rioni and Kvirila and on Vartsikhe Reservoir. For some local breeding birds, which are nesting in mountains, the Borjomi-Kharagauli National park is of great importance.

54 reptile species have been recorded in Georgia. The majority of these reptile species have restricted distribution within the south-eastern part of Georgia, and would be not affected by the project activities. Three species of reptiles are included in the Red Data List of Georgia - one of them is Endangered and two species are Vulnerable. Three species are endemic to Caucasus.

12 species of amphibians are found in Georgia, one of them is included in the Red Data List of Georgia as Vulnerable. About four-six species could be found in different places within the region. Four amphibian species and one sub-species are endemic to Caucasus and Middle East. One of the most numerous and sensitive to the project impact is a marsh frog (*Rana ridibunda*), which forms large associations in reservoirs and on floodplains of rivers, downstream from sites of projected reconstruction and developing.

The present ichthyofauna of Georgia comprises 167 species, 109 genera, 57 families, 25 orders and 3 classes. Among them 61 are freshwater inhabitants, 76 live in marine water and 30 species are anadromous. Within the considered area one can find 28 species of 24 genera belonging to 7 families of 5 orders of one class. Among them six sturgeon species are anadromous, 28 species occurs in Rioni, downstream from the Vartsikhe reservoir dam, and in its tributaries and standing water bodies to the West from Kutaisi, nine species are found in the upper reaches of Rioni and Kvirila (as well as in the other tributaries of both rivers upstream the Vartsikhe reservoir). Eight redlisted fish species, as well as one more sub-species of fish,

occur in the rivers of Imereti: three of them belongs to category of Vulnerable, six are Endangered and one Critical Endangered.

Thousands of invertebrate species inhabit Georgia. The status of “Data Deficient” can be applied to the majority of the species. The Red Data List of Georgia includes 44 invertebrates. Within the Imereti region are found 19 species of redlisted invertebrates. Among them 12 species are Vulnerable, four are Endangered and one Critical Endangered. For details see Table 8.13.

### ***Endemic and Protected Species in Project Area***

The Caucasus is rich in concentration of endemic species, exceeding the vast majority of non-tropical regions in these terms. The total number of regional endemic species varies between 20-30% for fish, amphibians, reptiles, and is slightly less for mammals and possibly even higher for some groups of invertebrates. Mostly, this is explained by presence of Pliocene forest refugia in the western Caucasus, where many species currently absent from the rest of the planet have survived both the Ice Age and the significant decrease of humidity 5 millions years ago.

21 vertebrate taxa, considered endemic to the Caucasus, are listed in the IUCN Red Data Book under categories of “DD: Data Deficient, LR(nt): Lower Risk/not threatened, VU: Vulnerable, EN: Endangered, and CR: Critically Endangered”. These include eight mammal species, one bird, ten reptiles, and two amphibians. There are at least five mammals, one bird, 17 reptiles, 18 fish and hundreds of invertebrates (insects, snails, crustaceans) that are endemic to the Caucasus but not included in either national or international threat categories. For instance, some of the sixteen narrow ranged lizards of genus *Darevskia*, several unisexual taxa among them, have such narrow areas of distribution that they comply with the IUCN Red List criteria, although little attention is paid to the conservation of these species.

In Georgia the region of the Western Lesser Caucasus, with its extremely high humidity level is characterized with the highest diversity of forest plants and animals throughout the entire country and provides shelter for a high proportion of the regional endemics, including Pliocene relict species. Another area which is rich in Caucasian endemic species is sub-alpine and alpine belts of the Greater Caucasus. At least 11 endemic species of mammals (including two species of goats), 3 bird, 6-7 reptiles, 2 amphibians, and several fish are recorded in the area.

The project area is partly situated within the region of Western Lesser Caucasus. The smaller part of the project area is situated within the sub-alpine belt of the Lesser Caucasus, in the area with lesser number of endemic species.

To sum up, there are 19 species endemic to Caucasus and Middle East within the whole project area: nine mammals, two birds, three reptiles and five amphibians (see Table 8.9). Eight mammal species are endemic to the Caucasus: Radde’s shrew (*Sorex raddei*), Caucasian Shrew (*Sorex satunini*), Caucasian Pygmy Shrew (*Sorex volnuchini*), Caucasian Water Shrew (*Neomys teres*), Daghestan Pine Vole (*Microtus daghestanicus*), Caucasian Snow Vole (*Chionomys gud*) and Robert’s snow vole (*Chionomys roberti*), and one conventional species that is endemic to Caucasus and Middle East - Caucasian squirrel (*Sciurus anomalus*). Two endemic bird species are also present: Caucasian Black Grouse (*Tetrao mlokosiewiczi*) and Caucasian chiffchaff (*Phylloscopus lorenzii*). Among reptiles two regional endemic species of the Middle East that is found only in the Caucasus and Asia Minor are noteworthy: Trans-Caucasian Rat Snake (*Elaphe hohenackeri*) and Georgian or spiny-tailed lizard (*Darevskia*

*rudis*). One species is regional endemic which are distributed exclusively in the Caucasus - Artvin lizard (*Darevskia derjugini*). Among the five amphibian species there are two regional endemic species of the Middle East that are found only in the Caucasus and the northern part of the Asia Minor: Northern banded newt (*Ommatotriton ophryticus* former *Triturus vittatus*) and Caucasian wood frog (*Rana macrocnemis*). Two species of amphibians endemic to the Caucasus with the most of their habitat ranges lay in Georgia should also be noted: Caucasian toad (*Bufo verrucosissimus*) and Caucasian parsley frog (*Pelodytes caucasicus*). One endemic subspecies of smooth newt (*Lissotriton (Triturus) vulgaris lantzi*) is also recorded in the study area.

The Caucasian Snow Vole (*Chionomys gud*) is know only from one location – mount Did Magal on the southern border of the Imereti region.

### **Species protected by law**

The Red data List of Georgia is an only legal issue to protect species according to law. The species listed in the Red Data List of Georgia, which can be seen within the area of the Imereti Region, are presented in the **Table 8.13**.

63 redlisted species and one subspecies are recorded within the Project Area. According to Criteria of Georgian Red List out of 12 mammals – seven species are Vulnerable (VU), three Endangered (EN) and two Critical Endangered (CR); among 19 bird species one is Critical Endangered, five - Endangered and 13 species are – Vulnerable; out of three reptilian species one reptile is Endangered and two species reptile are Vulnerable; one amphibian species is Vulnerable; nine redlisted fish species, as well as one more sub-species of fish, occur in the rivers of Imereti: three of them belongs to category of Vulnerable, six are Endangered and one Critical Endangered; among 19 invertebrates 12 species are Vulnerable, four are Endangered and one Critical Endangered. Presence on the studied territory of these species is confirmed by known data or their occurrence can be supposed (presumed) according to known habitats and species peculiarities. Among all the redlisted terrestrial vertebrate species, 21 have their home-ranges within the Project territory, 13 species are regular migrants through the area or occasional visitors to the area. For details see 8.13. Georgian Red List Species in the Project Area in the Appendix.

**Table 8.9. Endemic Fauna Species of the Study Area**

	<i>Latin name/ ლათინური დასახელება</i>	<i>Georgian name/ ქართული დასახელება</i>	<i>English name/ინგლისური დასახელება</i>	<b>RDL category/ დაცულობის სტატუსი</b>
1	<i>Neomys teres</i>	წყლის ბიგა	Water Shrew	
2	<i>Sorex raddei</i>	რადეს ბიგა	Radde's Shrew	
3	<i>Sorex satunini</i>	კავკასიური ბიგა	Caucasian Shrew	
4	<i>Sorex volnuchini</i>	ვოლნუხინის მცირეკავკასიური ბიგა	Caucasian Pygmy Shrew	
5	<i>Sciurus anomalus</i>	კავკასიური ციყვი	Caucasian Squirrel	VU
6	<i>Chionomys roberti</i>	მცირეაზიური მემინდვრია	Robert's Snow Vole	
7	<i>Chionomys gud</i>	გუდაურული მემინდვრია	Caucasian Snow Vole	
8	<i>Microtus daghestanicus</i>	დაღესტნური მემინდვრია	Daghestan Pine Vole	
9	<i>Sylvaemus ponticus</i>	პონტოს ტყის თაგვი	Pontic mouse	
10	<i>Phylloscopus lorenzii</i>	კავკასიური ყარანა	Caucasian Chiffchaff	
11	<i>Tetrao mlokosiewiczi</i>	როჭო	Caucasian Black Grouse	VU
12	<i>Darevskia derjugini</i>	ართვინის ხვლიკი	Artwin Lizard, Derjugin's Lizard	
13	<i>Darevskia rudis</i>	ქართული ხვლიკი	Spiny-Tailed Lizard	
14	<i>Elaphe hohenackeri</i>	ამიერკავკასიური მცურავი	Transcaucasian Rat Snake	
15	<i>Triturus vittatus</i> ( <i>Ommatotriton ophryticus</i> )	მცირეაზიური ტრიტონი	Northern Banded Newt	
16	<i>Lissotriton (Triturus) vulgaris</i>	ჩვეულებრივი ტრიტონი	Smooth Newt	
17	<i>Bufo verrucosissimus</i>	კავკასიური გომბეშო	Caucasian Toad	
18	<i>Rana macrocnemis</i>	მცირეაზიური ბაყაყი	Caucasian Wood Frog	
19	<i>Pelodytes caucasicus</i>	კავკასიური ჯვრიანა	Caucasian Parsley Frog	



## 8.2.3 NATURAL ENVIRONMENTAL COMPLEXES AND ECOLOGICAL RECEPTORS OF PROJECT RELATED IMPACTS

### 8.2.3.1 Natural Environmental Complexes

This section contains description of complexes of animals and ecosystems that could be affected by the Project.

Ranges of separate animal species and areas of distribution of species complexes often coincide with borders of biotopes or landscapes. Landscapes are mosaic scattered within each of physical-geographic or zoogeographical regions.

The area of project is lying within the 18 different landscapes (See map of Landscapes in Annex 1 to Chapter 8). These landscapes can be aggregated in 13 sub-types of landscapes, according to N. Beruchashvili map of landscapes. For zoogeographic and animal conservation purposes we can aggregate all landscapes into three natural environmental complexes (NEC): **High mountain open landscapes, with rhododendron thickets, and crooked-stem forest; Middle mountain forest; and Low mountain forest and open landscapes, and foothill forest.**

#### NEC No 1. High mountain forest complex

The High mountain complex covers most southern part of the Project area, within borders of Vani, Baghdati and Kharagauli municipalities (administrative districts). This complex is widespread in upper parts of mountains and is preserved within limits of Borjomi-Kharagauli National park. The area contains rocks, screes, and plant micro-communities (mosses and lichens), Caucasian alpine landscapes with Rhododendron thickets, sub-alpine landscapes with combination of meadows, tall-herb communities, elfin woods and thickets and, mainly, on the northern slopes of the Lesser Caucasus mountain ranges. Following landscapes are united in the pool of habitats of this complex of animals (according to Landscape Map, see Annex 1 to chapter 8): “(Landscape 144) High mountain paleoglacial-denudational alpine landscapes with grasslands and rhododendron thickets; (Landscape 136) High-mountainous karstic, sedge-bennet (*Geum sp.*) meadows with dense grass and elfin woodland (beechen and birch); (Landscape 135) High-mountainous denudational and paleoglacial sub-alpine landscapes with tall-herb and dense grass meadows with combination of shrubs and elfin woodland (beechen and birch); (Landscape 129) Upper-mountain erosion-denudational, partially paleoglacial, landscape witch birch and, in some places, with pine forest (*Pinus caucasica* and *P. cochiana*), sometimes with low-stem oak groves.

Animals that occupy this area belong to Caucasian region of the Circumboreal sub-zone. This zone is characterized with high level of endemism and with number of fragile ecosystems and sensitive species. The most vulnerable ecosystems are sub-alpine meadows, tall-herb communities, and elfin woods (crooked-stem forest). In the same time, these landscapes are richest and the most important for a wellbeing of mountain fauna.

Among protected by law species there are four mammals, one of them is Critically Endangered (Red Deer - *Cervus elaphus*), two species Endangered (Brown Bear - *Ursus arctos* and Chamois - *Rupicapra rupicapra*), and one species Vulnerable (small endemic rodent Long-Clawed Mole-Vole- *Prometheomys schaposchnikovi*); seven birds – one Endangered species (Black Vulture - *Aegypius monachus*), and six Vulnerable – four large birds-of-prey: two

occasional visitors to the area (Lammergeyer - *Gypaetus barbatus*, Griffon Vulture - *Gyps fulvus*) and two possible breeders (Golden Eagle - *Aquila chrysaetos*, Egyptian Vulture - *Neophron percnopterus*), and two Galliformes – endemic Caucasian Black Grouse (*Tetrao mlokosiewiczi*) and, expected, rare Caspian Snowcock (*Caspian Snowcock*); one Vulnerable reptile - Adzharian Rock Lizard (*Darevskia mixta*); one Vulnerable fish - Brook Trout (*Salmo fario*); and six insects, among them two Endangered species (Nordmann's Apollo - *Parnassius nordmanni* and Rosalia Longicorn - *Rosalia alpina*) and four Vulnerable (Dwarfish Sphinx - *Pterogon gorgoniades*, Appolo - *Parnassius apollo*, Stone Humble-bee - *Bombus eriophorus*, Wurfleni Humble-bee - *Bombus alpigenus* ( or *B.wurflenii*)). Totally - 19 species.

Most sensitive to human presence and activity impact are: Red Deer, Chamois, Caucasian Black Grouse, and, in case of poaching or water pollution - Brook Trout

Within frame of the projects under consideration, only possible increasing of tourists number in the Borjomi-Kharagauli National park, due to Ubisi development can impact this complex of fauna.

### **NEC No 2. Middle-mountain forest complex**

Middle-mountain forest complex covers slopes of the Lesser Caucasus ranges, Surami range and mountains at the northern-most limits of the Imereti region from the upper border of long-boled (full-grown) deciduous forest down to the upper border of forest of the low-mountain forest on foothills and on the plain.

This complex is widespread in upper parts of Vani, Baghdati Kharagauli and Sachkhere municipalities (administrative districts), and in lesser extent within the Tkibuli and Khoni municipalities. Very small plots can be observed in the Tskaltubo municipality as well. This complex is widespread in upper reaches of mountains and is protected within the limits of Borjomi-Kharagauli National park. This complex could not be considered as well protected in reserve, while significant part of the habitats of the complex are out of the National Park. The area contains Colchic middle-mountain landscapes with beech forests and Caucasian middle-mountain landscapes with beech-dark coniferous and dark coniferous (spruce-fir) forests mainly with evergreen underwood.

According to landscape map the following landscapes are united in the pool of habitats of this complex of animals: middle-mountain erosion-denudational landscapes with beech forests (Landscape 70) and middle-mountain karst with beech forests (Landscape 71), both with rich evergreen underwood; middle-mountain erosion-denudational landscapes with beech, beech-dark coniferous and dark coniferous (spruce-fir) forests mainly with evergreen underwood (Landscape 125), and middle-mountain erosion-denudational landscapes with dark coniferous forest, partially alternated with pine (*Pinus caucasica*) forest (Landscape 127); at the northern limits of the Imereti region some small spaces are covered with middle-mountain karst with beech-dark coniferous and dark coniferous forests (Landscape 126) and erosion-denudational landscapes with beech, beech-chestnut forests with rich evergreen underwood (Landscape 72).

Animals that occupy this area belong to Caucasian region of the Caucasian district of Circumboreal sub-zone with admixture of animals of Colchic (Kolkhida) zoogeographic district. Middle-mountain forest have sustainable and certainly rich complex of animals, with number of endemic to Caucasus species and species included in the Red Data List of Georgia

and number of sensitive to anthropogenic impact ecosystems and species. The most vulnerable ecosystems are beech and chestnut forests.

Among protected by law species there are seven mammals, two of them are Critically Endangered (Eurasian Lynx - *Lynx lynx* and Red Deer - *Cervus elaphus*), three species Endangered (Brown Bear - *Ursus arctos*, Chamois - *Rupicapra rupicapra* and very rare by us rodent Pontian Bank Vole - *Clethrionomys glareolus ponticus*), and two Vulnerable species (rodent Caucasian Squirrel - *Sciurus anomalus*, bat Western Barbastelle - *Barbastella barbastellus*); three Vulnerable bird species (Black Stork - *Ciconia nigra*, Golden Eagle - *Aquila chrysaetos* and Boreal Owl - *Aegolius funereus*); one Vulnerable reptile (Adzharian Rock Lizard - *Darevskia mixta*); one Vulnerable amphibian species (Caucasian Salamander - *Mertensiella caucasica*); one Vulnerable fish - Brook Trout (*Salmo fario*); and nine insects, among them two Endangered (Nordmann's Apollo - *Parnassius nordmanni* and Rosalia Longicorn - *Rosalia alpina*) and seven Vulnerable (Small Night Peacock Butterfly - *Eudia pavonia*, Dwarfish Sphinx - *Pterogon gorgoniades*, Scarlet Tiger - *Callimorpha dominula*, Appolo - *Parnassius appollo*, Hewitson's Mountain - *Erebia hewitsonii*, Meleager's Blue - *Polyommatus daphnis*, Stone Humble-bee - *Bombus eriophorus*), and Beech Snail (*Helix buchi*). Totally - 23 species.

Most sensitive to human presence and activity impact are: Lynx, Red Deer, Chamois, Black Stork, and, in case of poaching or water pollution - Brook Trout

Within frame of the projects under consideration this complex could be affected in case of activities in buffer zone (support zone) and inside of Borjomi-Kharagauli National park due to possible increasing of tourists number in the Borjomi-Kharagauli National park, due to Ubi development and in case new activities in the Sulori and Sairme resorts.

### **NEC No 3. Lowland and low-mountain forest complex**

This complex occupies lowland and low-mountain parts of the Imereti region from the beach of the river Rioni, upstairs to the lower edge of middle mountain forest (long-boled deciduous forest). Large area, occupied by this complex is located on floodplain and the slopes of ravine terraces. This complex covers entire Samtredia and Terjola municipalities, almost entire Khoni, Tskaltubo, Tkibuli, Chiatura and Zestafoni municipalities, large areas in lower parts of municipalities of Vani, Bagdati, Sachkhere and Kharagauli.

The area contains Colchic lowland landscapes with alder forest, foothill landscapes with hornbeam-oak forest alternating with beech-chestnut, oak-Zelkova and poly-dominant forest, and low-mountain landscapes with hornbeam-beech-chestnut forests, both with evergreen underwood. This natural cover is strongly degraded and on most of the area is replaced with anthropogenic ecosystems, such as arable lands, pastures, industrial and populated by human areas.

According to landscape map largest part of area of this complex is covered with two similar landscapes: lowland accumulative landscape with oak forest (*Quercus imeretina*) with evergreen undergrowth (Landscape 2) and plain and foothill erosional-accumulative landscapes with oak, oak-zelkova, beech-chestnut and poly-dominant forest (Landscape 6). The following landscapes are also presented in different extent in the pool of habitats of this complex of animals: foothill denudational- accumulative landscapes with poly-dominant forest (Landscape 5); foothill erosion-denudational landscapes with Colchic Hemihylaea forest

(superfluously humid forest) (Landscape 7); foothill-hilly karst landscapes with oriental hornbeam-oak, hornbeam-oak and poly-dominant deciduous forest (Landscape 8); foothill-hilly erosion-denudational landscapes with hornbeam-oak and beech-chestnut forest with evergreen undergrowth (Landscapes 9 and 10); low-mountain karst landscapes with mixed oak, hornbeam-oak and beech forest with evergreen undergrowth (Landscape 63); low-mountain erosion-denudational landscapes with mixed oak, hornbeam-oak and beech forest (Landscape 64). Northern part of the Imereti region is more rich in diversity of habitats (landscapes), than southern one. Exception presents only foothill Colchic Hemihylaea forest (Landscape 7), which is situated on the south-west border of the region.

Larger part of area occupied by this complex of animal species can be considered as belonging to the Colchic region of the Caucasus zoogeographical district. Western part of the territory is occupied with communities of mixed origin, with a considerable admixture of species belonging to Caucasus and East-European districts. Due to heavy pressure of humans, fauna is degraded on large lowland area. Numbers of species and populations are low.

Among protected by law species there are seven mammals, one Endangered (Brown Bear - *Ursus arctos*), and six Vulnerable species (two bats Mehely's Horseshoe Bat - *Rhinolophus mehelyi* and Mediterranean Horseshoe Bat - *Rhinolophus euryale*, rodents Caucasian Squirrel - *Sciurus anomalus*, and Harvest Mouse - *Micromys minutus*, Otter - *Lutra lutra*); 12 birds - one Critically Endangered winterer (Saker Falcon - *Falco cherrug*), four Endangered species (passage visitors: White-tailed Eagle - *Haliaeetus albicilla*, Red-footed Falcon - *Falco vespertinus*, Common Crane - *Grus grus*, and local breeder Barn Owl - *Tyto alba*) and seven Vulnerable bird species (six passage migrants: Black Stork - *Ciconia nigra*, Rudy Duck - *Tadorna ferruginea*, Long-legged Buzzard - *Buteo rufinus*, Imperial Eagle - *Aquila heliaca*, Greater Spotted Eagle - *Aquila clanga*, one year-round resident Boreal Owl - *Aegolius funereus*, and one species with uncertain status - Bearded Parrotbill - *Panurus biarmicus*); two Vulnerable reptile (Mediterranean Tortoise - *Testudo graeca* and Caucasian viper - *Vipera kaznakovi*); seven fish species: one Critical Endangered species - Baltic Sturgeon (*Acipenser sturio*), five Endangered anadromous Sturgeon species, spawning in the tributaries of Rioni River downstream of Vartsikhe dam (Beluga - *Huso huso*, Barbel sturgeon - *Acipenser nudiiventris*, Starry sturgeon - *Acipenser stellatus*, Russian sturgeon - *Acipenser gueldenstaedti*, Persian sturgeon - *Acipenser persicus*), Endangered anadromous Black Sea Salmon (*Salmo fario labrax*) and one Vulnerable fish (Colchian Khrumulya - *Varicorhinus sieboldii*); 12 species of insects, among them one very narrow ranged Critical Endangered beetle, dwelling in the caves in Tskhaltubo municipality (Kurnakov's Ground beetle - *Inotrechus kurnakovi*), two Endangered species (Death's Head Sphinx - *Manduca atropos* and Oleander Sphinx - *Deilephila nerii*) and eight Vulnerable (Small Night Peacock Butterfly - *Eudia pavonia*, Dwarfish Sphinx - *Pterogon gorgoniades*, Scarlet Tiger - *Callimorpha dominula*, Apollo - *Parnassius apollo*, Caucasian Festoon - *Anthocharis caucasica*, Stone Humble-bee - *Bombus eriophorus*, Violet Carpenter bee - *Xylocopa violacea* and two dragonflies: Dark pincertail - *Onychogomphus assimilis* and Banded Agrion damselfly - *Calopteryx mingrelica*) and Vulnerable endemic Colchis crayfish - *Astacus colchicus*. Totally - 42 species.

Most sensitive to human presence and activity impact are: Brown Bear, Otter, Mehely's Horseshoe Bat, all redlisted wintering birds, and, in case of poaching or water pollution - salmon and Sturgeon species in Rioni river.

All of locations of the Project implementation activities are located within range of this faunal complex: Gordi, Tskaltubo, Gelati, Vani, Sulori, Katskhi and Ubisa, and roads between these points are situated there.

The most severe impact on fauna, occurring within the Project area, can be expected exactly within this complex of species and landscapes. Almost all objects of reconstruction are situated there, as well as the new construction sites and the roads between them, which should be modernized. Most of works are planned to be done within the limits of the peopled areas – in towns and villages. That will reduce impact on large part of animals.

As regards terrestrial mammals within the urban and rural area – the bats (*Chiroptera*) are one of the vulnerable groups of the species. Bats are extremely restricted in finding shelters for breeding colonies. Suitable for the roosting shelters – trees hollows, caves and abandoned buildings are of great importance for their populations. Wintering and maternity roost can be destroyed if some trees with hollows will be felled during the clearing works (tree cutting) or if old buildings will be destroyed in not proper time during preparation works. In addition, a spill of a fuel in wetlands on the floodplains can destroy the food resource of the maternal colony, which will substantially reduce number of young's. All bats that occur in Georgia are included in the Appendix II of Bonn Convention and protected under EUROBATS Agreement signed by Georgia in 2002. Within the Project area, presence of the 15 bat species is confirmed and one more species - Western Barbastelle (*Barbastella barbastellus*) is expected. Three species of Chiroptera - Mediterranean Horseshoe Bat, Mehely's Horseshoe Bat and Western Barbastelle are included in the Georgian Red Data list under the category vulnerable. All old buildings, that will be destroyed during construction, should be inspected on the presence in it roosts of bats - in roofs and cellars. The building cannot be destroyed without consultation with MoE officials and bat experts, if the bat colony (despite whatever included or not this species into the Georgian Red Data List or not) will be found.

**Table 8.10. Bat species occurring within the work area**

N°	Species - Latin name	Common English name	Georgian name
1.	<i>Rhinolophus ferrumequinum</i>	Greater Horseshoe Bat	დიდი ცხვირნალა
2.	<i>Rhinolophus hipposideros</i>	Lesser Horseshoe Bat	მცირე ცხვირნალა
3.	<i>Rhinolophus euryale</i>	Mediterranean Horseshoe Bat	სამხრეთული ცხვირნალა
4.	<i>Rhinolophus mehelyi</i>	Mehely's Horseshoe Bat	მეჰელის ცხვირნალა
5.	<i>Barbastella barbastellus</i>	Western Barbastelle	ევროპული მაჩქათელა
6.	<i>Eptesicus serotinus</i>	Serotine Bat	მეგვიანე ღამურა
7.	<i>Myotis blythii</i>	Lesser Mouse-eared Bat	ყურწვეტა მლამიობი
8.	<i>Myotis mystacinus</i>	Whiskered Bat	ულვაშა მლამიობი
9.	<i>Myotis nattereri</i>	Natterer's Bat	ნატერერის მლამიობი
10.	<i>Nyctalus noctula</i>	Common Noctule Bat	მელამურა
11.	<i>Nyctalus leisleri</i>	Lesser Noctule Bat	მცირე მელამურა
12.	<i>Pipistrellus kuhlii</i>	Kuhl's Pipistrelle	ხმელთაშუაზღვის ღამორი
13.	<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	ჯუჯა ღამორი
14.	<i>Vespertilio murinus</i>	Parti-coloured (Frosted) Bat	ჩვეულებრივი ღამურა
15.	<i>Plecotus auritus</i>	Brown Big-eared Bat	რუხი ყურა
16.	<i>Miniopterus schreibersii</i>	Schreiber's Long-fingered Bat	ჩვეულებრივი ფრთაგრძელი

In addition it should be noted that within the work area along the roads can be affected some species, which are of community interest. There are game species and species attractive for tourists and birdwatchers. Among them are seven mammals, of middle and large size, which are listed in the Table 8.11.

**Table 8.11. Game species occurring within the work area**

	ლათინური დასახელება / Latin name	ინგლისური დასახელება/ English name	ქართული დასახელება/ Georgian name
1	<i>Canis lupus</i>	Wolf	მგელი
2	<i>Vulpes vulpes</i>	Fox	მელა
3	<i>Meles meles</i>	Badger	მაჩვი
4	<i>Martes martes</i>	Stone Martin	ტყის კვერნა
5	<i>Felis silvestris</i>	Wild Cat	ტყის კატა
6	<i>Capreolus capreolus</i>	Roe-deer	ევროპული შველი
7	<i>Sus scrofa</i>	Wild Boar	გარეული ღორი

**Table 8.12. Fish species of the Imereti Region**

#	Latin name	English name	Georgian name	Status	Rioni downstream from Vartsikhe	Kvirila and Rioni upstream from Vartsikhe
1	<i>Acipenser sturio</i>	Baltic Sturgeon	atlantiuri zuTxi	CR	+	
2	<i>Acipenser nudiventris</i>	Fringebarbel sturgeon	jarRala/foreji	EN	+	
3	<i>Acipenser stellatus</i>	Starry sturgeon	taraRana	EN	+	
4	<i>Acipenser gueldenstaedtii</i>	Colchic Sturgeon	rusuli zuTxi	EN	+	
5	<i>Acipenser persicus</i>	Persian sturgeon	sparsuli zuTxi	EN	+	
6	<i>Huso huso</i>	Beluga	svia	EN	+	
7	<i>Rhodeus colchicus</i>	Colchic Bitterling	tafela	Endem	+	
8	<i>Barbus escherichii</i>	Barb	kolxuri wvera		+	+
9	<i>Capoeta sieboldi</i>	Colchian Khramulya	kolxuri xramuli	VU Endem	+	+
10	<i>Carassius carassius</i>	Crucian carp	Cveulebrivi karCxana		+	
11	<i>Cyprinus carpio</i>	Common carp	kobri		+	
12	<i>Gobio lepidolaemus caucasica</i>	Gudgeon			+	+
13	<i>Abramis brama</i>	Common bream	kaparWina		+	
14	<i>Alburnus alburnus</i>	Bleak	TeTrula		+	
15	<i>Chalcalburnus chalcoides derjugini</i>	Shemaya of Batumi	Samaia		+	
16	<i>Aspius aspius</i>	Asp	wiTeltuCa Werexi		+	
17	<i>Chondrosotoma colchicum</i>	Colchic nase	kolxuri tobi	Endem	+	+
18	<i>Rutilus rutilus</i>	Roach			+	
19	<i>Scardinius erythrophthalmus</i>	Rudd	farflwiTela		+	
20	<i>Squalius cephalus = Leuciscus cephalus orientalis</i>	European Chub	kavkasiuri qaSapi		+	+
21	<i>Vimba vimba</i>	Vimba	mcire vimba		+	
22	<i>Tinca tinca</i>	Tench	guwu		+	
23	<i>Cobitis satunini</i>	Loache		Endem	+	

24	<i>Silurus glanis</i>	European catfish	loqo		+	+
25	<i>Salmo fario</i>	Brook Trout	mdinaris kalmis	<b>VU</b>	+	+
26	<i>Gambusia affinis</i>	Mosquito fish,	gambuzia		+	+
27	<i>Neogobius constructor</i>	Ravine goby	kavkasiuri mdinaris Rorjo	Endem	+	+
28	<i>Neogobius gymnotrachelus</i>	Caspian goad goby	Rorjo		+	
					<b>28</b>	9

**Table 8.13. Georgian Red List Species in the Project Area**

		<i>Latin name</i>	Georgian common name	Common name	IUCN Category	Status on territory	Open lowland	Mountain forest	Mountain grasslands
		<b>Mamalia</b>	<b>ძუძუმწოვრები</b>						
1		<i>Rhinolophus euryale</i>	სამხრეთული ცხვირნალა	Mediterranean Horseshoe Bat	VU	Rare	y		
2		<i>Rhinolophus mehelyi</i>	მეჰელის ცხვირნალა	Mehely's Horseshoe Bat	VU		y		
3		<i>Barbastella barbastellus</i>	ევროპული მაჩქათელა	Western Barbastelle	VU	Not confirmed	?	?	
4		<i>Sciurus anomalus</i>	კავკასიური ციყვი	Persian Squirrel	VU		y	y	
5		<i>Prometheomys schaposchnikovi</i>	პრომეტეს მემინდვრია	Long-Clawed Mole-Vole	VU	Rare			y?
6		<i>Clethrionomys glareolus ponticus</i>	წითური მემინდვრია	Pontian Bank Vole	EN	Very rare		y	
7		<i>Micromys minutus</i>	პაწია თაგვი	Harvest Mouse	VU	Rare	y		
8		<i>Lynx lynx</i>	ფოცხვერი	Lynx	CR			y	
9		<i>Lutra lutra</i>	წავი	Otter	VU		y		
10		<i>Ursus arctos</i>	მურა დათვი	Brown Bear	EN		y	y	y
11		<i>Cervus elaphus</i>	ირემი	Red Deer	CR			?	?
12		<i>Rupicapra rupicapra</i>	არჩვი	Chamois	EN			y	?
		<b>Aves</b>	<b>ფრინველები</b>						
13	1	<i>Ciconia nigra</i>	ყარყატი	Black Stork	VU	PM;YR-R	y	y	
14	2	<i>Tadorna ferruginea</i>	წითელი იხვი	Rudy Duck	VU	PM	?		
15	3	<i>Haliaeetus albicilla</i>	თეთრკუდა ფსოვი	White-tailed Eagle	EN	OV	y		
16	4	<i>Buteo rufinus rufinus</i>	ველის კაკაჩა	Long-legged Buzzard	VU	PM	y		
17	5	<i>Aquila heliaca</i>	ბეჰობის არწივი	Imperial Eagle	VU	PMr	y		
18	6	<i>Aquila clanga</i>	დიდი მყივანი არწივი	Greater Spotted Eagle	VU	PM	y	y	
19	7	<i>Aquila chrysaetos</i>	მთის არწივი	Golden Eagle	VU	YR-R		?	y
20	8	<i>Neophron percnopterus</i>	ფასკუნჯი	Egyptian Vulture	VU	PM-c			y
21	9	<i>Gypaetus barbatus</i>	ბატკანმერი	Lammergeyer	VU	OV			y
22	10	<i>Aegyptius monachus</i>	სვავი	Black Vulture	EN	OV			y
23	11	<i>Gyps fulvus</i>	ორბი	Griffon Vulture	VU	OV		y	
24	12	<i>Falco cherrug</i>	გავაზი	Saker Falcon	CR	PM; W	y		
25	13	<i>Falco vespertinus</i>	თვალშავი	Red-footed Falcon	EN	PM	?		
26	14	<i>Aegolius funereus</i>	ქოტი	Boreal Owl	VU	YR-R	?	y	



		<i>Latin name</i>	<i>Georgian common name</i>	<i>Common name</i>	<i>IUCN Category</i>	<i>Status on territory</i>	<i>Open lowland</i>	<i>Mountain forest</i>	<i>Mountain grasslands</i>
27	15	<i>Tyto alba</i>	ბუხინწა	Barn Owl	EN	YR-R	y		
28	16	<i>Tetraogallus caspius</i>	კასპიური შურთხი	Caspian Snowcock	VU	YR-R			?
29	17	<i>Tetrao mlokosiewiczi</i>	კავკასიური როჭო	Caucasian Black Grouse	VU	YR-R			y
30	18	<i>Grus grus</i>	რუხი წერო	Common Crane	EN	PM	?		
31	19	<i>Panurus biarmicus</i>	ულვაშა წივწივა	Bearded Parrotbill	VU	W	?		
		<b>Reptilia</b>	<b>ქვეწარმავლები</b>						
32	1	<i>Testudo graeca</i>	ხმელთაშუაზღვეთის კუ	Mediterranean tortoise.	VU		y		
33	2	<i>Darevskia mixta</i>	აჭარული ხვლიკი	Adzharian Rock Lizard	VU			y	?
34	3	<i>Vipera kaznakovi</i>	კავკასიური გველგესლა	Caucasian viper	EN		?		
		<b>Amphibia</b>	<b>ამფიბიები</b>						
35	1	<i>Mertensiella caucasica</i>	კავკასიური სალამანდრა	Caucasian Salamander	VU			y	
		<b>Fish</b>	<b>ხრტილოვანი თევზები</b>						
36	1	<i>Huso huso</i>	სვია	Beluga	EN		y		
37	2	<i>Acipenser sturio</i>	ფორონჯი	Baltic Sturgeon	CR		y		
38	3	<i>Acipenser nudiventris</i>	ფორეჯი	Barbel sturgeon	EN		y		
39	4	<i>Acipenser stellatus</i>	ტარაღანა	Starry sturgeon	EN		y		
40	5	<i>Acipenser gueldenstaedti</i>	რუსული ზუთხი	Russian sturgeon	EN		y		
41	6	<i>Acipenser persicus</i>	სპარსული ზუთხი	Persian sturgeon	EN		y		
		<b>Bony fish</b>	<b>ძვლოვანი თევზები</b>						
42	1	<i>Salmo fario</i>	მდინარის / ტბის კალმახი	Brook Trout	VU			y	y
43	2	<i>Varicorhinus sieboldi</i>	კოლხური ხრამული	Colchian khramulya	VU		y		
44	3	<i>Sabanejewia aurata</i>	წინააზიური გველანა	Golden Spined Loach	VU			y	
		<b>Insects</b>	<b>მწერები</b>						
45	1	<i>Eudia pavonia</i>	ღამის მცირე ფარშევანგთვალა	Small Night Peacock Butterfly	VU	Rare	y	y	
46	2	<i>Manduca atropos</i>	სფინქსი მკვდართავა	Death's Head Sphinx	EN	Rare	y		
47	3	<i>Deilephila nerii</i>	ოლეანდრის სფინქსი	Oleander Sphinx	EN	Rare	y	?	
48	4	<i>Pterogon gorgoniades</i>	ჯუჯა სფინქსი	Dwarfish Sphinx	VU	Rare	y	y	?
49	5	<i>Callimorpha dominula</i>	დათუნელა ჰერა	Tiger Moth	VU		y	y	
50	6	<i>Parnassius apollo</i>	აპოლონი	Appolo	VU		y	y	y
51	7	<i>Parnassius nordmanni</i>	კავკასიური აპოლონი	Nordmann's Appolo	EN			?	y

		<i>Latin name</i>	<b>Georgian common name</b>	<b>Common name</b>	<b>IUCN Category</b>	<b>Status on territory</b>	<b>Open lowland</b>	<b>Mountain forest</b>	<b>Mountain grasslands</b>
52	8	<i>Allancastria caucasica</i>	კავკასიური ზერინთია	Caucasian Festoon	VU		?		
53	9	<i>Erebia hewistonii</i>	ჰევისტონის ავერდულა	Hewiston's Mountain	VU			?	
54	10	<i>Polyommates daphnis</i>	ცისფერა მელეაგრი	Meleager's Blue	VU			?	
55	11	<i>Bombus eriophorus</i>	ბაზი ერიოფორუსი	Stone Humble-bee	VU		y	y	y
56	12	<i>Bombus alpigenus -(B.wurflenii)</i>	ალპური ბაზი	Wurflen's Humble-bee	VU				y
57	13	<i>Xylocopa violacea</i>	იისფერი ქსილოკოპა	Violet Carpenter bee	VU		y		
58	14	<i>Inotrechus kurnakovi</i>	კურნაკოვის ბზუალა	Kurnakov's Ground beetle	CR	Narrow range	y		
59	15	<i>Rosalia alpina</i>	ალპური ხარაბუზა	Rosalia Longicorn	EN			y	y
60	16	<i>Onychogomphus assimilis</i>	მსგავსი ნემსიყლაპია	Dark pincertail	VU		y		
61	17	<i>Calopteryx mingrelia</i>	სამეგრელოს ტურფა	Banded Agrion	VU		y		
		<b>Crustacea</b>							
62	1	<i>Astacus colchicus</i>	კოლხური ფართოფეხა კიბო	Colchis crayfish	VU		y		
		<b>Mollusca</b>							
63	1	<i>Helix buchi</i>	ბუხის ლოკოკინა	Beech Snail	VU			y	
		<b>Sub-species</b>							
1	1	<i>Salmo fario labrax</i>	შავი ზღვის ორაგული	Black Sea Trout	EN		y		

**Table 8.14. The Protected Areas in the Imereti Region**

Protected Area	National Category	IUCN category	Area ha	Date established	Date modified	# of law	Title of law	Administration
Borjomi-Kharagauli National Park	National Park	II	61234.84	1995		5263	Law about creation and managing protected areas of Borjomi-Kharagauli protected areas ("საქართველოს კანონი ბორჯომ-ხარაგაულის დაცული ტერიტორიების შექმნისა და მართვის შესახებ")	Borjomi-Kharagauli National Park Administration
Ajameti Managed Nature Reserve	Managed Nature Reserve	IV	5117	1935	2007	5486-1	Law about the status of protected areas ("საქართველოს კანონი "დაცული ტერიტორიების სტატუსის შესახებ")	Ajameti Managed Nature Reserve Administration
Imereti Caves Protected - Sataplia State Reserve	State Reserve	I	354	1935	2007	5485-III	Law about creation and managing protected areas of Imereti caves ("საქართველოს კანონი ბორჯომ-ხარაგაულის დაცული ტერიტორიების შექმნისა და მართვის შესახებ")	The Sataplia State Reserve is under governance of the Imereti Caves Territorial Administration of the Agency of Protected Areas
Imereti Caves Protected – Natural Monuments	11 Natural Monuments	III	n/a	2007		5485-III	Law about creation and managing protected areas of Imereti caves ("საქართველოს კანონი ბორჯომ-ხარაგაულის დაცული ტერიტორიების შექმნისა და მართვის შესახებ")	All 11 Natural Monuments are under governance of the Imereti Caves Territorial Administration of the Agency of Protected Areas

### 8.2.3.2 Protected Areas

Historically protected territories in Georgia were established in woodlands, because of its peculiarities and sensitiveness for human impact. Over 40% (2,706,600.0 ha) of territory of Georgia is covered with various types of forests, about 40% among them keep primary structure, 5% of natural forests are virgin, and only 59,500.0 ha are artificial. (Zazanashvili, 1997). About 75 % of Protected Areas are covered by forests. The Georgian Law "On the Protected Areas System", (7 March 1996) and "Law about the status of protected areas" (2007) gave the legal basis for the establishment, management, control, territorial and functional organization of the protected territories, and human activities within their boundaries. This Law determines following categories for protected areas: State Nature Reserve, National Park, Natural Monument, Managed Nature Reserve (Sanctuary), Protected Landscape, Multiply Use Protected Area, and protected areas included in international network - Biosphere Reserve, World Heritage Unit, Wetland of International Importance (Ramsar-site). There are 14 Strict Nature Reserves, 9 National Parks, 17 Managed Nature Reserves, 14 Natural Monuments and two Protected Landscapes in Georgia. At present the total area of Protected Areas is 511 123 hectares, which is about 7 % of the country's territory. There are one State Nature Reserve (Sataplia), part of one National Park (Borjomi-Kharagauli), one Sanctuary (Ajameti Managed Nature Reserve), and 11 Natural Monuments (within frame of Imereti Caves Protected Areas).

Those are under governance of the three territorial Protected Areas Administration of Agency of Protected Areas of State: Borjomi-Kharagauli Protected Areas Administration, Imereti Caves Protected Areas Administration, and Ajameti Protected Areas Administration For details see, please, **Table 8.14**. The Protected Areas in the Imereti Region.

#### **Borjomi-Kharagauli National Park**

The Borjomi-Kharagauli National Park was established in 1995 and was officially opened in 2001. In 2007 the Borjomi-Kharagauli National Park became a member of European network of Protected Areas – Pan Park. Total area is about 61235 ha, one third, about 20900 ha lies within the Imereti region. The Borjomi-Kharagauli Protected Areas consist of Borjomi State Reserve, Borjomi-Kharagauli National Park, and of Managed Reserve Nedzvi. Only a part of the National Park itself lies on the territory of Imereti, within municipalities of the Kharagauli and Baghdati. Another part of the National Park, the State Reserve and managed reserve are located outside the Imereti region in the municipalities of Adigheni, Akhaltsikhe, Borjomi and Khashuri. The Imeretian part of the National park is spread on northern and north-west slopes of the Meskheti mountain range. All rivers are flowing into the Rioni river and then in the Black Sea.

The main peculiarities of the area are high mountain landscape – sub-alpine and alpine meadows, elfin woodland (crooked forest), rhododendron bushes and coniferous woodland on the slopes. Forests of the Kharagauli part of the Borjomi-Kharagauli National Park are presented by dark coniferous, deciduous and mixed forests.

The main purpose of this decision was the conservation of ecosystems; restoration of degraded areas; support and control of sustainable use of renewable resources; educational activity and eco-tourism. According to the management plan designed by WWF, the following zones are represented in the park: zone of strict nature protection; zone of wildlife; zone of traditional

use; restoration zone and buffer zone (the border of which coincides with the administrative borders of six districts). The park area is 54,400 ha. It is covered with primary forests and subalpine meadows typical for Lesser Caucasus. Diverse flora and fauna is represented in the area: rare, endangered species, relict species, species endemic to Central Caucasus. Buffer zone comprises 150000 ha with various land use forms, namely, arable land and industrial building zones, infrastructure, natural and semi-natural habitats. Buffer zone facilitates that the surroundings of the park are preserved in the conditions, which supports the sustainable preservation of the park regime. It is implemented, on one side, through economic support and aid to the buffer zone and, on the other, through its involvement into the park planning and management process. Land and resource use within the buffer zone should be matched with park conservation purposes. The development of the buffer zone should be based upon the thoroughly devised plan of regional development, which facilitates sustainable economic development of the buffer zone and conservation of biodiversity. Buffer zone is not included in IUCN categories and is absent from the IUCN list of protected areas. In 1998 the governments of Germany and Georgia signed bilateral agreement “on the Protection of Environment and Natural Resources of Borjomi-Kharagauli National Park”. The details of the cooperation are given in the order of the president of Georgia (July 13, 2001) “on Planning and Implementation Coordination of the Current and Perspective Programs of Borjomi-Kharagauli National Park and its Buffer Zone”. The government of Germany finances three programs: development of infrastructure; training/ecological education; program of development of the buffer zone.

High mountain rough relief, steep slopes, numerous gorges and dense forest provide good shelters for many species. According to official data there are 49 species of mammals, about 88 species of birds, 16 - of reptiles, 9 - of amphibians and 1 species of fish are widespread in the Borjomi-Kharagauli National Park. One can note the following most sensitive to anthropogenic impact species:

- Ungulates - Chamois and Red deer.
- Carnivores – Lynx and Bear
- Endemic bird - Caucasian Black grouse
- Large birds-of-prey - Golden eagle and Peregrine falcon
- Endemic reptiles - rock lizards
- Amphibian endemic to Caucasus – Caucasian Salamander (*Mertensiella caucasica*), Caucasian Parsley Frog (*Pelodytes caucasicus*).

Borjomi-Kharagauli National Park has the good tourist infrastructure. The comfortable shelter for visitors located in Merelisi (Imereti sector). The National Park offers four hiking or horse-riding tours on special arranged trails. The tours are of duration of one-five days on distance 23-50 km. Further development should be subject of discussion with experts’ conservationists and zoologists.

### **Imereti Caves Protected Areas**

The Imereti Caves Protected area consists of State Nature Reserve Sataplia and 11 Natural monuments, among the Nature monuments are: one waterfall, two gorges (or canyons) and eight karst caves. The purpose of the establishment of the complex is the protection of karst caves, dinosaur imprint and Colchic forest. Imereti cave complex is located in 10 km from t. Kutaisi. The area of the complex is about 354 ha.

The Sataplia State Nature Reserve is located between cities of Kutaisi and Tskhaltubo at a distance about 5 km of Kutaisi and about 3 km of Tskhaltubo. The area of the State Nature Reserve Sataplia is 354 hectares. The area is covered with forest of Colchic type. The beech forest with box-tree underbrush and natural groves of yew trees (*Taxus baccata*) can be found here.

Sataplia reserve is located at the altitude of 500 m a.s.l. Karst caves occur within the reserve. Sataplia climate is subtropical. The annual precipitations reach 1900 mm. The average January temperature is +4°C and August mean +25°C. Sataplia reserve is located in humid subtropical belt. 98% of the reserve is covered with subtropical Colchic forest. Beech forests with boxwood undergrowth and hornbeam forests with oriental hornbeam undergrowth dominate in the area. Yew (*Taxus baccata*) grows naturally in the area from coniferous species. 67 woody species are described from the reserve. 30 of these species are trees and 37 shrubs, of which 59 species are deciduous and 8 - evergreen. Almost half of the woody species are relict. Tertiary period relicts occur as well: Caucasian hornbeam (*Carpinus caucasica*), Georgian oak (*Quercus iberica*), Imeretian buckthorn, rhododendron, box butcher's broom, butcher's broom, Colchic bladder nut (*Staphylea colchica*), whortleberry and Colchic boxwood (*Buxus colchica*). It is noteworthy that 9 woody species, which are endangered and included in the Red List of Georgia, occur in the reserve along with three Caucasian and one Georgian endemic species.

Fauna of Sataplia State Reserve is poor. According to official data there are 15 species of mammals, about 44 species of birds, 7 - of reptiles, 4 - of amphibians. Total about 70-71 species. One of redlisted insects (Kurnakov's Ground beetle - *Inotrechus kurnakovi*) is strictly depended on cave ecosystems of Tskhaltubo region.

Besides the State Nature Reserve, the Imereti Caves Protected area includes the following Natural Monuments:

1. Natural monument of Kumistavi Cave in vicinities of villages Kumistavi and Kvilishori
2. Natural monument of White Cave located to the north of Tskaltubo city at a distance of 1,5 km
3. Natural monument of Khomulo Cave in the vicinities of the village of Khomulo
4. Natural monument of Tsutskhvati Cave in the vicinities of the village of Tsutskhvati, to the south of the Chishura River basin – the right tributary of the Kvirila River
5. Natural monument of Navenakhevi Cave on the territory of the village of Navenakhevi
6. Natural monument of Nagarevi Cave on the territory of the village of Godogani
7. Natural monument of Jason's Cave in the canyon of the Tskaltsitela River at the village of Godogani
8. Natural monument of Sakazhia Cave on the left slope of the gorge of the Tskaltsitela River at the village of Godogani
9. Natural monument of Tskaltsitela Gorge, the strip of length of 7,5 km between the bridge of the village of Godogani and the bridge to the Gelati monastery
10. Natural monument of Okatse Canyon is located in the vicinities of the village of Gorda
11. Natural monument of Okatse Waterfall is located in the vicinities of the village of Gorda

### **Ajameti Managed Nature Reserve**

Ajameti Managed Nature Reserve is a Sanctuary which was established on the basis of former Ajameti State Reserve in 2007. Ajameti Strict Nature Reserve was established in 1946 to preserve the relict plants – Imeretian oak (*Quercus imeretina*) and Zelkova tree (*Zelkova*

*carpinifolia*). Today, the sanctuary is the only place, where the subtropical forests of Colchic lowland (Kolkhida) have been preserved in near primary condition. In the forest is great number of old trees which age is more than 100 years, and some of the trees are more than 250 years old.

Total area of the Managed Nature reserve is 5117 hectares, and 4738 ha is covered with forest

Ajemeti reserve is located in the easternmost part of Kolkheti lowland, on the left bank of r. Rioni within the water catchment basins of r. Rioni tributaries – r. Kvirila and Khanistskhali. The reserve comprises various forestries: Ajameti (3,531 ha), Vartsikhe (1,105 ha) and Sviri (211 ha). The first two regions are separated with Khanistskhali and Vartsikhe viticulture arable land. The distance between them is 1-2 km. Sviri massif is located in several meters from Ajamaeti forest and is separated from the forest with vil. Sviri agricultural land.

There are no water abundant rivers within the reserve. Small rivulets dry out during the dry season. Irrigation channels were built in 1946-1948 in the north-western part of Ajameti forest. Potable water is abstracted from wells.

Ajemeti Sanctuary is located in the lower reaches of the Kvirila River valley. The relief of the Managed Nature Reserve is smooth. The floodplain of the Kvirila River is covered with meadows and bushes, and it is of certain importance for the birds wintering and migrating there. Unfortunately, the floodplain is not included into Managed Nature Reserve.

The Ajameti sanctuary is surrounded by the areas which are densely populated by human. It is located on the Rioni plain in Baghdati municipality at 15 km distance from Kutaisi and at 1.5 km from nearest village Vartsikhe. Length of the sanctuary is about 13 km, and its average width is 3 km with 5 km in the widest place. Moreover, the sanctuary is divided into three separate sites: Ajameti, Vartsikhe and Sviri.

Ajemeti reserve was established to protect rare relict species of the Tertiary period – Imeretian oak (*Quercus imeretina*) and Zelkova (*Zelkova carpinifolia*). These species are included in the Red List of Georgia (as well as Red Book of Georgia and Red Book of the former USSR). In addition, species included in Red List of Georgia (as well as Red Book of Georgia and Red Book of the former USSR): Caucasian wingnut (*Pterocarya pterocarpa*) and Caucasian persimmon (*Diospyros lotus*) are represented within the reserve. The following species occur as well: box butcher's broom (*Ruscus colchicus*) – species of the Red Book of the former USSR, Colchic oak (*Quercus hartwissiana*) and nut (*Juglans regia*) – species of the Red List of Georgia (Red Book of Georgia).

The vegetation of the below type is present within Ajameti reserve: Imeretian oak forests; oak-hornbeam and hornbeam forests; alder formations on small territory; shrubbery; weeds; r. Kvirila floodplain vegetation; Zelkova and meadows developed on forest cuttings.

About 97 % (4,700 ha) of the total area of the reserve (4,848 ha) is covered with forests, of which 4,609 ha is represented with natural forests. Imeretian oak forests occur on about 95 % (4,454 ha) of the total forests. Oak forest of 140 year old individuals covers about 1,700 ha. In some areas oak individuals are 220-230 year old and even 250-270 year old.

The territory of the reserve is surrounded with Vartsikhe agricultural land and arable land of villages Dimi, Perzati, Baghdati, Rodinouli, etc. Due to proximity of settlements the reserve forests are partially thinned. The average density of forests is about 0.56 in these areas, for about 1,561 ha the density is 0.6 and in some areas (268 ha) even reaches 0.8-0.9.

Fauna of Ajameti is poor. According to official data there are 26 species of mammals, about 84 species of birds, among them 21 local breeders, the rest are winterers and passage migrants, 9 - of reptiles, 5 - of amphibians. Total about 124 species. Roe deer, jackal, red fox, badger are among “large” mammals there. The redlisted Caucasian squirrel (*Sciurus anomalus*) can be found in the sanctuary. The Common otter (*Lutra lutra*) occurs on Kvirila floodplain and, possible, within the protected area. All animals dwelling in the Ajameti Sanctuary can be considered as sensitive to anthropogenic impact, because of small area of the sanctuary and because of permanent presence of disturbance factor.

Botanic, photo and ecological tours, the bird-watching and animal-watching can be developed in the Managed Nature Reserve. A number of historical monuments attractive for tourists are situated in environs of the sanctuary. Among them are ruins of the town of Rodopolis (at Vartsikhe), ruins of the winter hunting palace of Georgian kings at Geguti, Bagrati temple (11th century) and the Gelati monastery complex (12th century) at Kutaisi.

## 8.3 NATURAL RESOURCES, POLLUTION HOTSPOTS AND CONTAMINATION SOURCES IN IMERETI REGION

### 8.3.1 INTRODUCTION

Imereti is located in West Georgia. Its natural border is defined by mountains and ravines.. The border runs along Racha Ridge in the north, along Likhi Ridge – in the east, Meskheti Ridge – in the south and the Tskhenistskali River – in the west.

Imereti region consists of 11 districts (Baghdati, Vani, Zestafoni, Samtredia, Terjola, Sachkhere, Tkibuli, Chiatura, Kharagauli, Khoni, ts kaltubo), 11 towns, 3 settlements and about 520 villages.

The area of the region totals to 62,6641 ha including 250,000 ha of woodland. As of January 1, 2006 the population of Imereti region is 700,000 people.

Imereti has humid subtropical sea climate. The sea influence diminishes in the low-mountain and middle-mountain areas. However these areas also have humid climate. Winter is cold and summer – relatively dry and hot. The temperature in January is +2 - +50C . the maximum summer temperature is between +38 - +400C. The precipitation amount is 100-200mm. The average annual number of rainy days is 150.

Imereti has plenty of historic and natural monuments. The most famous historic monuments here are Gelati, Motsmeta, Ubisa, Bagrati Temple, Vani archaeological excavations, etc.



There are three protected areas in Imereti, namely L Borjomi Kharagauli National Park, Sataplia Reserve and Ajameti Sanctuary.

### 8.3.2 NATURAL RESOURCES

Imereti is rich in natural resources and their rational and complex use will shape the social and economic development of the country.

Forests are one of the important natural resources in Imereti. Most of the forests are located on mountain slopes, many of which are quite steep. Thus Imereti forests have utmost importance for environment protection.

The forests are scarce in plains and valleys where they were cut down and the land was used for agriculture. The geographic location and natural and climatic conditions account for a wide variety of plants in Imereti forests. The lowlands are dominated by alder, quercus imeretina, Zelkova, box, hornbeam. Mountain forests are dominated by beech, chestnut, fir and spruce and subalpine forests – by fir, spruce and pine.

In Imereti forests there are several species included in the Red List, e.g. chestnut, Zelkova, box, lime tree, walnut trees, etc. There is also a wide variety of medicinal plants.

There is a large number of deposit occurrences and promising deposits, including manganese, coal, facing materials (teschenite, limestone, marble lime, tuff, basalt), materials used for production of bricks, ceramics, fireclay, materials containing glauconite, which are used for production of aluminium, potassium and environmentally safe fertilizers, gagate, etc. as well as mineral and thermal water springs.

The richest deposits are Chiatura manganese ore deposits in and Tkibuli-Shaori coal deposits.

Chiatura manganese ore deposits has high-quality oxides and carbonates with 11-55% of manganese content. The deposits are operated by JSC “Georgianmanganese”.

Tkibul-Shaori deposit mainly provides fuel coal, with 30-45% ash content. The average heat capacity of coal is 5500 calories. The deposit is run by Saknakhshiri GIG Group Ltd.

- teschenite is the main facing materials in Georgia. It is a gabbroid plutonic rock. The explored teschenite deposits amount to 4.7 million m<sup>3</sup> and prospected ones – to 7 million m<sup>3</sup>;
- limestone and marble lime are one of the main constructing and facing materials. Imereti Region has a lot of explored quarries and prospected deposits of limestone and marble lime, totaling to tens of millions of cubic meters (including basalt, tuff, diorite, granite).
- glauconite is used for production of potassium, aluminium and environmentally safe fertilizers. The supply of glauconite sandstone in the Region is in fact inexhaustible. Most of them contain more potassium oxide and aluminium oxide than the sandstones of New Jersey quarry in the USA.
- There are several well-known mineral and thermal water springs in the Region, including Sairme, Kvereti, Simoneti, Legva, Sulori, Amaghleba, Zvare, Nunisi and Tskaltubo (see Table 2.1).

Imereti is rich in surface and ground fresh water. The surface water is represented by the following rivers: the Rioni, the Tskhenistskali, the Kvirila, the Dzirula, the Khanistskali, the Koristskali, the Sulori, the Tskaltsitela, the Chkherimela, the Cholaburi, ect.

### **Surface Water Resources**

**The Rioni River** is the largest one in West Georgia. Its length is 327 km and the river basin area totals to 23,400 km<sup>2</sup>. The Rioni takes its rise in Pasi Mountain at 2,960m above sea level and flows into the Black Sea near Poti Town.

The average annual discharge of the Rioni is 27.3 m<sup>3</sup>/sec near Glola, 134 m<sup>3</sup>/sec – near Kutaisi, 406 m<sup>3</sup>/sec – near Sakochakidze. The maximum discharge of the Rioni is 345 m<sup>3</sup>/sec – near Glola, 1,440 m<sup>3</sup>/sec – near Kutaisi and 3,000 m<sup>3</sup>/sec – near Sakochakidze. The minimum annual discharge is 16m<sup>3</sup>/sec near Glola, 22 m<sup>3</sup>/sec – near Kutaisi, 34 m<sup>3</sup>/sec – near Sakochakidze. The Rioni flow varies by seasons with 38.8% - in spring, 28.5% - in summer, 18.2% - in autumn and 14.3% - in winter. The river flow is formed by several feeding sources in the following percentages: groundwater – 34.7%, rain – 32.5%, snow 28.2% and glacier water - 4.6%. The Rioni brings 12.9 km<sup>3</sup> of water and a large amount of sediment runoff into the Black Sea annually. The annual average amount of sediment runoff increases from the river head to the mouth. It is 96,000 tons near Ghebi Village, 2.2 million tons – near Khidikari Village, 4.9 million tons – near Namokhvani Village and 6.9 million tons – near Sakochakidze Village.

**The Kvirila River** is the left tributary of the Rioni. It takes its rise in Racha Ridge. The Kvirila is 140 km long, the river basin totals to 3,630 km<sup>2</sup>. The average water discharge is 61 m<sup>3</sup>/sec near Zestafoni, 90m<sup>3</sup>/sec – near the river head. The Kvirila is mainly fed by rain water.

**The Tskhenistskali River** takes its rise on the southern slope of Svaneti Caucasus and west of Pasismta Peak and at 2,710m above sea level. It flows into the Rioni River on the right near Sajavakho Village. The length of the Tskhenistskali River is 176 km, the basin area is 2,120 km<sup>2</sup>. The river is fed by snow, rain, glacier and underground water. The flood occurs in spring and summer (70% of the annual discharge). The water level is low in winter (10%) and there are flash floods in autumn (20%).

**The Sulori River** is the left tributary of the Rioni. It takes its rise on the northern slope of Meskehti Ridge at 2140 m above sea level. The river length is 33 km and basin area is 189 km<sup>2</sup>. The Sulori River is fed by snow, rain and underground waters. There are flash floods all the year round and floods in spring. The average annual discharge in spring is 3.95m<sup>3</sup>/sec.

**The Khanistskali River** takes its rise on the northern slope of Meskheti Ridge at 2,280 m above sea level. The river is 57 km long and the basin area is 914 km<sup>2</sup>. The Khanistskali River is fed by snow, rain and underground waters. There are floods in spring, flash floods – in autumn and low water level – in summer. The average annual discharge at the river head is 22.8m<sup>3</sup>/sec.

**The Cholaburi River** is the right tributary of the Kvirila River. It is formed through joining the of Dzusa and Buji rivers at 170m above sea level. The river length is 22 km and the basin area is 565 km<sup>2</sup>. The Cholaburi River is fed by rain, snow and underground waters. There are

floods in spring, flash floods in summer and autumn and low water level – in winter. The average annual discharge at the river head is 11.4m<sup>3</sup>/sec.

### **Groundwater Resources**

There are a lot of infiltrations of groundwater in Imereti. This is groundwater moving along impermeable strata and emerges from below the surface in the form of springs. The aquifer depths mostly vary between 2 and 10m. groundwater and springs are main sources of water supply for Imereti population.

The source of Kutaisi water supply are pore, fissure, fissure-Karst and Karst waters in Tskaltubo artesian basin. By zoning it belongs to the annual (abundant) type of feeding. The main intakes of the city are Partskhanakanebi Mukhiana-Kacahara and Kopitnari located in the valley between the Rioni and the Gubistskali. The aquifer has enough water for uninterrupted supply of the city. Water supply cut-offs are caused by the unsatisfactory condition of the network. The closeness of the aquifer to the surface, absence of natural protection and close hydrologic connection with surface runoff increase the risk of its contamination.

Characteristics of mineral waters in Imereti Region

Table 8.15

N	Location	Discharge m <sup>3</sup> /24hr	Chemical composition Mineralization g/l	Use
		Temperature °C		
1	2	3	4	5
1	Amaghleba (Vani district)	$\frac{345}{41^0}$	carbonaceous, sodium chloride m-9,4-10,3	balneological, spa
2	Zvare (Kharagauli district)	$\frac{31}{13-15^0}$	carbonaceous, chloride - hydrocarbonate- calcium- sodium m-4-6	drinking
3	Zekari (Baghdati district)	$\frac{355}{36^0}$	Sulfide hydrocarbonate- chloride-sodium m-1,5	balneological, spa
4	Kvereti (Sachkhetre district)	$\frac{50}{15-17^0}$	Sulfide chloride - hydrocarbonate -calcium - magnesium m-0,24	balneological, spa
5	Nunisi (Kharagauli district)	$\frac{80}{27^0}$	Sulfide chloride - hydrocarbonate - sodium	balneological, spa
6	Sairme (Baghdati district)	$\frac{80}{12^0}$	carbonaceous hydrocarbonate - calcium -sodium and carbonaceous - hydrocarbonate sodium m-3,6-7	drinking
7	Samtredia (Samtredia district)	$\frac{2767}{65-67^0}$	sulphate - chloride - sodium -calcium m-65-67	balneological, spa, heating
8	Sulori (vani district)	$\frac{230}{35-37}$	Sulfide sulphate-hydrocarbonate-sodium m-0,3-0,4	balneological, spa, heating
9	Tskaltubo	$\frac{14000}{33-35}$	Radon nitrogen sulphate-hydrocarbonate - chloride - calcium-sodium m-0,8	balneological, spa
10	Udabno (Baghdati district)	$\frac{500}{43^0}$	low sulfide, containing silicic acid, hydrocarbonate - sulphate- calcium - sodium m-0,36	balneological, spa
11	Leghva (Tkibuli District)			balneological, spa
12	Simoneti (Terjola district)			balneological, spa

Tskaltubo Town is supplied with water from the aquifer. The so called Tselimitsa Intake is located in the north-west of the town. The groundwater supply is sufficient and the water quality meets the current standards. The water supply cutoffs are caused by the unsatisfactory condition of the network. Chiatura Town water supply relies on Karst springs. There are several intakes. The so-called “Ghrudo, Pasknara and Cheruli are karst springs. Their quality meets the standards. but not all the karsts have been examined. Sometimes mining and other works cause water pollution. Tkibuli Town is supplied from surface water. There are 5 intakes, out of which 4 are built at the heads of the Dzusa, Tetri Ghele, Khochoula and Mukhura rivers. Most of water is supplied from Shaori reservoir and requires treatment before it goes into the network. Despite the functioning treatment plant the water does not meet the sanitary requirements. There are two water intakes in Khoni district. One is built on the aquifer and supplies Samtredia Town and the other – on the Tskhenistskali River filtrate supplying Khoni. Water is supplied by gravity for 24 hours. The intake gallery built for the filtrate is close to the surface (3-4m). It can not provide satisfactory filtration during rains and dirty water goes into the network. In Baghdati and Terjola districts the intakes are located at the river channels and are supplied by the filtrates of the Khanistskali and Cholaburi rivers.

Zestafoni Town is supplied from the aquifer. The so called Khohkoula Intake is built in Sviri and is supplied with the Kvirila River filtrate, which is sufficient for 24 hour water supply. The water quality meets the sanitary standards. “Georgianmanganese” Ltd also has its own intake on the Kvirila River filtrate to deliver potable and industrial water to its facilities.

there is no water supply network in Vani where multi-storey houses have no running water. Although the region is rich in fresh groundwater, water supply is limited in all the towns and villages except Sachkhere.

Private houses and enterprises use numerous springs and aquifers existing in the region for their individual water supply systems. Villagers have installed interceptions at the springs ensuring water supply of their houses. Many of them also have dug wells and pipe wells in the yards.

According to the data of the West Georgia Regional Office of the MoENRP there are about registered 250 water users in Imereti using water for industrial, drinking and economic purposes. The data on water users of the state water measuring companies is given in Table 2.2.

### **Protected Areas**

In compliance with the Law “on Protected Areas System” of Georgia there is Borjomi-Kharagauli National Park, Sataplia Reserve, Ajameti Sanctuary and Protected Area of caves.

Borjomi-Kharagauli National Park was opened in 2001. It comprises the areas of several historic regions of Georgia, namely Tori, Samtskhe and Imereti districts of Kharagauli, Zestafoni and Baghdati.

The flora of the northern (Kharagauli) part of Borjomi-Kharagauli National Park belongs to Kolkheti botanical-geographic province.

Kharagauli part of Brojomi-Kharagauli National Park contains beech forests alternating with broad-leaved forests with Kolkheti type subforest in 1000m-1600m above sea level zone. There are also hornbeam forests, beech and chestnut forests, spruce and fir tree forests.

The upper zone is covered by dark coniferous forests like spruce forests and fir tree forests with plots of combined coniferous and deciduous tree forests. In this zone Kolkheti subforest is relatively scarce.

The subalpine belt (1800-2200m above sea level) contains subalpine forests and shrubs, grasslands and meadows.

Ajameti Sanctuary is 15km away from Kutaisi on the Rioni River valley in Baghdati district. It comprises Ajameti oak forest, Vartsikhe hunting ground and Sviri district. Ajameti oak forest is located between the Kvirila and the Khanistskali rivers. The total area of the sanctuary is 4,848 ha including 4,738 ha of forests.

Ajameti Sanctuary stretches over 13 km from the east to the west. Its average width is 3 km and the maximum width is 5 km. Ajameti forest is unique as it is the only place in Kolkheti Lowland where the original subtropical mixed forest is preserved. In addition to oak and Zelkova these forests comprise hornbeam, *Carpinus orientalis* and maple. The subforest is scarce and consists of Pontic *Rhododendron*, medlar, dog-rose and hawthorn.

The famous oak forest of Ajameti is very old. Some trees are more than 250 years old and there are quite a lot of hundred year old trees. Although Ajameti is surrounded by populated areas it has preserved its original condition. Imereti oak forest is unique and it needs to be expanded.

Sataplia Reserve is 10 km away from Kutaisi. Sataplia is at 500m above sea level. There are 5 karst caves in this area. One of which is distinguished for the size and beauty of its stalagmites and stalactites. There is a stream at the end of the cave, which flows into a natural well. Then the stream flows in a narrow cleft and emerges from below the surface as the Oghaskura River on the southern slope of Sataplia Mountain.

There Kolkheti type forests in Sataplia Reserve, including beech forests with evergreen subforests, beech- hornbeam forests with box subforest , chestnut forests with Yellow Azalea subforest, alder forests with blackberry subforest. The Reserve contains about 60 bark species. In intact Kolkheti type forests there are maples, beeches, yews, Kolkheti box (*Buxus colchica*), *Staphylea colchica*, Zelkova and oak (*Quercus imeretina*).

The box subforest growing under beeches, hornbeams and oaks are especially beautiful. Most boxes are younger than 100 years old. The average age is 55-60 years. The diameter of the oldest box is 14 cm and the height is 40m.

In Sataplia Reserve there is a dinosaur's footprint from the Cretaceous period. The aforementioned sites are great tourist attractions. The legislation of Georgia defines "the Protected Area of Imereti Caves". Sataplia Reserve comprises Sataplia, Kumistavi, Tsutskhvari and Navenakhevi caves, as well as

## Recreational Resources

The main factor determining the development of the recreational and tourist infrastructure of the regions is its natural environment. There is a network of climatic health resorts and spas.

The list of resorts of Imereti region is given in Table 8.16

### **Tskaltubo Resort**

Tskaltubo is a spa resort famous for its thermal radon mineral water. This water is used for treatment of musculoskeletal system, cardiovascular, peripheral nervous system, gynecological and dermatological diseases.

There are 22 sanatoriums and rest homes in Tskaltubo. They were located around the first degree sanitary zone of the resort. Now most of these buildings are occupied by IDPs. Only 2 private sanatoriums are currently functioning. Only three so called bathrooms (No1, no3 and No6) are used for balneological treatment.

The first degree sanitary zone of the resort was defined and approved many years ago. The borders have not been reviewed. A sanitary zone design has not yet been elaborated or approved. Such a design is required under the Law “On Sanitary Protection Zones of Resorts and Resort Areas”.

The first degree sanitary zone of the resort with 78 ha area is bordered by artificial canals with concrete lining in which the Tsklatubo River flows from Tsivi Lake. The canals are joined at the end of the area. The leakage of the canals is one of the factors causing waterlogging. There are mineral water boreholes and balneological spas in the area. construction of spas in the sanitary zone is a necessary condition of water use. This water loses its therapeutic qualities when transported or stored. Radon is retained in water only for 4 minutes. Therefore this water is used as soon as it is supplied. A constant water flow ensures water renewal during the spa treatment.

The spa baths, other facilities and utilities in the sanitary zone were designed taking into account the aforementioned conditions. The utilities include a sewage collector the damage of which will cause contamination of the mineral water deposit.

### **Sairme Resort**

Sairme resort is located in Baghdati district, on the northern slope of Meskheta Ridge at 950m above sea level in the Tsablarastskali River gully.

Sairme is a seasonal balneological health resort. Sairme mineral water has strong therapeutic effect on urological and gastroenterological diseases, especially on nephrolithiasis and gallstones. Udabno mineral water is used for treatment of musculoskeletal system, peripheral nervous system and gynecological diseases.

**Table 8.16**

<b>N</b>	<b>Name and Location</b>	<b>Meters above sea level</b>	<b>Type of resort Type of mineral water</b>	<b>Use</b>
1	Amaghleba (Vani district)	140	balneological, carbonaceous	arthrological, neurological, gynecological
2	Gormaghali (Samtredia district)	200	balneological, sulfide	arthrological
3	Zekari (Baghdati district)	780	balneological, climatic, sulfide	arthrological
4	Zvare (Kharagauli district)	600	balneological, climatic, carbonaceous	gastroenterological
5	Kvereti (Sachkhere district)	750	balneological, climatic, sulfide	arthrological, neurological, gynecological
6	Kursebi (Tkibuli district)	350	balneological, climatic, sulfide	arthrological, neurological, gynecological
7	Nunisi (Kharagauli district)	900	balneological, low sulfide	dermatological
8	Sairme (Baghdati district)	950	balneological, climatic, carbonaceous	urologic, gastroenterological
9	Samtredia (Samtredia district)	25	balneological, sulfide	arthrological, neurological, gynecological
10	Simoneti (Terjola district)	120	balneological, sulfide	arthrological, neurological, gynecological
11	Sulori (Vani district)	200	balneological, sulfide	arthrological, neurological, gynecological
12	Tskaltubo (Tskaltubo Town)	95–120	balneological, radon, chloride – sulphate	arthrological, neurological, gynecological, cardiological



The resort area is 1.8 ha. it comprises a park, mineral water pumprooms, recreation facilities and Baghdati-Benari state motorway. The resort has water supply system with the intake on Namarnebi Stream, about 700m from the resort. Udabno facilities are supplied through a separate water supply system with the intake in Vani Forestry. The sewage system network and treatment plant of Sairme resort were put into operation in 1972. The sewage network located in the resort area is in order. However the collector does not ensure delivery of wastewater to the treatment plant. The biological treatment plant has been out of order for many years.

Udabno sewage network and wastewater treatment plant were built in 1984. The treatment has never been operated. The area is covered with trees. The sewage network and collector (made of asbestos pipes) are amortized and it is not clear where wastewater is discharged.

In 2011 Sairme resort was reconstructed, the park was improved, new pumprooms were installed, the sanatorium and other facilities were repaired and refurbished. However, the sanitary protection zone design has not yet been elaborated or approved.

Although garbage bins were put in the resort the Tsablarastskali river gorge is polluted with domestic waste.

### **Sulori Resort**

Sulori resort is located in Vani district in the Sulori River gorge at 200 above sea level. It is a seasonal balneological spa resort. Half thermal (35-37°C) sulfide sulphate water (sulphate-hydrocarbonate-sodium) water of the resort has strong therapeutic effect on arthritic, neurological and gynecological diseases.

Currently, there is one spring, 30-seat bathroom and administrative building in the first degree sanitary zone. Other buildings and facilities (two hundred bed hotel) are located in the second degree sanitary zone. However, a design for sanitary protection zone required under the Law “On Sanitary Protection Zones of Resorts and Resort Areas” has been prepared or approved.

The resort has a water supply system delivering water from the natural stream. Wastewater is discharged in the Sulori River. Due to the non-operational infrastructure the resort does not work at its full capacity.

### **Nunisi Resort**

Nunisi resort is located the south-east part of upper Imereti, 2 km away from Zvare Village on the left bank of the river. It is adjacent to Borjomi-Kharagauli National Park.

The resort area is 1 ha. There are cottages (7 residential cottages and 1 modern rest home – a total of 84 beds). Nunisi is alkaline reaction sulfide thermal water used for balneological spa treatment. This unique water is used for treatment of chronic skin diseases, as well as musculoskeletal system, peripheral nervous system diseases and anemia.

The resort is supplied with water from a natural stream. wastewater is discharged in the Zvarula river.

The main obstacle of the resort development is the poor condition of the access road and village infrastructure.

There are spa resorts of Amaghleba, Simoneti, Samtredia, Zekari in Imereti. Their infrastructure is in dire condition.

The mineral water deposits in this area.

### 8.3.3 INDUSTRIAL CAPACITY OF IMERETI AND POTENTIAL SOURCES OF POLLUTION

The high-capacity industrial enterprises functioning in Imereti until the 1990s were manganese plant in Chiatura, coal mines in Tkibuli, ferro-alloy plant in Zestafoni, electric elements plant in Shorapani, automotive plant, lithopone plant, tractor plant, electro-mechanical plant, bottle plant in Kutaisi, etc. There was a large number of light industry, food processing, furniture manufacturing and other plants in the region.

In the 1990s most of the enterprises were closed. Currently, “Georgian Manganese” Ltd, Tkibuli mines and manganese enrichment plants in Chiatura are operating.

In addition, there are small washing enterprises, ferroalloy enterprise in Nakhshirghele and Zestafoni, lime manufacturers, asphalt and cement plants, sawmills, metallurgical plants and small mining and processing enterprises. There is also a bakery plant equipped with modern machinery. Sairme, Zvare, Leghva mineral waters are bottled in the region.

The service enterprises have significantly increased and improved the quality of their services in the past few years.

### 8.3.4. ENVIRONMENTAL POLLUTION IN IMERETI REGION

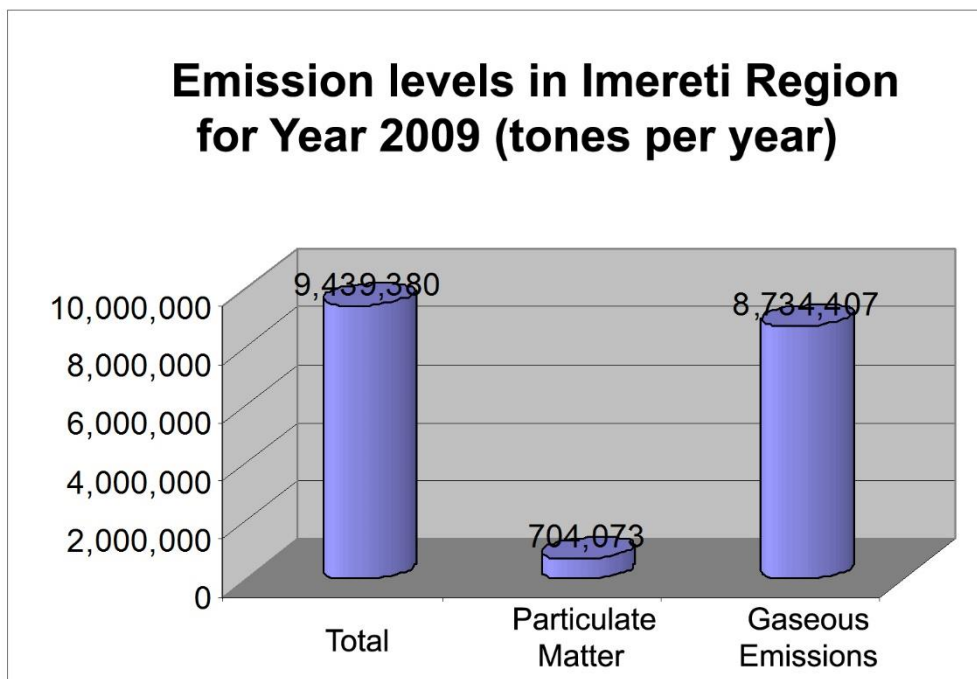
#### Ambient Air Analysis

until the end of the 1980s the industrial enterprises and traffic were main polluters of the air. In the 1990s due to the economic recession emissions drastically decreased. The economic revival since 2005 caused gradual increase of emissions.

According to the data of the West Georgia Regional Office of the MoENRP the quantities of emissions of 219 enterprises registered in Imereti Region in compliance with the current legislation are shown in the table and figure below.

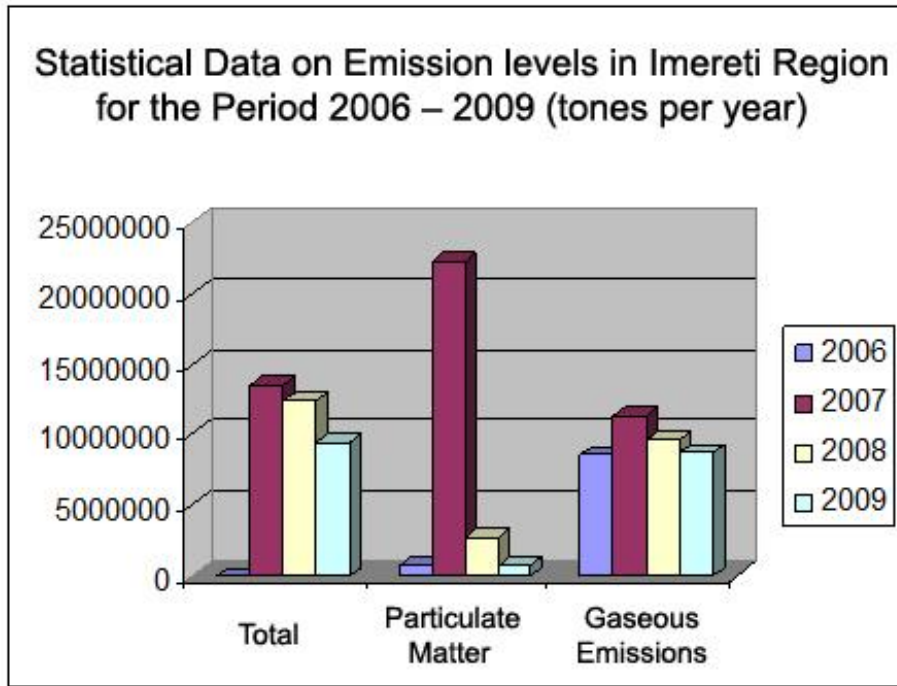
No	District	Total Emission Quantity ton/year	including	
			solid ton/year	gases ton/year
1	Kutaisi	183,809	135.088	48.721
2	Terjola	1304,715	1197,316	107,399
3	Zestafoni	8270,159	156,753	8113,406
4	Samtredia	45,428	29,132	16.296
5	Tskaltubo	66.022	57.787	8.235

6	Baghdati	79.634	51.689	27.945
7	Kharagauli	9.303	8.003	1.300
8	Sachkhere	269.172	228.233	40.939
9	Tkibuli	1777.155	628.123	1149.032
10	Khoni	1.997	1.947	0.050
11	Vani	13.164	11.337	1.827
12	Chiatura	56.507	48.884	7.623



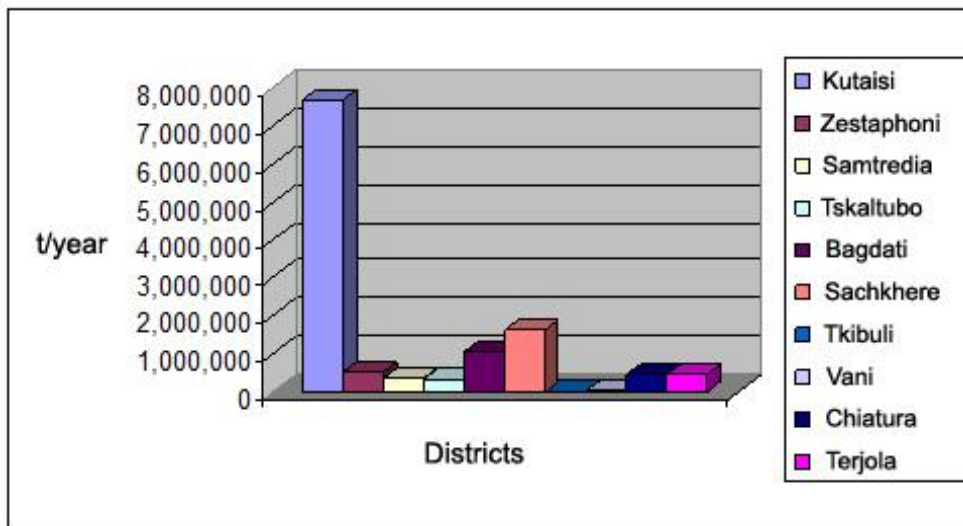
**Fig. 8.3 Emission levels in Region for Year 2009 (tones per year)**

The percentage of solid pollutants (22.6%) and gases (77.4%) in the diagram is explained by the fact that none of the registered enterprises have emission gas catchers. The data by years is given in the diagram below.



**Fig. 8.4 Statistical Data on Emission levels in Region for the Period 2006 – 2009 (tones per year)**

Traffic is a significant source of air pollution in the populated areas of Imereti region, especially near the central highway. The construction of a new highway in Imereti will help to solve this problem. During the analysis of the aforementioned data special attention was paid to green house gases, namely carbon oxide emissions. The results are shown in the diagram below.



**Fig. 8.5 Greenhouse Gas Emission levels in Region (tones per year)**

**Pollution of Water Bodies**

The main polluters of the water bodies in the region is wastewater from towns and villages of the region. Wastewater treatment plants are non-functional (the only exception is Sachkhere district).

the main polluter of the Kvirila River is Chiatura ore enrichment plant of “Georgian Manganese” Ltd, which was established in 1928.

Ore enrichment is a wet-gravity process where water is a major component of the technological process. Wastewater contains a large amount of sludge. The integrated wastewater treatment system was designed and built for all six ore enrichment plants. The system ensured settling of sludge in the settling basins near plants. The settled sludge was then pumped through the hydrotransport system and stored in Ghurghumela sludge pit. Sludge transportation system was 10 km long. It was served by 7 pump stations (5 of them pumping sludge from the plants and 2 – lifting sludge up). The system has not been functioning for quite some time. The sludge settled in the settling basins is discharged in the Kvirila River.

In addition to the aforementioned plants, the large water users in the region are hydropower plants and irrigation schemes. these water users do not deteriorate water quality in water bodies. Their effects include channel and hydrological regime changes and they discharge partially clean water.

The quantities of discharged wastewater by years are given in the table below:

**Table 8.17**

	<b>Discharge data (mln. m<sup>3</sup>)</b>			
	2006	2007	2008	2009
Total quantity discharged	<b>11042,5</b>	<b>13411,1</b>	<b>12218,7</b>	<b>14753,2</b>
Partially clean	<b>11012</b>	<b>13367,5</b>	<b>12172,9</b>	<b>14721,1</b>
Polluted	<b>27,75</b>	<b>31,085</b>	<b>32,641</b>	<b>32,1</b>

The wastewater treatment data is given in the table below:

**Table 8.18**

	<b>Discharge data (mln. m<sup>3</sup>)</b>			
	2006	2007	2008	2009
Polluted	<b>27,75</b>	<b>31,085</b>	<b>32,641</b>	<b>32,1</b>
untreated	<b>24,775</b>	<b>30,069</b>	<b>32,641</b>	<b>30,9</b>
Insufficiently treated	<b>2,975</b>	<b>1,016</b>	<b>0,838</b>	<b>1,2</b>

There are no chemical laboratories in the region to analyze wastewater quality. No control is exercised over surface water pollution by enterprises. According to the submitted forms the quantities of pollutants discharged in the surface water bodies of Imereti are given in the table below:

Table 8.19

Pollutants	Quantity (thousand tons)		
	2006	2007	2008
Suspended solids	5,475	39,493	51,056
Biological oxygen demand	1,508	1,568	1,445
Oil products	0,132	0,129	0,026
Sulphates	0,048	0,162	0,138
Chlorides	2,125	0,504	2,089
Ammonium nitrogen	26,197	63,365	18,497
Nitrates	–	41,647	44,287
Nitrites	17,233	11,862	–
Manganese	0,081	0,054	0,051



Fig 8.6 Hazardous Materials in Georgia

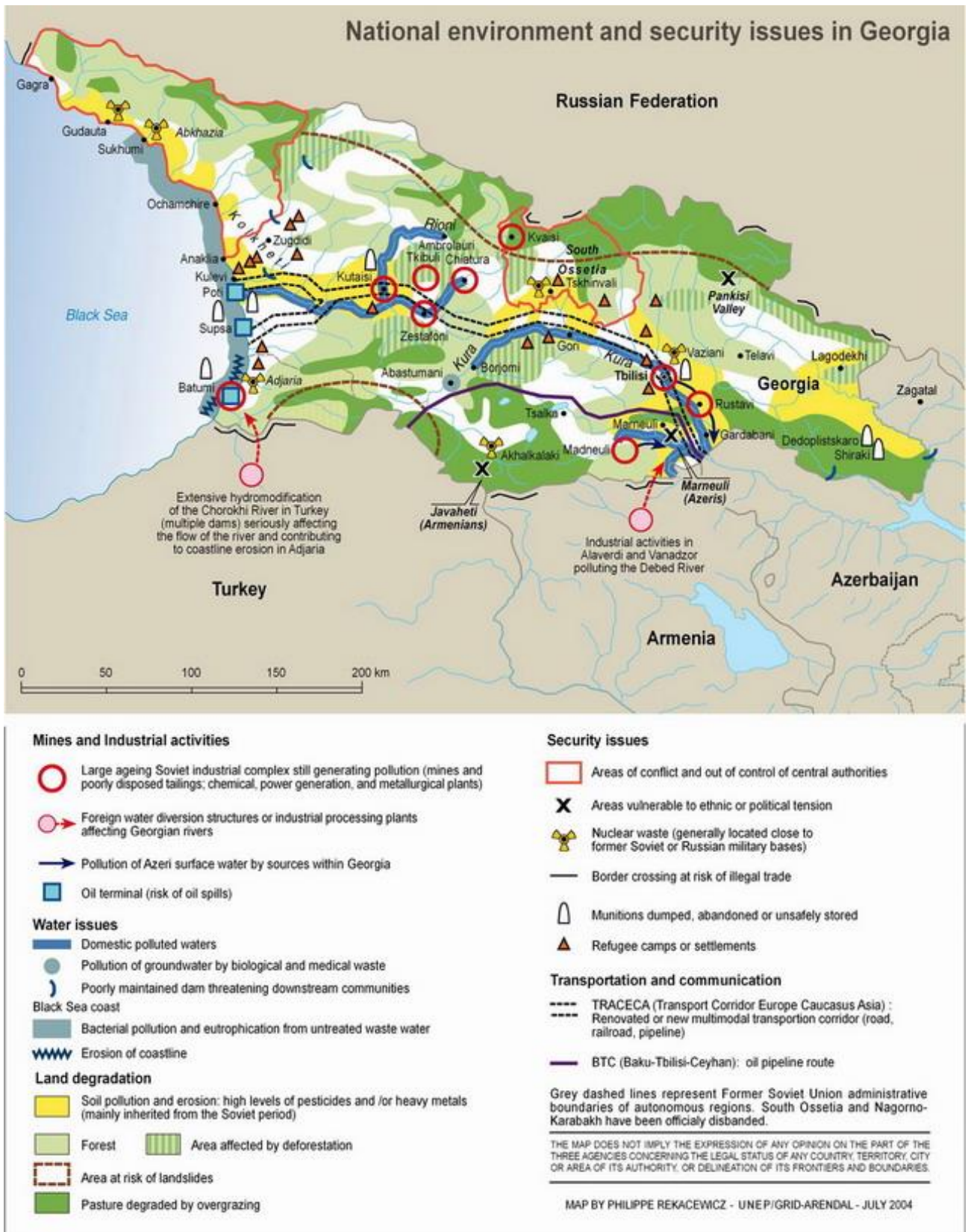


Fig 8.7 Pollution and Other Security Problems in Georgia

### 8.3.5 WASTE MANAGEMENT

For many years waste was managed without taking into consideration environmental requirements. Domestic, industrial, medical and military base waste was all disposed in the same landfills.

The currently operating landfills do not meet the standards. The situation by towns and districts is as follows:

#### **Kutaisi City**

##### **One landfill**

- **location** – south of town, about 500m away from Nikea Street settlement, on the right bank of the Rioni River.
- **area** – 42 ha. the plot was allocated in 1962. Operation period is 15 years.
- **annual quantity of waste is 550,000 m<sup>3</sup>.** (domestic, industrial and construction waste).

##### **The current situation**

The landfill does not meet environmental and sanitary standards. It has no design and only part of it is fenced. Waste is openly burned and smoke often shrouds the town. The waste layers are about 10m thick. The landfill is overloaded and waste quantities vary by seasons.

- **The landfill is also used by Tskaltubo district.**

#### **Zestafoni Municipality**

- **location** – adjacent to Kvaliti settlement, near the so called dam..
- **area** – 2.2 ha.
- **The quantity of waste is 27-30 m<sup>3</sup>/day, 15000m<sup>3</sup>/year.**

##### **The current Situation**

There is no landfill design. The landfill is not fenced. It does not meet environmental and sanitary requirements. The waste quantities in the district tend to rise. The landfill is overloaded. It has to be closed and relocated.

#### **Tkibuli Municipality**

##### **Tkibuli Municipality uses Tkibuli landfill.**

- **location** – on the left side of terjola-Tkibuli motorway, near the so called Tsintskala Mountain.
- **area** – 1.6 ha.

##### **The current Situation**

The landfill is not operated now. It was closed several years ago. There is no liquidation plan.

#### **Chiatura Municipality**

##### **There is only one landfill in the district. It is Rgani Village lanfill.**

- **location** – Rgani village in Chiatura district.



- **area** – 12368 m<sup>2</sup>. The plot was allocated in the 1970s by the local authorities. There is no design. The exact date of putting the landfill into operation and operation period are unknown.

### **Current Situation**

The landfill is only used by Chiatura Town. It is not fenced and does not meet the environmental and sanitary standards. The Kvirila River is polluted with waste. The town population is 10000 people. **The daily quantity of waste dumped there is 15-20m<sup>3</sup>. The annual quantity is 22 500 m<sup>3</sup>.**

### **Sachkhere Municipality**

Sachkhere municipality uses Sareki Village landfill. The landfill serves Sachkhere Town, Chrovila and Sirkhe villages.

- **location** – sachkhere municipality, Sareki village. The area is 11400 m<sup>2</sup>.

### **Current Situation**

The landfill has a design. The plot of land was allocated on March 30, 2005. Its operation period is 10 years. The daily quantity of waste dumped in the landfill is 15m<sup>3</sup>. The annual quantity is 5475 m<sup>3</sup>. The landfill is fenced. The waste is compacted and covered with isolating layer. The landfill has waste wetting system, rain ditches, green barrier along the fence and boreholes for taking samples of groundwater.

### **Kharagauli Municipality**

Kharagauli Municipality uses Boriti landfill located in Boriti Village in the Chkherimela River gorge. The landfill area is 4000 m<sup>2</sup>. It serves Kharagauli settlement. A plot of land was allocated by decision of the district authorities. The landfill was put into operation in 2005. The landfill is currently closed.

### **Current Situation**

Kharagauli authorities allocated a plot of land above Saghandzile Village for a new landfill. The plot is fenced and waste dumped there.

The annual quantity of dumped waste is 600m<sup>3</sup>. There are illegal landfills in the district.

### **Vani Municipality**

### **Current Situation**

Vani district has one landfill located half a kilometre away from the Sulori and the Rioni mouth. The landfill area is about 1 ha. The annual quantity of dumped waste is 584 m<sup>3</sup>. The landfill is now flooded.

**At present waste collected in Vani district is transported to Samtredia landfill.**

### **Samtredia Municipality**

**The district is served by one landfill.**

**Location:** The landfill is located in Opei Village area of Samtredia district, near the Rioni River, 1km away from Dapnari motorway bridge.

### **Current Situation**

The landfill area is 5 ha. The landfill is used by Samtredia Town and Vani Town. The population is 37,000 people. The daily quantity of waste is 14-16 m<sup>3</sup>. 10 ha plot of land was allocated by Samtredia district council's decision No 138 of June 15, 1993. Out of this 10 ha 5 ha is actually used. The landfill was put into operation in 1993. The operation period is not defined. There is no design. The landfill is not fenced. The waste is compacted and covered with isolating layer. The landfill has rain ditches.

**The annual quantity of dumped waste is 18500 m<sup>3</sup>.**

### **Terjola Municipality**

Terjola Municipality has only one landfill.

**Location:** Kokhra village, 1 km away from Zestafoni-Kutaisi highway. A plot of land was allocated by decision of local council in the 1980s. It was put into operation in 1984 and its operation period is not defined.

### **Current Situation**

The landfill is not fenced. There is no design. The landfill is not fenced. The waste is not compacted or covered with isolating layer. There are no rain ditches. The landfill does not meet environmental and sanitary requirements. The monthly quantity of 80m<sup>3</sup> waste is dumped in the landfill from Terjola Town.

### **Khoni Municipality**

**There is one landfill in Khoni Municipality.**

**Location:** The landfill is located in Namashebi Village of Khoni district (3000 m<sup>3</sup>) and serves only Khoni district.

A plot of land for the landfill was allocated by decision of the local council in the 1980s. It was put into operation in 1980 and its operation period expired in 2010.

### **Current Situation**

The landfill is not fenced. It has no design and it does not meet environmental and sanitary requirements. . The annual quantity of dumped waste is 1520 tons.

In addition to the aforementioned landfills there are a lot of illegal dumps in the villages where there is no waste collection.

The waste management has been somewhat improved lately. Garbage bins and covered garbage trucks were purchased for the municipalities. The bins were placed in towns, historic sites, near tourist attractions, like Sataplia reserve, Promete Cave, Gelati and Motsameta monasteries, etc.

## **Industrial Waste**

As it was mentioned in Section 5.1 Imereti had high-capacity industrial enterprises before the 1990s. Due to their operations some industrial waste was accumulated and is dumped in various places.

In Chiatura and Tkibuli there is a lot of ore enrichment residue.

The industrial waste is located in the former lithopone plant area on the left bank of the Rioni River.

In Zestafoni and its adjacent areas there was a large amount of metallurgical slag. Later it was which was considered a technogenic deposit and since then its licensed production and processing has been going on.

Galvanic waste is accumulated in the former automotive plant in Kutaisi and ferro-alloy plant in Zestafoni.

Currently operating plants (see Section 5.1) also produce various waste. According to the law an enterprise is responsible for waste management. The responsibility for waste management control lies with the Ministry of Energy and MoENRP of Georgia.

## **Stable Organic Polluters**

Agricultural chemicals and pesticides are widely used in the agricultural production in Georgia. In many cases the rules of their use and storage were neglected. In the 1990s due to the destruction of the farm infrastructure many of these chemicals and pesticides were dispersed.

During the inventory of 2003-2004 about 10 storehouses of expired pesticides and agricultural chemical were registered in the region. These storehouses were privatized and are in private ownership now.

The storehouse in Mukhiani Village in Tskaltubo district supplied Imereti region with agricultural chemicals and pesticides. After the privatization the owner pulled down the storehouse building and some chemicals remained under the ruins.

In 2003 in the storehouses of Naboslevi, Tabakini, Tskhratskaro and kvaliti villages of Zestafoni district some agricultural chemicals were still stored without observing storage rules or any protection. The villagers explained that expired agricultural chemicals were accumulated because they were not used in local agricultural production. The agricultural chemicals were transferred from Tabakani to Iaghuja storehouse. The other storehouses were pulled down by their owners and chemicals were just thrown away.

The agricultural chemicals were stored in the partly destroyed tree nurseries of Alisubani village and Iashvili in Terjola district. These buildings were then pulled down by their owners and the chemicals were thrown away.

The storehouse of agricultural chemicals In Kumura Village of Vani district was privatized in the 1990s. the building was partly destroyed and crops were grown in the yard.

In Ianeti village storehouse of Samtredia district various mixed chemicals were stored. They were then transferred to Iaghuja storehouse.

At present there no storehouses with expired pesticides and agricultural chemicals. However, no neutralization or additional analysis of the areas where these storehouses and chemicals were located have been carried out.

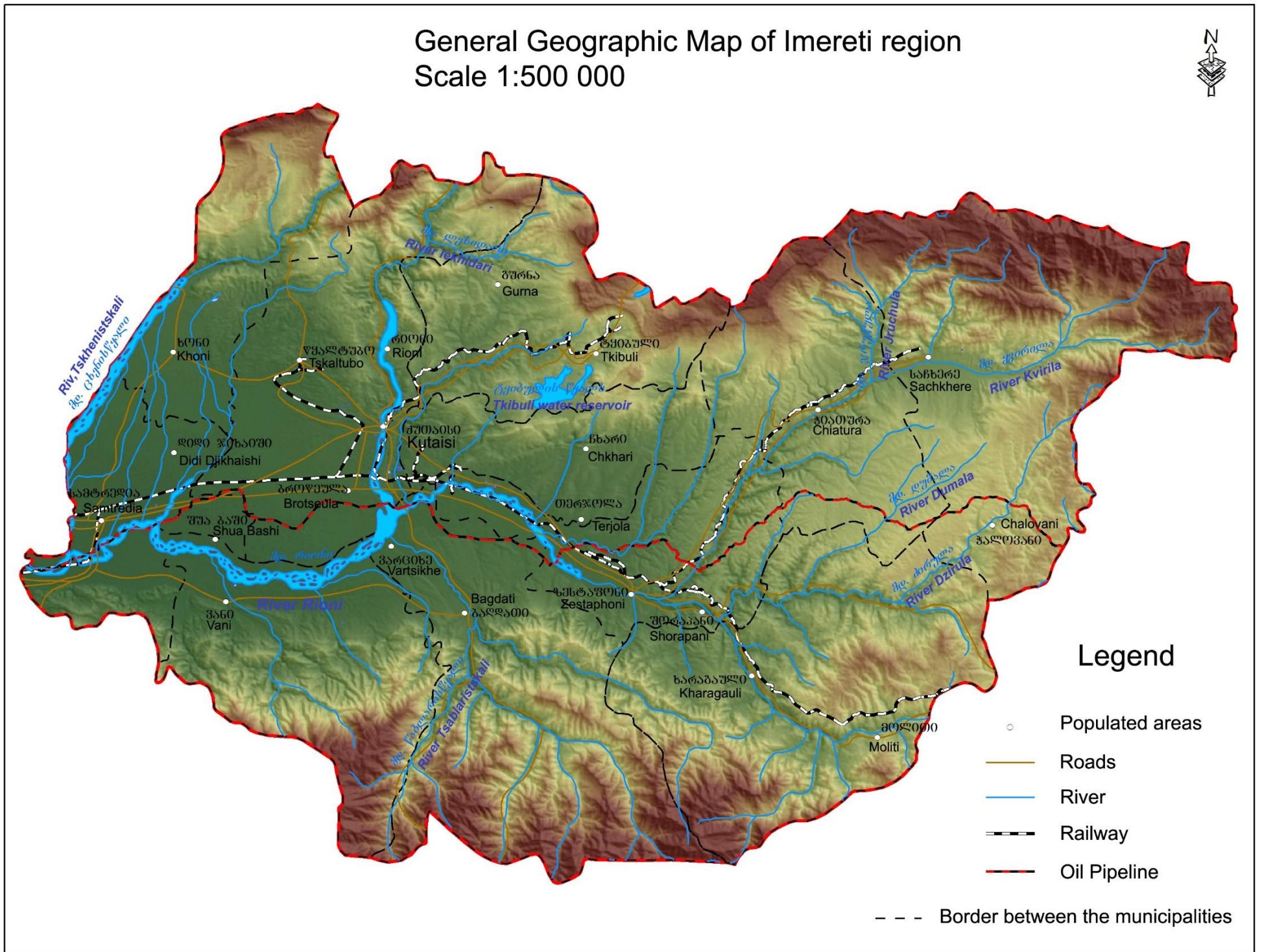
#### 8.4 SENSITIVE ENVIRONMENTAL RECEPTORS AND POLLUTION HOTSPOTS WITHIN PROPOSED TOURISM CLUSTERS

Summarising the baseline environmental description of Imereti region, we can outline the most valuable and sensitive environmental receptors, which are located within the spatial zones related to each of the Tourism Clusters proposed in the ITDS, as well as pollution hotspots and potential sources of pollution within these zones.

Cluster	Sensitive Environmetal Receptors	Pollution Hotspots and Sources
Cluster 1	<p><b>Sataplia Reserve and Santcuary;</b>  <b>Okatse (Gordi) Canyon;</b>  <b>Imereti Caves Natural Monuments</b> (Prometeus, Satsurbli, Solkota, Didgele, Melouri, Bgeri, Gliana, Tetramgvime, Sakajia Caves )  <b>Tskaltsitela Gorge Natural Heritage</b></p> <p><b>Rivers: Rioni, Kvirila, Tskaltsitela, Gubistskali, Tskhenostskali</b></p>	<p><b>Within the Cluster Zone:</b>  Pollution source:  - Metallurgical plant in Kutaisi  - Municipal solid waste and wastewater  Main Affected Receptors:  - Ambient Air  - r.Rioni</p> <p><b>Adjacent territories:</b>  Pollution source:  - Ferroalloy plants in Zestaphoni and Nakhshirgele  Affected Receptor:  - Ambient Air  - r. Kvirila</p>
Cluster 2	<p><b>Tskaltubo balneological water resources</b>  <b>Sataplia Reserve and Santcuary</b> (Includes NEC No 1. High Mountain Forest Complex and Caves)  <b>Imereti Caves Natural Monuments</b> (Prometeus, Tetramgvime Caves )</p> <p><b>Rivers: Rioni, Tskaltubo</b></p>	<p><b>Within the Cluster Zone:</b>  - Municipal solid waste and wastewater  Main Affected Receptors:  - Ambient Air  - r.Tskaltubo and r.Rioni</p>
Cluster 3	<p><b>Within the Cluster Zone:</b>  - Katskhi Canyon;  - Local small forested areas and scenic landscapes near Sachkhere and Chiatura  <b>Adjacent territories:</b>  - <b>Imereti Caves Natural Monument</b> (Tsutskhvati, Nagarevi, Iazoni caves)  - NEC No 2. Middle-mountain forest complex</p>	<p><b>Within the Cluster Zone:</b>  Pollution source:  - Coal mines in Tkibuli,  - Manges mines and Enrichment Plants in Chiatura  - Municipal solid waste and wastewater  Affected Receptor:</p>

	<p><b>Rivers: Rioni, Kvirila, Cholaburi , Buja, Dzusa, Dzevrula, Khanistskali</b></p>	<ul style="list-style-type: none"> <li>- r. Kvirila polluted by manganese wastewater and sludge</li> <li>- r. Dzevrula (Tkibuli)</li> <li>- Ambient air (Tkibuli and Chiatura areas)</li> </ul> <p><b>Adjacent territories:</b> Pollution source: - Ferroalloy plants in Zestaphoni and Nakhshirgele Affected Receptor: - Ambient Air - r. Kvirila</p>
Cluster 4	<p><b>Within the Cluster Zone:</b></p> <ul style="list-style-type: none"> <li>- Borjomi-Kharagauli National Park;</li> <li>- NEC No 1. High Mountain Forest Complex</li> <li>- NEC No 2. Middle-mountain forest complex</li> <li>- NEC No 3. Lowland and low-mountain forest complex</li> <li>- Zvare and Nunisi mineral water resources and <b>Sairme,</b></li> </ul> <p><b>Sulori, Zekari, Amagleba balneological water resources</b></p> <p><b>Rivers: Rioni, Kvirila, Dzirula, Chkherimela, Sulori, Kumuri, Kvintskali</b></p> <p><b>Adjacent territories:</b></p> <ul style="list-style-type: none"> <li>- Ajameti Managed Reserve (Sanctuary)</li> </ul>	<p><b>Within the Cluster Zone:</b></p> <ul style="list-style-type: none"> <li>- Municipal solid waste and wastewater</li> </ul> <p><b>Adjacent territories:</b> Pollution source: - Ferroalloy plants in Zestaphoni and Nakhshirgele Affected Receptor: - Ambient Air - r. Kvirila</p>

**THEMATIC MAPS**



**Fig.A8-1. General Topographical Map of Imereti Region**

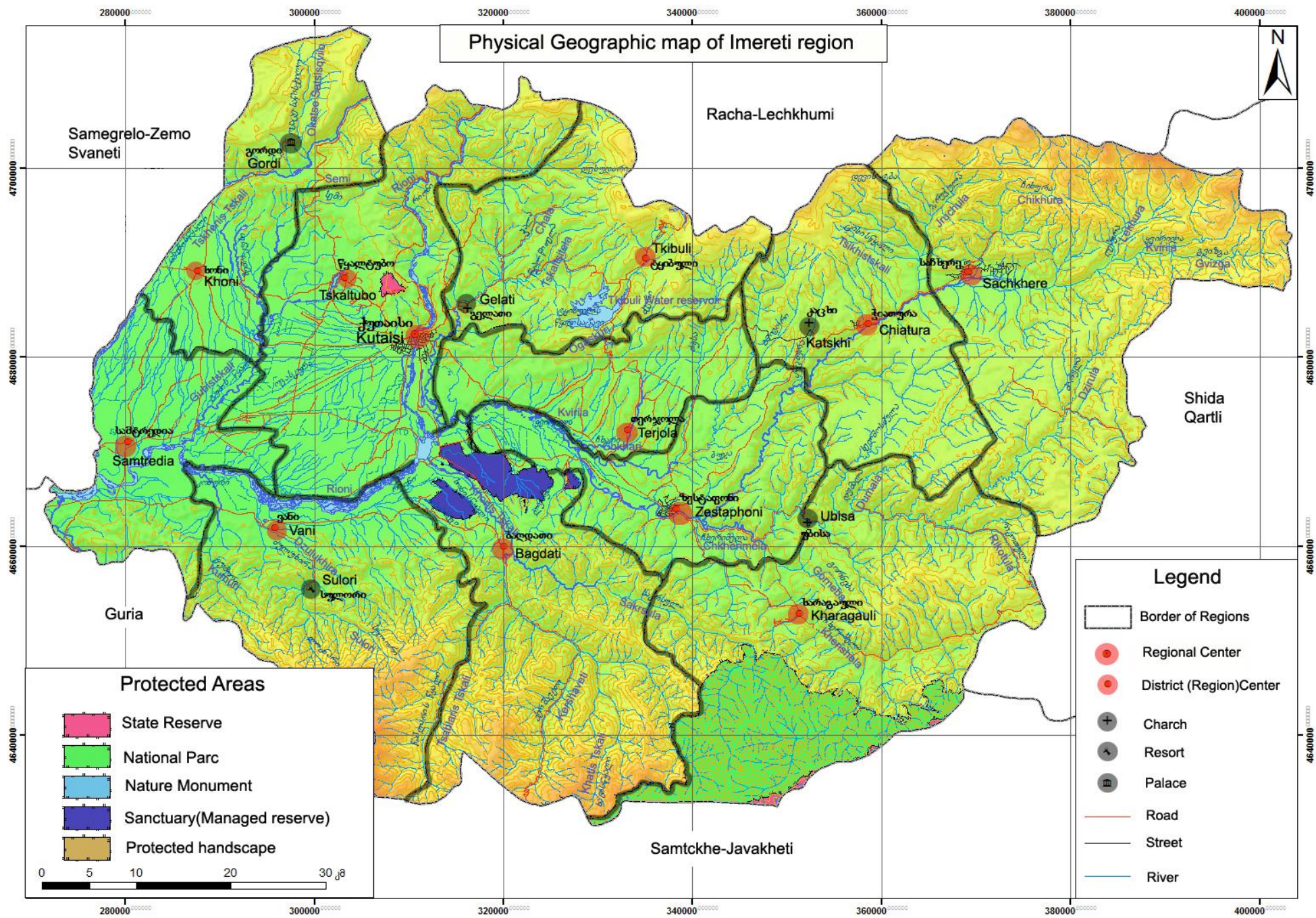


Fig. A8-2. General Physical-Geographical Map of Imereti Region with Administrative Borders



Geological map of Imereti Region  
Scale 1:500 000

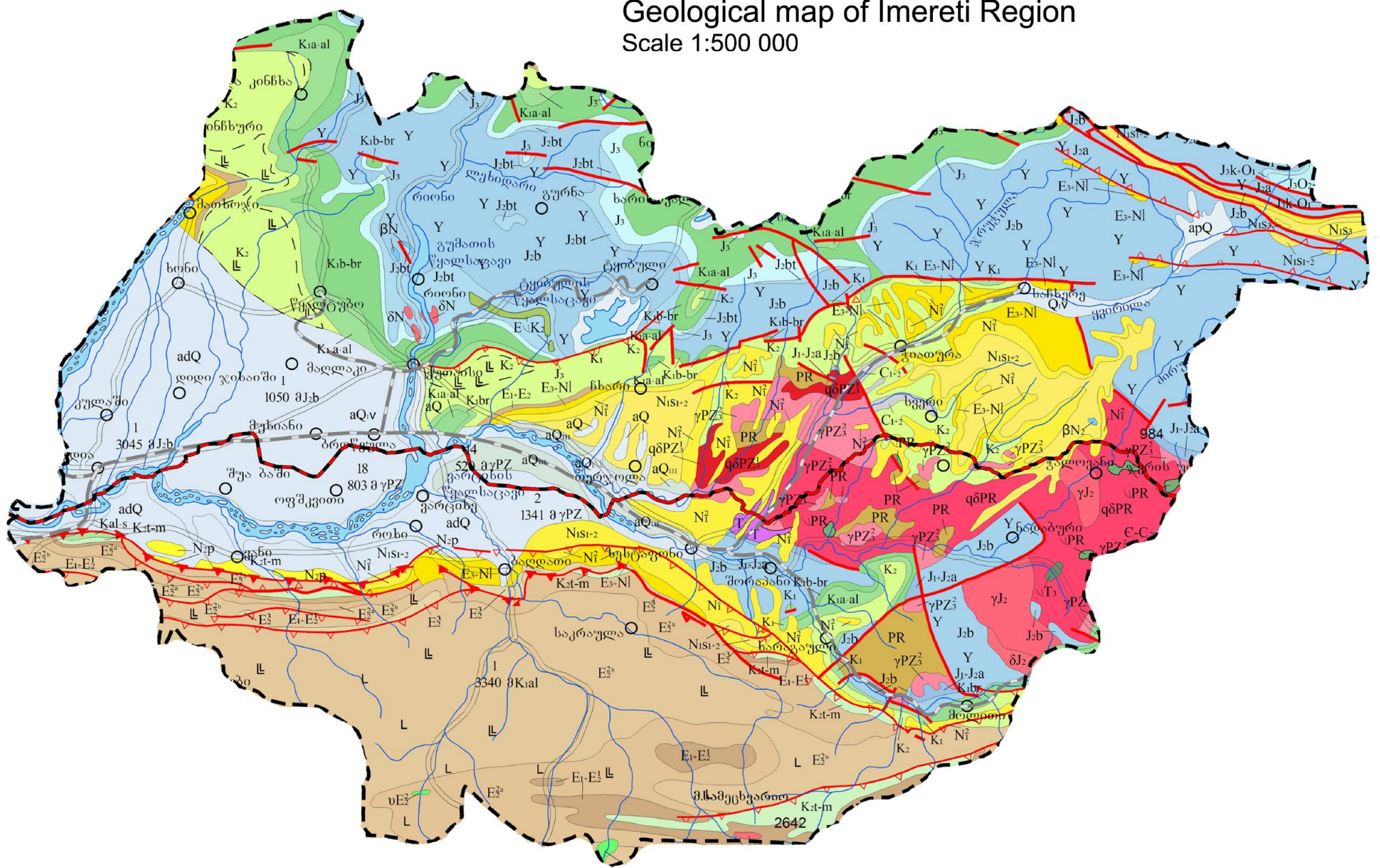


Fig. A8-3. Geological Map of Imereti

## Legend

Q	Quaternary system. Genetic types of deposits: a - alluvial, ap - alluvial-proluvial, lp- marine-proluvial deposits. pd - proluvial-delluvial deposits: pebbles, block talus, gravel, sands, conglomerates, clays, loam		
<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td style="text-align: center;">N</td></tr><tr><td style="text-align: center;">N<sub>1</sub>   N<sub>2</sub></td></tr></table>	N	N <sub>1</sub>   N <sub>2</sub>	Neogene system (1 - Miocene, 2 - Pliocene in geological sections): sandstones, clays, conglomerates
N			
N <sub>1</sub>   N <sub>2</sub>			
<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td style="text-align: center;">N<sub>1p</sub></td></tr></table>	N <sub>1p</sub>	Pontic stage. Marine and continental Mollassa: clays, sandstones, clay sands, conglomerates, sands	
N <sub>1p</sub>			
<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td style="text-align: center;">N<sub>1s3</sub></td></tr></table>	N <sub>1s3</sub>	Upper Sarmatic. Marine and continental Mollassa: sandstones, clays, conglomerates, and marls at some places.	
N <sub>1s3</sub>			
<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td style="text-align: center;">N<sub>1s1-2</sub></td></tr></table>	N <sub>1s1-2</sub>	Lower and Middle Sarmatic. Marine Mollassa: clays, sandstones, conglomerates, marls and limestones.	
N <sub>1s1-2</sub>			
<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td style="text-align: center;">N<sub>1</sub><sup>†</sup></td></tr></table>	N <sub>1</sub> <sup>†</sup>	Middle Miocene (Tarhan, Chokrak, Caragan and Conque stages). Marine Mollassa: clays, sandstones, conglomerates (basalt at some places), marls, oolite and sandy limestones.	
N <sub>1</sub> <sup>†</sup>			
<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td style="text-align: center;">E<sub>1</sub>-N<sub>1</sub></td></tr></table>	E <sub>1</sub> -N <sub>1</sub>	Oligocene and Lower Miocene (Maykop series). Mestia-Tianeti zone. Marine Mollassa: sandstones, gravellites, slightly carbonatic clays with marl interlayers, and gypsum clays and sandstones at some places. Georgian Block and Gagra-Java zone: carbonate clays (Hadum horizon), non-carbonate gypsum clays with jarosite flakes, fish scales and septaria, with quartz-mica sandstone interlayers and stacks at some places. On Dzirula massif, there is a sandstone-spongyolite stratum of a minor strength with manganese ore interlayers. Ajara-Trialeti and Artvini-Bolnisi zones. Marine Mollassa: carbonate clays (Hadum horizon), gypsum clays with jarosite flakes, fish scales and septaria, conglomerate interlayers and lenses, at some places in the upper part of the section there are coarse-grain strong layers and stacks of quartz-arkose sandstones.	
E <sub>1</sub> -N <sub>1</sub>			
<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td style="text-align: center;">E<sub>1</sub><sup>3</sup></td></tr></table>	E <sub>1</sub> <sup>3</sup>	Upper Eocene. Mestia-Tianeti zone. Sandstone-aleurite flysch: sandstone, gravellite and aleurite turbidites, pelagic marls and clay with olistostrome slate clays, sandstones, gravellite and conglomerate stacks and interlayers. Ajara-Trialeti zone: marls with lyrolepis and foraminifer, coarse-grain quartz-arkose and grey wacke sandstones, clays (carbonate, bituminous, of a slate Maykop type), conglomerate, conglomerate-breccia interlayers and stacks, more rarely marls and limestones, and sub-alkaline basalt, andesite-basalt and trachyte lavas and pyroclastolites. Artvini-Bolnisi zone: carbonate bituminous and gypsum (similar to Maykop stratum) clays with thin marl and sandstone interlayers, and with conglomerates at some places in the upper part of the section.	
E <sub>1</sub> <sup>3</sup>			
<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td style="text-align: center;">E<sub>1</sub><sup>2</sup></td></tr></table>	E <sub>1</sub> <sup>2</sup>	Upper part of Middle Eocene. Ajara-Trialeti zone: mostly sub-alkaline, alkaline and lime-alkaline basalts, more rarely andesite basalts, andesites, delenite and trachyte mass and thick-layer volcanic breccias, tuffas and lava mantles, with tuffa-conglomerates, olistostromes, tephro- and sandstone-aleurite turbidites at some places. There are tuffas, gravellites, tuffa-sandstones and marls in some sections of the upper part (Chidila or Dviri stratum).	
E <sub>1</sub> <sup>2</sup>			
<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td style="text-align: center;">E<sub>1</sub><sup>2</sup></td></tr></table>	E <sub>1</sub> <sup>2</sup>	Lower part of Middle Eocene. Ajara-Trialeti zone: alternating layers of mixed tuffas, argillites, tuffa-argillites, limestones and marls mostly with the content of basalt and more rarely trachyte, rarely sub-alkaline and sometimes trachyte and delenite mantles in the upper part (Likani and Kvabiskhevi stratum).	
E <sub>1</sub> <sup>2</sup>			
<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td style="text-align: center;">E<sub>1</sub>-E<sub>2</sub></td></tr></table>	E <sub>1</sub> -E <sub>2</sub>	Paleocene and Eocene. Georgian Block and Gagra-Java zone: Shoal marine limestones (pelitomorphic, crystal, breccia-like), marl limestones and marls (with lyrolepis and foraminifers), with Hb1 and biotite and interlayers and stacks of andesite tuffas.	
E <sub>1</sub> -E <sub>2</sub>			
<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td style="text-align: center;">E<sub>1</sub>-E<sub>1</sub><sup>1</sup></td></tr></table>	E <sub>1</sub> -E <sub>1</sub> <sup>1</sup>	Paleocene and Lower Eocene. Ajara-Trialeti zone: pelitomorphic and crystal limestones, marls (Danish), sand-aleurite and clastic-limestone flysch: sandstone, aleurite and clastic-limestone turbidites, pelagic argillites and marls, with mixed marls, clays and sandstones at some places.	
E <sub>1</sub> -E <sub>1</sub> <sup>1</sup>			
<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td style="text-align: center;">K<sub>2</sub></td></tr></table>	K <sub>2</sub>	Upper Cretaceous (unbroken). Mestia-Tianeti zone. Sandstone-aleurite (in the lower part) and clastic-limestone (in the upper part) flysch: aleurite, sandstone, gravellite and clastic-limestone turbidites, olistostromes, pelagic marls, silicium argillites, phtanites, with the alternating layers of pelitomorphic limestones and marls at some places.	
K <sub>2</sub>			
<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td style="text-align: center;">k-t-m</td></tr></table>	k-t-m	Turon, Ridge, Santon, Campanian and Maastricht stages. Ajara-Trialeti zone: thin-layer red and pink limestones and marls, lithographic stratified limestones with the interlayers of bentonite clays, sandstones and marl limestones, sandstones, with conglomerate streaks at some places.	
k-t-m			

Kal-s	Albian and Senoman stages. Northern sub-zone of Ajara-Trialeti zone: tuffas, glaukonite sandstones, high-potassium trachyte tuffas and volcanic breccias.
K <sub>1</sub>	Lower Cretaceous (unbroken). Novorossiysk-Tuapse zone: flysch alternating layers of argillites, sandy limestones and marls.
Kia-al	Aptian and Albian stages. Mestia-Tianeti zone. Sandstone-aleurite flysch: sandstones, gravellite and aleurite turbidites, pelagic clays, argillites and marls.
Kibr	Barremian stage. Georgian Block and Gagra-Java zone (Dzirula and Kelasuri massifs): shoal marine deposits: quartz-arkose sandstones and conglomerates, limestones, dolomites.
Kib-br	Berriasian, Valanginian, Hauterivian and Barremian stages. Georgian Block and Gagra-Java zone: shoal marine limestones of urgon facies, ammonite limestones, dolomitized limestones, dolomites, marls, with basal conglomerates at some places, quartz sandstones and anhydrite interlayers.
J <sub>3</sub>	Upper Jurassic (unbroken). Mestia-Tianeti zone: clastic-limestone flysch: limestone, and more rarely sandstone turbidites, pelagic marls and clay slates, with the alternating layers of marls, limestones and clay slates at some places. Georgian Block and Gagra-Java zone. Laguna-continental deposits: mixed gypsum clays, argillites, sandstones, breccias and conglomerates (basal at some places), limestones, dolomite and marl interlayers and stacks, with alkaline and sub-alkaline olivian basalts and trachyte lavas and pyroclastolites at some places. In the upper part of the section, there are interlayers and lenses of gypsum and anhydrite (color stratum).
J <sub>3</sub> O <sub>2</sub>	Upper sub-stage of Oxford stage. Mestia-Tianeti zone: clastic-limestone flysch: clastic-limestone and more rarely sandstone-gravelite turbidites, pelagic marls and clay slates.
J <sub>3</sub> k-O <sub>1</sub>	Calovian stage and lower sub-stage of Oxford stage. Mestia-Tianeti zone: clastic-limestone flysch: clastic-limestone turbidites, pelagic marls and clay slates, alternating layers of marls and clay slates at some places. On the eastern end of the zone, there is a sandstone-aleurite flysch: sandstone and aleurolite turbidites and pelagic argillites.
J <sub>3</sub> bt	Bathonian stage. Novorossiysk-Tuapse zone and north-western part of Gagra-Java zone. Shoal marine deposits: alternating layers of sandy aleurites and grey wacke sandstones with thin interlayers of sandy limestones and with conglomerate interlayers and streaks in the upper part of the section.
J <sub>3</sub> b	Bajocian stage. Mestia-Tianeti zone (Ksani-Arkali stratum), Gagra-Java zone, Georgian Block and Loki-Karabach zone: lime-alkaline basalts, andesite basalts, andesite and more rarely dacite and rhyolite lavas, lava breccias and pyroclastoliths, tuffites, with tephro-turbidites and tephro-argillites at some places and with tuffa-conglomerates, tuffa-sandstones, tuffa-aleurites, conglomerates, sandstones and clays (Porphyry series) in the upper part.
J <sub>1</sub> -J <sub>3</sub> a	Lower Jurassic and Aalenic stage. Georgian Block (Dzirula massif): basal conglomerates, gravellites, arkose sandstones, tuffites, tuffa-sandstones, clay slates, aleurites, crinoid limestones, marls.
γJ <sub>2</sub>	Granitoids (granites, grano-diorites, quartz diorites, Middle Jurassic diorites)
\PR	Gabroids, Proterozoic
qδPZ <sub>3</sub>	Quartz diorites, plagio-granites of Upper Paleozoic (Early Hercynian)
γPZ <sub>3</sub>	Microcline granites, grano-diorites of Upper Paleozoic (Late Hercynian)
qδPZ <sub>3</sub>	Microcline granites, grano-diorites of Upper Paleozoic (Late Hercynian)
γPZ <sub>1</sub>	Granitoids (Plagio-granites, grano-diorites) and their gneiss types, Upper Paleozoic (Early Hercynian)
qδPZ <sub>1</sub>	Granitoids (Plagio-granites, grano-diorites) and their gneiss types, Upper Paleozoic (Early Hercynian)

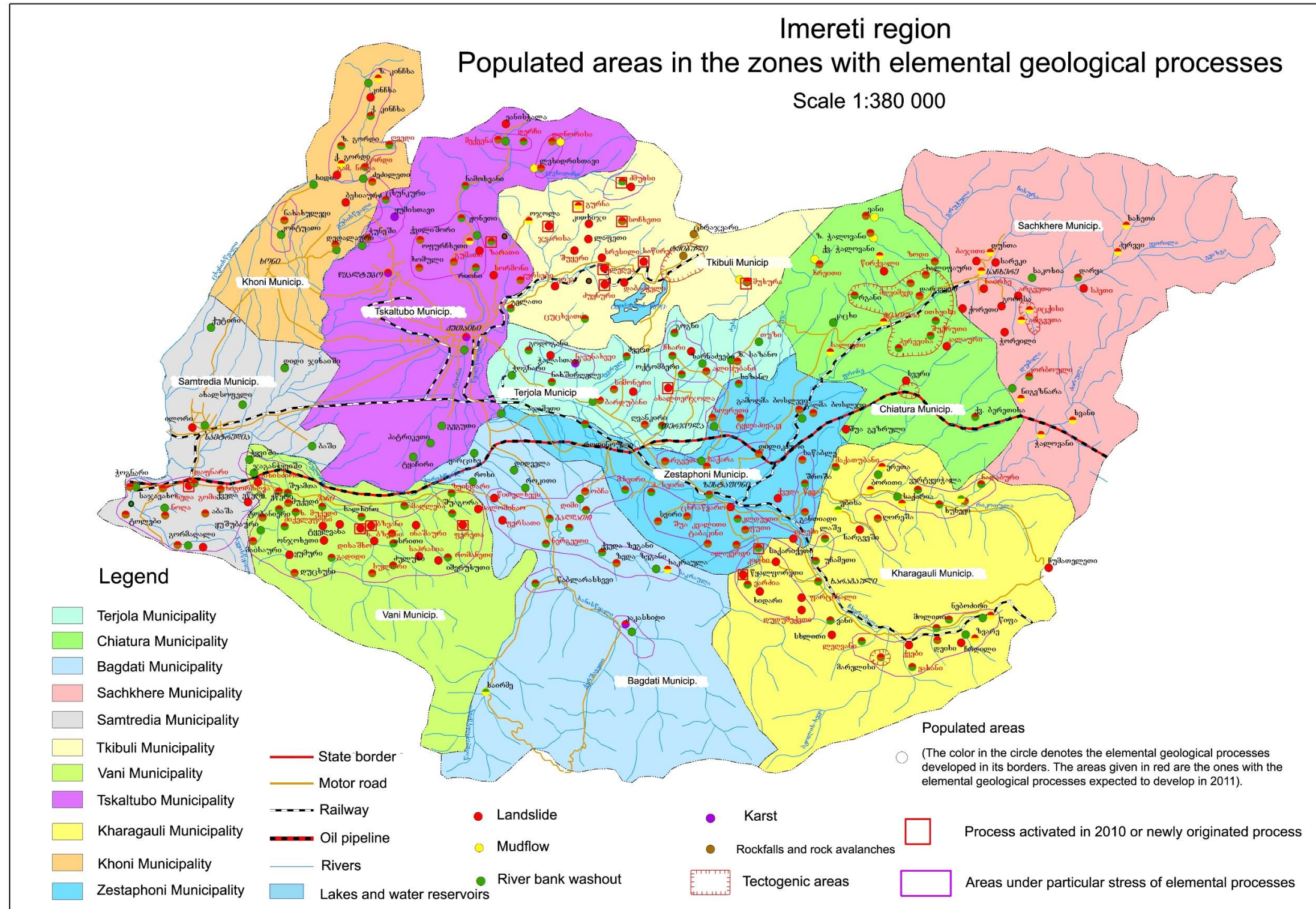


Fig. A8-4. Map of Hazardous Geological Processes in Imereti Region

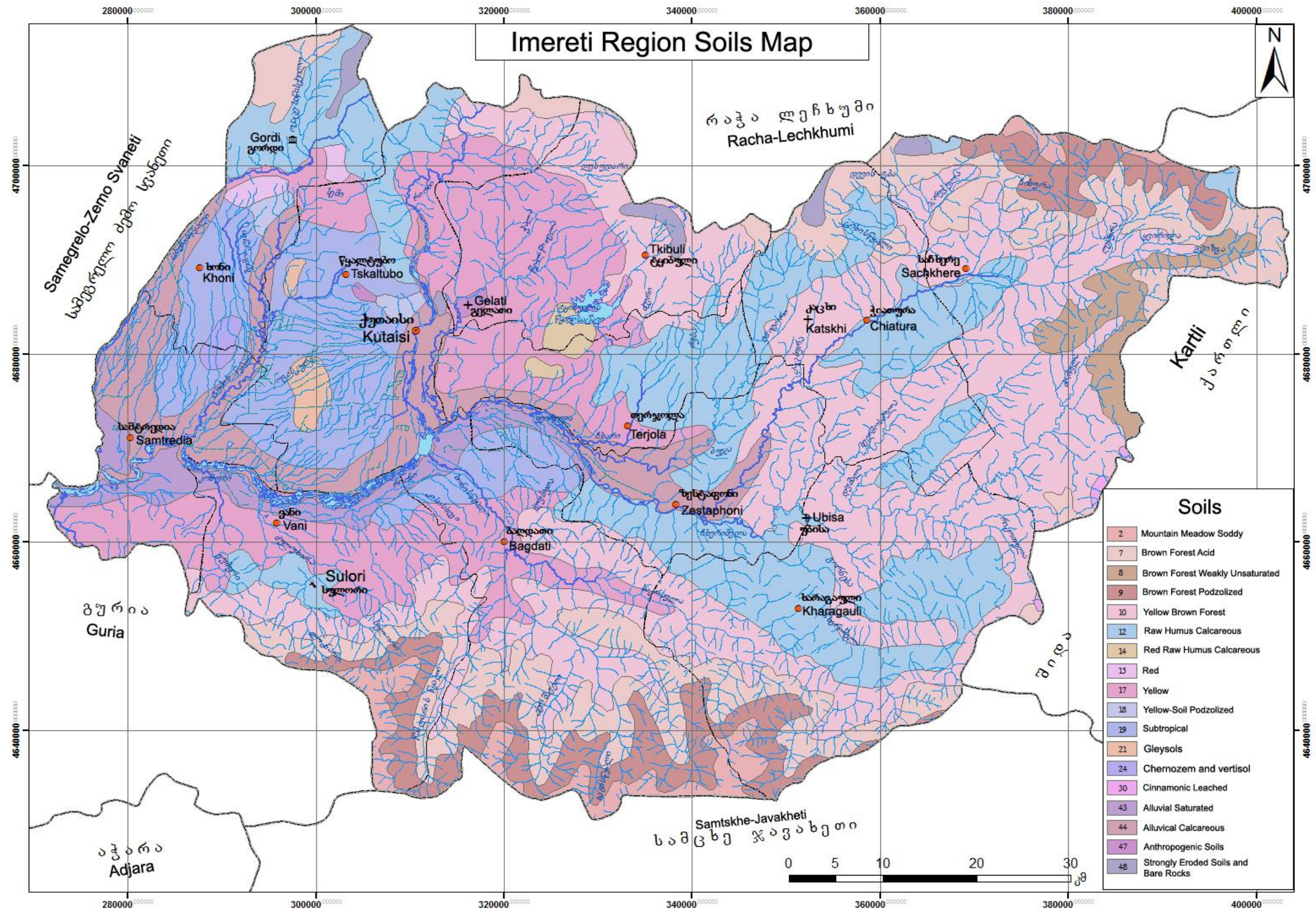
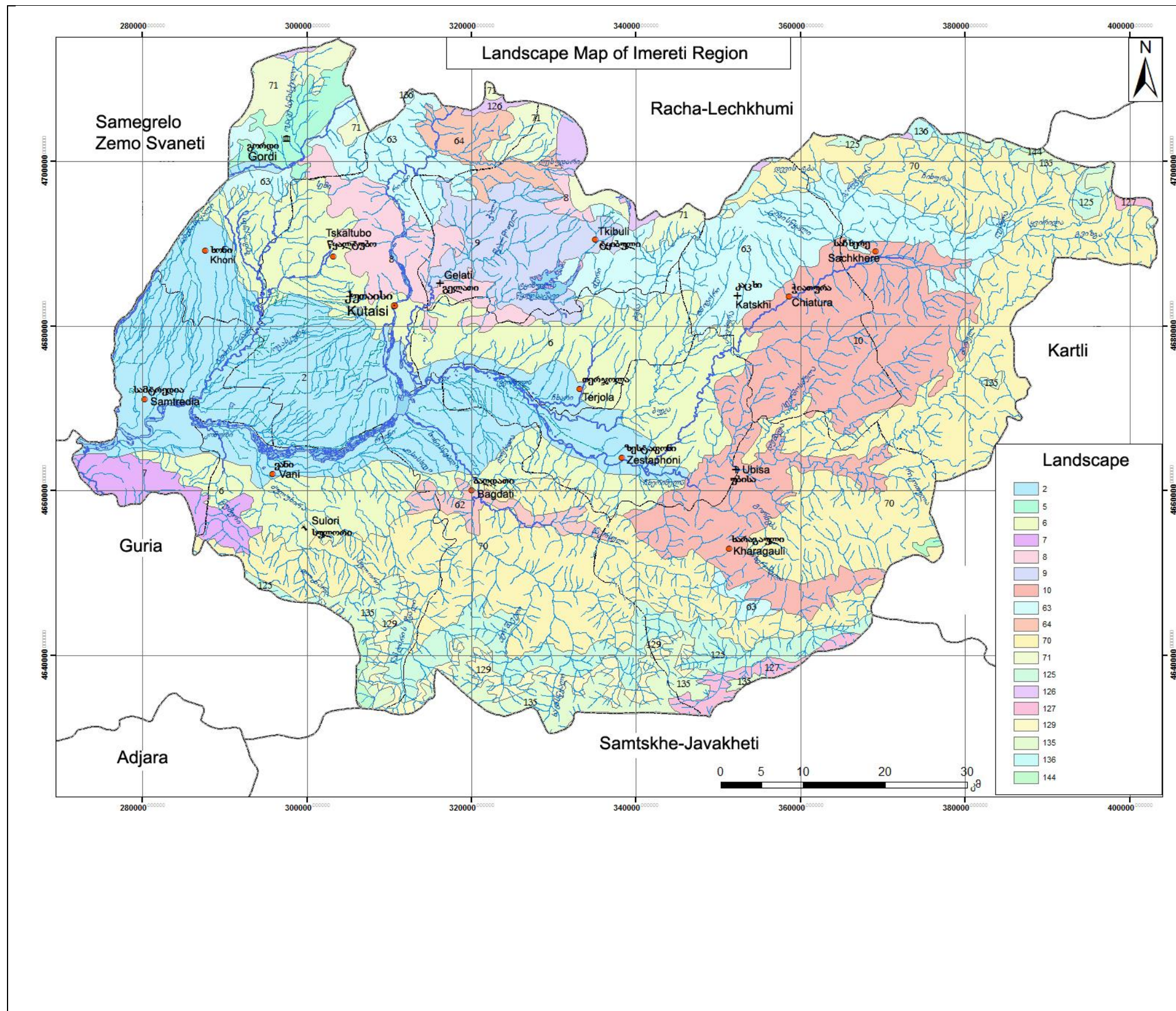
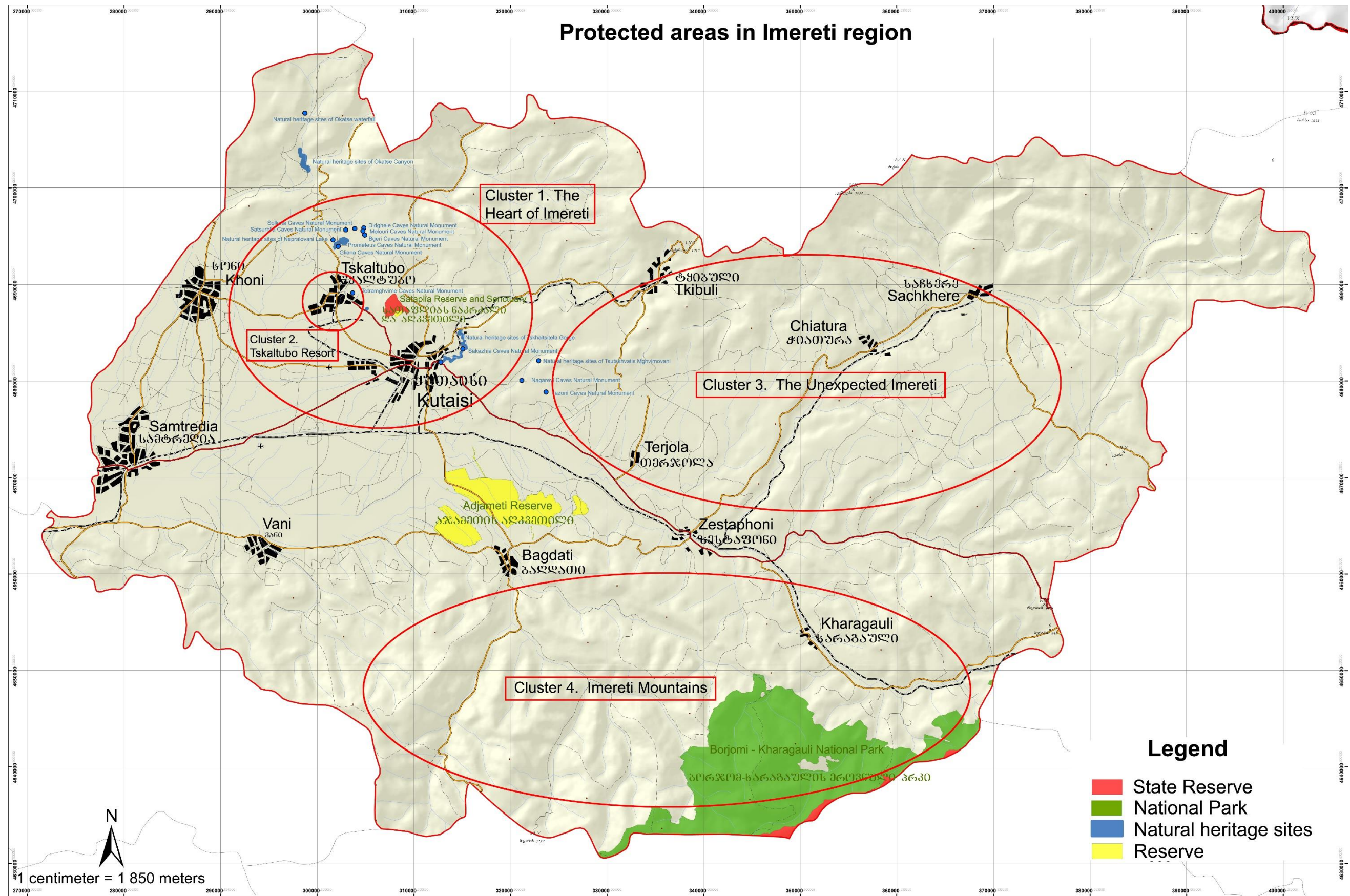


Fig. A8-5. Soil Map of Imereti Region



- Landscape 2.** Plain-Lowland Accumulative Landscape with Imeretian Oak Forests, at Some Areas with Evergreen Undergrowth
- Landscape 5.** Foothill Landscape (Undulating) with Denudational-Accumulative Polydominant Leaved Forests
- Landscape 6.** Lowland and foothill Erosive-Accumulative Landscape with Hornbeam-Oak, Oak-Zelkova, Beech-Chestnut and Polydominant Leaved forests
- Landscape 7.** Foothill Undulating Erosive-Denudational Landscape with Colchic Hemihylaea
- Landscape 8.** Foothill Undulating Karst Landscape with Oriental Hornbeam-Oak, Hornbeam-Oak and Polydominant Leaved Forests
- Landscape 9.** Foothill Undulating Erosive-Denudational Landscape with Hornbeam-Oak, Oak-Chestnut Forests and Evergreen Undergrowth.
- Landscape 10.** Plateau Erosive-Denudational Landscape with Hornbeam-Oak, Oak-Beech-Chestnut forests and Evergreen Undergrowth.
- Landscape 63.** Karst Landscape of Lower Mountains with Hornbeam-Oak and Beech Forests and Evergreen Undergrowth.
- Landscape 64.** Mountain Depression and Lower Mountain Erosive-Accumulative Landscape with Mixed Oak, Hornbeam and Beech Forests
- Landscape 70.** Erosive-Denudational Landscape of Medium Mountains with Beech Forests and Evergreen Undergrowth.
- Landscape 71.** Medium Mountain Karst Landscape with Beech Forests and Evergreen Undergrowth
- Landscape 126.** Medium Mountain Karst Landscape with Beech-Dark Coniferous and Dark Coniferous (Oriental Spruce, Caucasian Pine), at Some Areas – Pine (Caucasian Pine) Forests
- Landscape 127.** Medium Mountain Erosive-Denudational Landscape with Beech-Dark Coniferous, at some Areas Pine (Caucasian Pine) Forests
- Landscape 129.** Upper Mountain Erosive-Denudational, Rarely Paleoglacial Landscape with Birch, at some Areas Pine (Caucasian Pine, Kokh's Pine) Forests and Pontic Oak Low Stem Forests
- Landscape 135.** High Mountain Denudational and Paleoglacial Landscape with Tall Grass and Dense Grass Meadows, Shrubbery and Crook Stem Forests (Beech and Birch)
- Landscape 136.** High Mountain Karst Landscape with Forb Grass (Sedge-Avens\_ Meadows and Crook Stem Forests (Beech and Birch)
- Landscape 144.** High Mountain Denudational-Paleoglacial Landscape with Alpine Meadows, Frequently in Rhododendron Complex

**Fig. A8-6. Lanscape Map Imereti Region**



**Fig. A8-7. Project Sites, Tourist Clusters and Protected Areas**

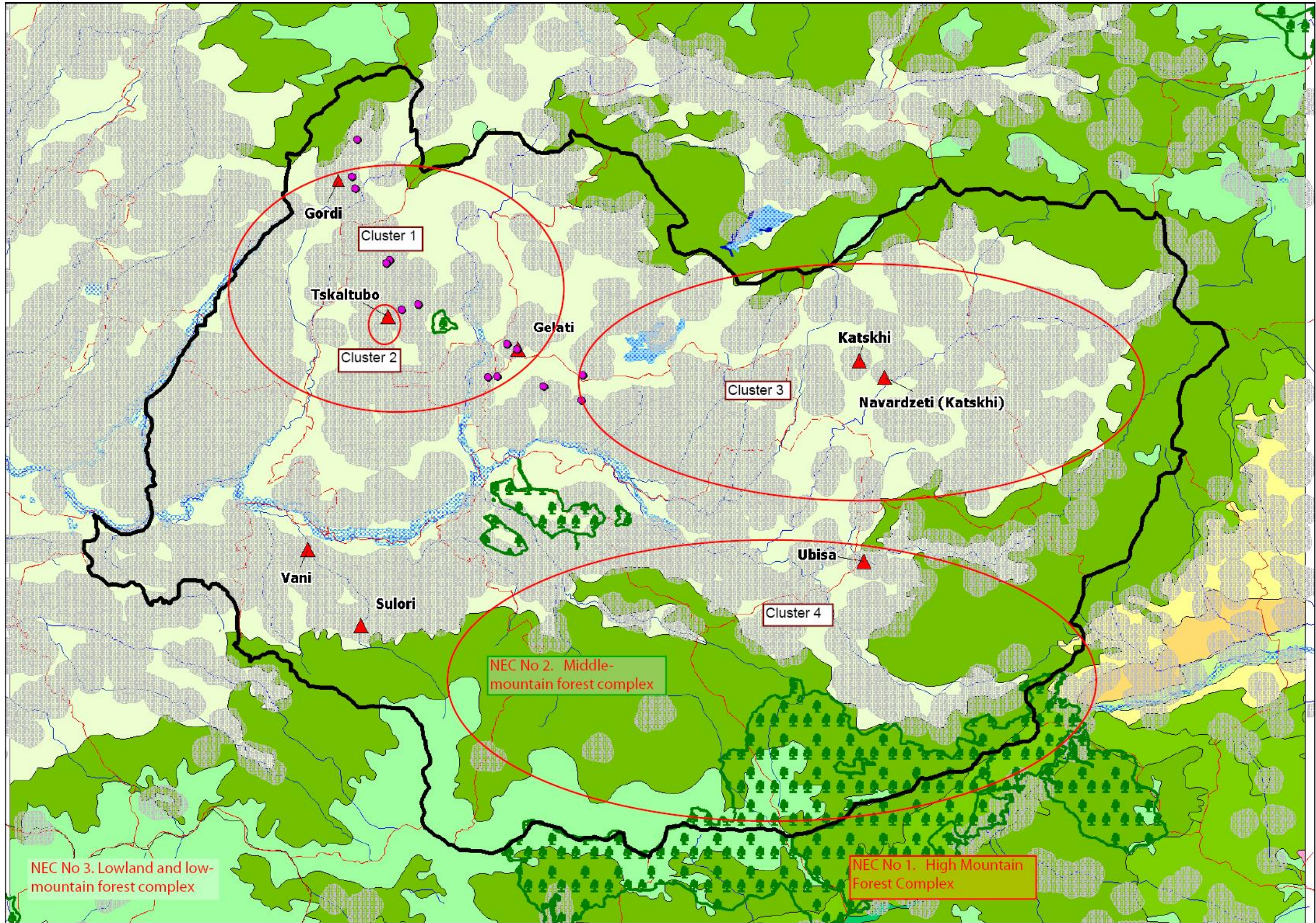
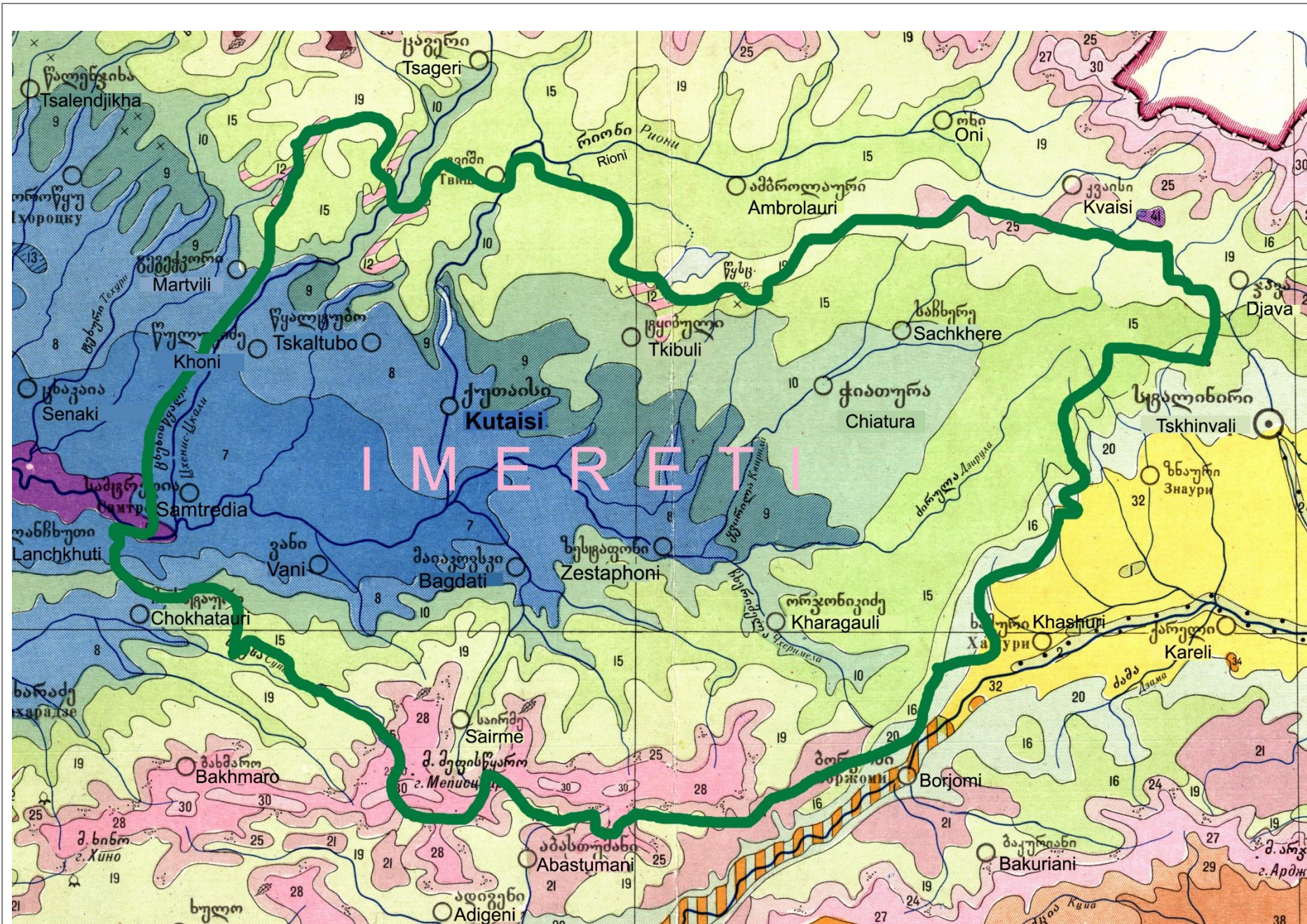


Fig. A8-8. . Natural Ecological Complexes, Sensitive Habitats and Tourism Clusters proposed in ITDS





### Imereti Vegetation Map

#### Legend

- 6 – Kolkheti Lowland Wetland Forest (species: *Alnusbarbata*, *Pterocaryapterocarpa*, etc.).
- 7 – Kolkheti Lowland Forest with Lianas (species: *Alnusbarbata*, *Quercusimeretina*, *Carpinuscaucasica*, *Smilax excelsa*, *Periplocagraeca*, etc.).
- 8 – Kolkheti Lowland Forest with Evergreen Undergrowth (species: *Quercushartwissiana*, *Q. imeretina*, *Carpinuscaucasica*, *Rhododendron ponticum*, etc.).
- 9 – Kolkheti Foothill Oak Forests (species: *Quercusiberica*, *Q. hartwissiana*, etc.).
- 10 – Beech-Hornbeam Forests of Kolkheti Foothills (species: *Fagusorientalis*, *Carpinuscaucasica*, etc.).
- 11- Oriental Hornbeam and Oak Formations of Kolkheti Limestones (species: *Carpinusorientalis*, *Quercusiberica*, etc.).
- 12 –Chestnut Formations (species: *Castanea sativa*, *Fagusorientalis*, *Laurocerasusorientalis*, etc.).
- 15- Beech Forests of Western Georgia (species: *Fagusorientalis*).
- 16- Beech Forests of Eastern Georgia (species: *Fagusorientalis*).
- 19- Spruce-Fir Formations (species: *Piceaorientalis*, *Abiesnordmanniana*).
- 20 – Oak and Hornbeam Forests of Eastern Georgia (species: *Quercusiberica*, *Carpinuscaucasica*, *C. orientalis*).
- 25- Subalpine Forest of Western Georgia (species: *Betulalitwinowii*, *B. medwedewii*, *Quercuspontica*, etc.).
- 28 –Subalpine Meadows of Western Georgia (species: *Agrostisplanifolia*, *Troliuspatalus*, *Anemone fasciculate*, *Geraniumgymnocaulon*, *Betulagrandiflora*, etc.).
- 30- Alpine Meadows (species: *Festucaovina*, *Poaalpina*, *Carextristis*, *Campanula tridentate*, *Sibbaldiapriviflora*, etc.).

Fig. A8-9. Imereti Vegetation Map (see Annex 2 to Chapter 8)

## GEOBOTANICAL DESCRIPTION OF IMERETI REGION

The project area comprises the geo-botanical district of Imereti of Lesser Caucasus geo-botanical province and geo-botanical district of Upper Imereti Plateau of Upper Imereti Plateau geo-botanical province. The geobotanical districts in Imereti region are demonstrated at the Fig. A8-8. Imereti Vegetation Map.

**Geo-botanical district of Imereti of Lesser Caucasus Geo-Botanical Province.** This geo-botanical district comprises the northern slope of Meskheta ridge within Imereti (except for the westernmost part; the western border follows m. Mephistkharo meridian). The relief is complex, dissected with river gorges. Lower mountainous part of the area and foothills are characterized with relatively smoother terrain.

The Black Sea influence is significantly diminished in the district, due to which the climate is characterized with less humidity than Adzhara-Guria climate.

The type of the vegetation of Imereti geo-botanical district is Colchic, relict. In comparison with Adzhara-Guria districts the relict level of the local vegetation is lower, which is reflected in reduction of share of typical relict phytocenoses in vegetation composition. The Colchic type of zoning is represented with 3 belts – forest, sub-alpine and alpine (subnival belt is not developed).

The forest belt comprises the foothills of Meskheta ridge, lower and middle belts of the mountains till 1800-1850 m a.s.l. 3 sub-belts are fairly conspicuous within the forest belt: a) sub-belt of mixed broad leaved forests; b) sub-belt of beech forests; and c) belt of dark coniferous forests.

- a) Sub-belt of mixed broad leaved forests are represented till 900-1000 m a.s.l. Polydominant mixed broad leaved forests mainly occur within the sub-belt with the dominance of the following species: Colchic oak (*Quercus hartwissiana*), chestnut (*Castanea sativa*), beech (*Fagus orientalis*), hornbeam (*Carpinus caucasica*). The most common from mixed species are the following: lime (*Tilia caucasica*), alder (*Alnus barbata*), Norway maple (*Acer platanoides*), etc. Monodominant and bidominant formations are also abundant: hornbeam, beech, chestnut, beech-hornbeam, beech-chestnut, oak-hornbeam stands, etc. Unmixed oak forests (*Quercus iberica*) occur on the slopes of the south-eastern and south-western expositions, while oak-hornbeam and oak-chestnut forests are more common on slopes of shaded thin soiled slopes. Secondary alder (*Alnus barbata*) stands are developed in forest cuttings on slopes of fairly steep inclinations, where soils are relatively disintegrated and washed down. The topological spectrum of the forests of the described geo-botanical district significantly differs from Adzhara-Guria spectrum. Phytocenotical positions of relict Colchic species are relatively weaker in these forests. Despite the mentioned, forests are quite widespread within the district (mixed broad leaved, chestnut, beech, beech-chestnut, etc.) with undergrowth of relict evergreen and deciduous species: cherry laurel (*Laurocerasus officinalis*), rhododendron (*Rhododendron ponticum*), Colchic holly (*Ilex colchica*), Colchic ivy (*Hedera colchica*), butcher's broom (*Ruscus hypophyllum*), Caucasian whortleberry (*Vaccinium arctostaphylos*), pontic azalea (*Rhododendron luteum*), etc. Relict grasses are also present. The live cover of fescue (*Festuca Montana*) and sweet woodruff (*Asperula odorata*) forb grass of forest associations is fairly abundant in comparison with Adzhara-Gurian district. The main forests of the sub-belt had suffered from strong anthropogenic stress (chaotic timber logging, forest

thinning, livestock grazing in forests), which is especially true for foothills. As a result of the stress the forest cover has entirely been destroyed at some areas and post-forests shrubbery, meadows, ferns (braken fern - *Pteridium tauricum*) have become abundant.

- b) The sub-belt of beech forests comprises hypsometry between 900-1000 m to 1350-1400 (1500) m a.s.l. Unmixed beech (*Fagus orientalis*) forests are dominant in the sub-belt. Bidominant forests are also widespread (chestnut-beech, hornbeam-beech, spruce-beech, etc.). From other formations the polydominant mixed broad leaved forests have limited distribution – hornbeam (*Carpinus caucasica*), spruce (*Picea orientalis*), spruce-fir (*Picea orientalis*, *Abies nordmanniana*), hornbeam-beech, beech-chestnut, beech-spruce, beech-spruce-fir, pine (*Pinus kochiana*), etc. stands. It is noteworthy that positions of relict forests are significantly limited in the area. Forests with undergrowth of cherry laurel (*Laurocerasus officinalis*), rhododendron (*Rhododendron ponticum*), Caucasian whortleberry (*Vaccinium arctostaphylos*), Colchic ivy (*Hedera colchica*) and other typical Colchic species are less abundant. Forb grass, fescue (*Festuca Montana*) and fern (*Dryopteris filix mas*) associations are relatively more widespread.
- c) The sub-belt of dark coniferous forests occurs from 1350-1400 m to 1800-1850 m a.s.l. Dark coniferous and mixed leaved-coniferous forests dominate in the vegetation cover, namely: spruce (*Picea orientalis*), fir (*Abies nordmanniana*), spruce-fir, beech-spruce-fir, fir-spruce formations. Pine forests are sporadically distributed (*Pinus kochiana*). In some areas narrow stripes of unmixed beech (*Fagus orientalis*) forests are developed above the zone of coniferous forests. Fescue (*Festuca Montana*), moss (*Hylocomium splendens*, *Dicranum scoparium*, etc.), fern (*Dryopteris filix mas*), sweet woodruff-sanicle (*Asperula odorata*, *Sanicula europaea*), wood sorrel (*Oxalis acetosella*) associations dominate in the topological spectrum of coniferous forests. The distribution of forests with relict Colchic undergrowth (cherry laurel, rhododendron, Colchic ivy and other species) is very restricted.

The subalpine belt is spread from 1800-1850 m till 2500 m a.s.l. The vegetation is complex with three main vegetation types: subalpine forests, subalpine shrubbery and subalpine meadows.

There are only few subalpine forests in the district. Their majority has been destroyed as a result of chaotic utilization (timber logging, livestock grazing) and secondary subalpine shrubbery and meadows have developed. The composition of remaining subalpine forests is fairly diverse. High mountain versions occur in the mountain forest formations – subalpine beech (*Fagus orientalis*), subalpine fir (*Abies nordmanniana*), beech-fir, subalpine pine (*Pinus kochiana*) stands. Typical subalpine formations are represented with birch (*Betula litwinowii*), ash-birch (*Sorbus caucasicus*, *Betula litwinowii*), maple (*Acer trautvetteri*) stands. Subalpine forest communities are mainly distributed in the form of smaller sections, which interchange (form complex with) subalpine shrubbery, tall grasses and subalpine meadow communities.

Rhododendron (*Rhododendron caucasicum*) is fairly widespread from subalpine shrubbery. It occupies the major part of the slopes of the northern exposition. Smaller sections and fragments of juniper (*Juniperus depressa*), whortleberry (*Vaccinium myrtillus*), etc. occur as well.

Subalpine tall grasses are mainly distributed within the belt of subalpine forests in forest edges, flattened and lowered areas. Tall grass composition is mainly polydominant. The presence of Colchic species in cenoses is relatively restricted in comparison with Adzhara-Guria district.

Subalpine meadows cover large areas in the upper part of subalpine belt (2200-2500 m a.s.l.). Polydominant grain-forb grass meadows are widespread. Bent (*Agrostis capillaris*), geranium (*Geranium gymnocaulon*), anemone (*Anemone fasciculata*), mat nardusgrass (*Sorbus glabriculmis*),

etc. monodominant meadows occur as well. Major part of subalpine meadows is severely weeded due to overload of pastures.

Alpine belt is developed only on high peaks (m. Mepistskharo, Nageba, Sametskhvario, etc.), the altitude of which exceeds 2450-2500 m. Polydominant grain-forb grass meadow is the most abundant in alpine vegetation. The major part of the meadow is weeded due to over-exploitation (overload of pastures). Alpine geranium (*Geranium gymnocaulon*) and grain meadows are relatively limited in distribution. Alpine rhododendron is developed on the northern slopes (*Rhododendron caucasicum*).

**Geo-Botanical District of Upper Imereti Plateau of Geo-Botanical Province of Upper Imereti Plateau.** Upper Imereti Plateau (Dzirula and Tchiatura plateaus), i.e. Dzirula crystal massif comprises the major part of r. Kvirila water catchment basin. The western slope of Likhi ridge is also included within the geo-botanical district. Upper Imereti plateau is prominent in Kolkheti in terms of geological structure, tectonic history, terrain and vegetation. The district is characterized with complex relief. The altitude of the major part of the plateau fluctuates within 500-800 m a.s.l. The hydrographic system of the district is fairly dense. It is represented with branched system of r. Kvirila, karst waters and lakes. The main rivers are Kvirila, Dzirula and Chkherimela. They are joined by many rivers flowing from Ratcha and Likhi ridges.

The district is located in the easternmost part of Kolkheti and has the least influence of the marine climate. The climate of the district is continental, but still fairly humid and moderately warm.

Flora and vegetation of Upper Imereti Plateau geo-botanical district is the poorest version of Colchic vegetation. Although the total number of relict Colchic species within the district is not few, but the phytocenotical positions of these species are quite weak (phytocenotical positions of cherry laurel - *Laurocerasus officinalis*, rhododendron - *Rhododendron ponticum*, pontic azalea - *Rhododendron luteum*, boxwood - *Buxus colchica* are somewhat conspicuous). In these terms the distribution of relict phytocenoses is fairly limited and entirely lacks endemic plant communities of Kolkheti.

Only forest belt is represented within the district (and its hypsometric profile is not full). Natural vegetation and especially forests have been almost entirely destroyed in many areas of the plateau due to dense population and economic activities. The natural vegetation has been preserved only in individual gorges (on Tchiatura plateau – r. Buja gorge, etc.). To be more specific, *Cytisushirsutissimus* and *Hypericum orientale* (*H. ptarmicifolium*) are mixed with hornbeam (*Carpinus caucasica*) in the undergrowth of Tchiatura plateau forests. Along with *Quercusiberica* species included in the Red List of Georgia, Red Book of Georgia and former USSR Red Book - *Q. imeretina* occurs in some areas, while pontic azalea (*Rhododendron luteum*) is present in the undergrowth. Calciphites and endemic species of Imereti - *Delphinium colchicum*, *Potentilla imerethica* and *Symphyanthra pendula* are distributed on Tchiatura plateau in Nigozeti limestone canyons. Hornbeam formations (*C. caucasica*) along with species of the Red List and Red Book of Georgia – chestnut (*Castanea sativa*) and pontic azalea (*R. luteum*) are represented on the left bank of r. Buja. Imeretian oak (*Q. imeretina*) along with the following grasses: *Dorycnium graecum*, *D. herbaceum*, *Pteridium tauricum*, as well as box butcher's broom (*Ruscus ponticus*) grows on the red soils of the same area. The undergrowth species of dry ecotopes are: *Corylus avellana*, *R. luteum*, *Crataegus* spp. and *Staphylea* spp. In humid areas they are substituted with: *Laurocerasus officinalis*, *Ilex colchica* and *Frangula alnus*.

The vegetation cover has been preserved more or less intact on Likhi ridge as well as Dzirula-Chkherimela watershed and several other areas. The composition of forest vegetation mainly comprises mixed broad leaved and beech formations. Mixed broad leaved forests cover the gorge slopes till 800-900 m a.s.l. They are composed of chestnut (*Castanea sativa*), beech (*Fagusorientalis*), alder (*Alnusbarbata*), hornbeam (*Carpinuscaucasica*), lime (*Tiliacaucasica*), Norway maple (*Acer platanoides*), European ash (*Fraxinus excelsior*), Colchic oak (*Quercushartwissiana*), Georgian oak (*Quercusiberica*), etc. Georgian oak (*Quercusiberica*) forest is mainly distributed on the slopes of the southern exposition till the altitude of 800-900 m. Temporary alder (*Alnusbarbata*) formations are frequent on abandoned land (former maize, potato fields). In many areas these formations have already transformed into oak (*Quercusiberica*) or mixed broad leaved forests.

In the higher part of the district (above 800 m a.s.l.) beech formations (*Fagusorientalis*) are fairly abundant. Bidominant stands are also present, namely: chestnut-beech (*Castanea sativa*, *Fagusorientalis*) and hornbeam-beech formations (*Carpinuscaucasica*, *Fagusorientalis*). Large areas are covered with hornbeam (*Carpinuscaucasica*) forests. Only pine formations (*Pinuskochiana*) are rare from coniferous forests. Relict Colchic species – cherry laurel (*Laurocerasusofficinalis*), rhododendron (*Rhododendron ponticum*), pontic azalea (*Rhododendron luteum*) – rarely occur in the undergrowth of mixed broad leaved and beech forests. Forb grass, fescue (*Festucamontana*), sweet woodruff (*Asperulaododrata*), fern (*Dryopterisfilix mas*) series associations are more abundant. In oak stands (*Quercusiberica*), especially on limestone substrata, oriental hornbeam (*Carpinusorientalis*) is frequent along with mezo-xerophylic shrubbery. Shrubbery occurs on forest cuttings, especially – on limestone substrata: oriental hornbeam (*Carpinusorientalis*), boxwood (*Buxuscolchica*), forb shrubbery formations.

### **Protected Areas**

The protected areas within the project area are described below.

**Ajemeti Reserve.** Ajemeti reserve is one of the most sensitive areas and is included within the potential impact zone of the project.

Ajemeti reserve is located in the easternmost part of Kolkheti lowland, on the left bank of r. Rioni within the water catchment basins of r. Rioni tributaries – r. Kvirila and Khanistskhali. The reserve comprises various forestries: Ajemeti (3,531 ha), Vartsikhe (1,105 ha) and Sviri (211 ha). The first two regions are separated with Khanistskhali and Vartsikhe viticulture arable land. The distance between them is 1-2 km. Sviri massif is located in several meters from Ajamaeti forest and is separated from the forest with vil. Sviri agricultural land.

There are no water abundant rivers within the reserve. Small rivulets dry out during the dry season. Irrigation channels were built in 1946-1948 in the north-western part of Ajemeti forest. Potable water is abstracted from wells.

Ajemeti reserve was established to protect rare relict species of the Tertiary period – Imeretian oak (*Quercusimeretina*) and Zelkova (*Zelkovacarpinifolia*). These species are included in the Red List of Georgia (as well as Red Book of Georgia and Red Book of the former USSR). In addition, species included in Red List of Georgia (as well as Red Book of Georgia and Red Book of the former USSR):

Caucasian wingnut (*Pterocaryapterocarpa*) and Caucasian persimmon (*Diospyros lotus*) are represented within the reserve. The following species occur as well: box butcher's broom (*Ruscuscolchicus*) – species of the Red Book of the former USSR, Colchic oak (*Quercushartwissiana*) and nut (*Juglansregia*) – species of the Red List of Georgia (Red Book of Georgia).

The vegetation of the below type is present within Ajameti reserve: Imeretian oak forests; oak-hornbeam and hornbeam forests; alder formations on small territory; shrubbery; weeds; r. Kvirila floodplain vegetation; Zelkova and meadows developed on forest cuttings.

About 97 % (4,700 ha) of the total area of the reserve (4,848 ha) is covered with forests, of which 4,609 ha is represented with natural forests. Imeretian oak forests occur on about 95 % (4,454 ha) of the total forests. Oak forest of 140 year old individuals covers about 1,700 ha. In some areas oak individuals are 220-230 year old and even 250-270 year old.

The territory of the reserve is surrounded with Vartsikhe agricultural land and arable land of villages Dimi, Perzati, Baghdati, Rodinouli, etc. Due to proximity of settlements the reserve forests are partially thinned. The average density of forests is about 0.56 in these areas, for about 1,561 ha the density is 0.6 and in some areas (268 ha) even reaches 0.8-0.9.

**Borjomi-Kharagaul National Park.** Borjomi-Kharageuli national park was established in 1995 on the basis of the resolution #447 of the cabinet of ministers of Georgia. The main purpose of this decision was the conservation of ecosystems; restoration of degraded areas; support and control of sustainable use of renewable resources; educational activity and eco-tourism. According to the management plan designed by WWF, the following zones are represented in the park: zone of strict nature protection; zone of wildlife; zone of traditional use; restoration zone and buffer zone (the border of which coincides with the administrative borders of six districts). The park area is 54,400 ha. It is covered with primary forests and subalpine meadows typical for Lesser Caucasus. Diverse flora and fauna is represented in the area: rare, endangered species, relict species, species endemic to Central Caucasus. Buffer zone comprises 150000 ha with various land use forms, namely, arable land and industrial building zones, infrastructure, natural and semi-natural habitats. Buffer zone facilitates that the surroundings of the park are preserved in the conditions, which supports the sustainable preservation of the park regime. It is implemented, on one side, through economic support and aid to the buffer zone and, on the other, through its involvement into the park planning and management process. Land and resource use within the buffer zone should be matched with park conservation purposes. The development of the buffer zone should be based upon the thoroughly devised plan of regional development, which facilitates sustainable economic development of the buffer zone and conservation of biodiversity. Buffer zone is not included in IUCN categories and is absent from the IUCN list of protected areas. In 1998 the governments of Germany and Georgia signed bilateral agreement “on the Protection of Environment and Natural Resources of Borjomi-Kharagauli National Park”. The details of the cooperation are given in the order of the president of Georgia (July 13, 2001) “on Planning and Implementation Coordination of the Current and Perspective Programs of Borjomi-Kharagauli National Park and its Buffer Zone”. The government of Germany finances three programs: development of infrastructure; training/ecological education; program of development of the buffer zone.

**Additional Territories of Borjomi-Kharagauli National Park.** The territories of Borjomi-Kharageuli national park spread onto part of Akhaltsikhe and Adigeni districts of Samtskhe-Javakheti region comprising Meskheti and Vani ridge slopes, Abastumani and Zekari pass with total area of 10.846 ha.

The legal basis for these territories is as follows: law of Georgia “on Protected Areas”; agreement between the governments of Georgia and Germany on financial cooperation within the project, which is approved by the resolution of the cabinet of ministers of Georgia (#446, 28/07/1995) “on the Formation of the Protected Areas System and Activities Supporting the Establishment of Borjomi-Kharageuli National Park”; respective regulations of Adigeni transitional authorities, Adigeni forestry and state department of land management. The status of the mentioned territories corresponds with IUCN second category.

**Imereti Cave Complex.** The purpose of the establishment of the complex is the protection of karst caves, dinosaur imprint and Colchic forest. Imereti cave complex is located in 10 km from t. Kutaisi. The area of the complex is about 354 ha. Sataplia reserve is located at the altitude of 500 m a.s.l. Karst caves occur within the reserve. Sataplia climate is subtropical. The annual precipitations reach 1900 mm. The average January temperature is +4<sup>0</sup>C and August mean +25<sup>0</sup>C. Sataplia reserve is located in humid subtropical belt. 98 % of the reserve is covered with subtropical Colchic forest. Beech forests with boxwood undergrowth and hornbeam forests with oriental hornbeam undergrowth dominate in the area. Yew (*Taxusbaccata*) grows naturally in the area from coniferous species. 67 woody species are described from the reserve. 30 of these species are trees and 37 shrubs, of which 59 species are deciduous and 8 - evergreen. Almost half of the woody species are relict. Tertiary period relicts occur as well: Caucasian hornbeam (*Carpinuscaucasica*), Georgian oak (*Quercusiberica*), Imeretian buckthorn, rhododendron, box butcher’s broom, butcher’s broom, Colchic bladder nut (*Staphyleacolchica*), whortleberry and Colchic boxwood (*Buxuscolchica*). It is noteworthy that 9 woody species, which are endangered and included in the Red List of Georgia, occur in the reserve along with three Caucasian and one Georgian endemic species.

## REFERENCES TO CHAPTER 8

## Geology

1. Hydrogeology of the USSR, v. X, Georgian SSR, Publishing House “NEDRA”, Moscow, 1970.
2. Mrevlishvili N., Geology of Georgia, TSU, Tbilisi, 1997.
3. Geological map of Georgia scaled 1:500 000 by Gujabidze G., Tbilisi, 2003.
4. Information bulletin “The outcomes of the elemental geological processes in Georgia in 2009 and forecast for 2010”, The Ministry of Environment Protection of Georgia, the National Environmental Agency, Tbilisi, 2009.
5. Information bulletin “The outcomes of the elemental geological processes in Georgia in 2010 and forecast for 2011”, The Ministry of Environment Protection of Georgia, the National Environmental Agency, Tbilisi, 2010.

## Fauna

1. Abuladze A., 1994b, Birds of Prey in Georgia in the 20th Century. In book: B.-U.Meyburg and R.Chancellor (Eds.). Raptor Conservation Today. WWGBP/ The Pica Press.
2. Abuladze A., Eligulashvili B., 1996, White-tailed Sea Eagle (*Haliaeetus albicilla*) in Transcaucasus // Meyburg B.-U. & R.D.Chancellor Eds. // Eagle Studies. Berlin, London & Paris: 173-176. 1 map & Bibl.
3. Arabuli A., 1970. Bear in Georgia. (in Georgian).
4. Badridze J.K., 1995. The status of fauna in Georgia.// Russian Conservation News, Moscow, October. V: 23-24;
5. Badridze J. *et al* (Editors: Tarkhnishvili D., Kikodze D.), 1996. Principal Characteristics of Georgian Biodiversity. *Natura Caucasica*, Vol. 1, p. 46.
6. Boehme, R.L., Zhordania, R.G., Kuznetsov, A.A., 1987. Birds of Georgia. Tbilisi, Sabchota Sakartvelo (Russian).
7. Bukhnikashvili A., 1997, Rare species of rodents of Georgia., //Rare mammal species of Russia and adjacent territory. Proc.Inter.con. 9-11 Apr. 1997, Moscow, :19.
8. Bukhnikashvili A., Kandaurov A., 1996. "Small mammals (*Insectivora*, *Chiroptera*, *Lagomorpha*, *Rodentia*)", Report on Program "Assistance for preparation of Biodiversity Country Study in the Republic of Georgia", (UNEP, Ministry of Environment of Georgia, Noah's Ark Centre for Recovery of Endangered Species); Wide Version. Manuscript. Tbilisi. (in Russian).
9. Bukhnikashvili A., Kandaurov A., 1998. The Threatened and insufficiently studied species (*Insectivora*, *Rodentia*) :56. Tbilisi, (in English).
10. Bukhnikashvili A., Kandaurov A., 2002, "The Annotated List of Mammals of Georgia" //Proceedings of the Institute of Zoology of Academy of Sciences of the Georgia, Metsniereba, Tbilisi, vol. XXI : 319 – 340. Bukhnikashvili. A. 2004. On Cadastre of Small Mammals (*Insectivora*, *Chiroptera*, *Lagomorpha*, *Rodentia*) of Georgia. // Publ. Hous “Universal”. Tbilisi: 132 pp (Бухникашвили А., 2004, Материалы к кадастру млекопитающих Грузии (*Insectivora*, *Chiroptera*, *Lagomorpha*, *Rodentia*), Тбилиси, Грузия, Кампестер, «Универсал», 138 стр.)
11. Bukhnikashvili A., Kandaurov A., Natradze I., 2008, Action Plan for Georgian Bats //Campester, Tbilisi, Georgia, “Suniversal”: 103 (ბუხნიკაშვილი ა., კანდაუროვი ა., ნატრაძე ი., 2008, საქართველოს ხელფრთიანთა დაცვის სამოქმედო გეგმა//ჩამპესტერ, თბილისი, საქართველო, უნივერსალი, 103 გვ.)
12. Darevskii I.S., 1967. Rock Lizards of the Caucasus. Leningrad. Nauka. (in Russian).



13. Didmanidze E., 2005, The butterflies of Georgia//Zoological Department of S. Janashia Museum of Georgia, Tbilisi, Georgia, "Sezan", 87 pages
14. Elanidze R.F., 1983. Ichthyofauna of Rivers and Lakes of Georgia. Tbilisi, Metsniereba. (in Russian).
15. Galvez R.A., Gavashelishvili L., Javakhishvili Z., 2005, Raptors and Owls of Georgia//GCCW and Buneba Print Publishing: 128 pages
16. Gulisashvili V.Z., 1964. Landscapes and Nature-Historical Zones of Caucasus. Moscow, Nauka.: 233p. (in Russian).
17. Gulisashvili, V.Z., Makhatadze, L.B. & Prilipko, L.I.,1975. Vegetation of Caucasus. -Moscow, Nauka: 233p (Russian).
18. Gurielidze Z., 1997. Large Mammals (*Carnivora, Artiodactyla, Cetacea*). In book: Chatwin, M.E., Kikodze, D., Svanidze, T., Chikvaidze, J., Gvritishvili, M., and Tarkhnishvili, D.N. (Eds.), Georgian Country Biological Diversity Study Report, (1996., Program "Assistance for preparation of Biodiversity Country Study in the Republic of Georgia"), UNEP, Ministry of Environment of Georgia, Noah's Ark Centre for Recovery of Endangered Species; 1997, Tbilisi, Georgia : 74-82. (in Georgian).
19. Heredia, B., Rose, L. & Painter, M., 1996. Globally threatened birds in Europe: Action plans. Council of Europe Publishing/Bird-Life International: 408 pp.
20. Janashvili A., 1963. In book: Animals of Georgia. vol. 3. Vertebrates. Tbilisi, Georgian Academy of Sciences. (in Georgian).
21. Kandaurov A., 1997, Rare species of insectivorous of Georgia., //Rare mammal species of Russia and adjacent territory. Proc.Inter.con. 9-11 Apr. 1997, Moscow, :44.
22. Kapanadze A., 1974. Abundance and structure of the chamois population in the Georgia SSR. //First Intern. Theriol. Congress, Moscow, June 6-12. I: 249-250.
23. Kutubidze, M.E., 1985. The Guide to the Birds of Georgia // Tbilisi: 648 pp.(in Georgian).
24. Morgilevskaya I.E., 1989. Catalogue of Collection of Small Mammals of the Institute of Zoology of Georgian Academy of Sciences. Tbilisi, Metsniereba. (in Russian).
25. Nekrutenko Yu.I., 1990. Butterflies of Caucasus. Kiev, Naukova Dumka. (in Russian).
26. Ninua N., Japoshvili B., 2008, Check List of Fishes of Georgia// Proceedings of the Institute of Zoology, XXIII, Tbilisi, 2008 :163 -176
27. Sokolov V., Tembotov A., 1989. Vertebrates of Caucasus, Mammals, Insectivora. Moscow, Nauka. p. 545.
28. Shidlovsky M.V., 1948, Rodents of Georgia. List of fauna and ecological-geographical distribution., Tbilisi, Manuscript : 127, 23 maps.
29. Shidlovsky M.V., 1976. Key of Rodents of Transcaucasia. Second edition. Tbilisi, Metsniereba. (in Russian).
30. Skhirtladze I.A., 1981. Bees in Transcaucasia. Tbilisi, Metsniereba. (in Russian).
31. Tarkhnishvili D., Kikodze D. (Eds.). Principal Characteristics of Georgia Biodiversity. In: Natura Caucasia (publication of the NGO CUNA Georgica), v. 1, No. 2.
32. Tarkhnishvili D.N., 1996. Amphibians. In: Report on Program "Assistance for preparation of Biodiversity Country Study in the Republic of Georgia", UNEP, Ministry of Environment of Georgia, Noah's Ark Centre for Recovery of Endangered Species; Wide Version. Manuscript. Tbilisi. (in Russian).
33. Tarkhnishvili, D. N., 1997. The Status of Amphibian Species in Georgia (C.I.S). DAPTF Reports series, J.W. Wilkinson (ed.), The Open University, Milton Keynes (UK).
34. Tarkhnishvili D., Kandaurov A., Bukhnikashvili A., 2002, "Declines of amphibians and reptiles in Georgia during the 20th century: virtual vs. actual problems" //Zeitschrift für Feldherpetologie, 2002, № 9: 89-107.
35. The Nature Reserves of the USSR , 1990.// Edited by V.E.Sokolov and E.E. Syroechkovskii. Moscow: 365 p. (in Russian).
36. THE RED DATA BOOK OF THE GEORGIAN SSR, 1982 "Sabchota Sakartvelo", Tbilisi: 255 pp. (in Georgian).

37. THE RED LIST OF THREATENED ANIMALS. IUCN. 1996.
38. Vereshchagin N.K., 1959, Mammals of the Caucasus. History of Fauna Formation. Academy of Sciences of the USSR. Moscow-Leningrad. (in Russian).
39. WWF leaflet "Protected Areas System of Georgia - Iori Region" 1995; WWF Project Office Georgia. Tbilisi.
40. Zazanashvili N., 1997. Protected Areas of Georgia: Present and Future, (edit. Shishniashvili) , WWF Project Office Georgia. Tbilisi.: 36pp.

### Flora

1. Zazanashvili N. 1997. The Protected Areas of Georgia: the Present and Future. WWF. Tbilisi
2. Ivaniashvili M. 2000. International Environmental Law on Biological Diversity. Meridian. Tbilisi
3. Ketskhoveli N. N. 1957. Zones of Landraces of Georgia. Metsniereba (Science). Tbilisi
4. Ketskhoveli N. N. 1959. Map of Vegetation of Georgia. Appendix to book: Vegetation of Georgia Tbilisi
5. Ketskhoveli N. N. 1960. Vegetation of Georgia. Tbilisi
6. Ketskhoveli N. N. (ed.) 1977. Protect the Wilde and Cultural Plants of Georgian SSR. Press of the Academy of Sciences of Georgia. Tbilisi
7. Makashvili A. 1995. Trees and Shrubs of Georgia (ed. G. Nakutsrishvili and N. Zazanashvili). WWF. Tbilisi
8. Law of Georgia "on Protected Areas System" adopted by the Parliament of Georgia on 7th March, 1996. Normative acts of the Parliament of Georgia, Tbilisi, 2000, 10-17
9. Guide of Plants of Georgia. 1969. 2. Press of the Academy of Sciences of Georgia. Tbilisi
10. Flora of Georgia. 1941-1952. 1-8. Press of the Academy of Sciences of Georgia. Tbilisi
11. Flora of Georgia. 1970-200. 1-13. Metsniereba (Science). Tbilisi
12. Red Book of Georgia SSR. 1982. Soviet Georgia. Tbilisi
13. Kvachakidze R. 1996. Geo-Botanical Zoning of Georgia. Metsniereba (Science). Tbilisi
14. Kvachakidze R. 2001. Forests of Georgia. Tbilisi
15. Kikava G., Chkhetiani I., Jugheli N., Todua G. 1997. "Wild Fruit of Georgia", Tbilisi
16. Shanshiashvili P. 1998. "The Development of Protected Areas System in Georgia". Newsletter of the Center of Strategic Research and Development (Tbilisi). № 16, 2-23
17. Grebenshikov O. S. 1965. Geo-Botanical Dictionary. Russian-English-Dutch-French. Science. Moscow
18. Gulisashvili V. Z. 1964. Natural Zones and Natural-Historical Provinces of Caucasus. Science. Moscow
19. Dolukhanov A. G. 1989. Vegetation of Georgia. 1. Forest Vegetation of Georgia. Metsniereba (Science). Tbilisi
20. Mosiakin S. L., Fedoronchuk M. M. 1999. "Vascular Plants of Ukraine. Checklist". Kiev
21. Cherepanov S. K. 1981. Vascular Plants of USSR. Science. Leningrad
22. Akhalkatsi, M., Kimeridze, M., Lorenz, R., Kuenkele, S., Mosulishvili, M. 2003. Diversity and Conservation of Georgian Orchids. Tbilisi.
23. Braun-Blanquet, J. 1964. Pflanzensoziologie, Grundzüge der Vegetationskunde, 3rd ed. Springer, Wien-New York.
24. Canter L.W. 1996. Environmental impact assessment. 2nd ed. McGraw-Hill. New York, London, Tokyo, Toronto.
25. Convention on Biological Diversity. 1995. UNEP. Switzerland (Russian version).
26. Council of Europe. Convention on the conservation of European wildlife and natural habitats. Bern, 19.09.1979.
27. Forest Code of Georgia. 1999. Tbilisi.
28. Georgian law on Protected territories system adopted by Parliament of Georgia (March 7 1996). Normative Acts of Parliament of Georgia, Tbilisi, 2000, 10-17 (in Georgian).

29. Groombridge B. (ed.). 1992. Global biodiversity: Status of the Earth's Living Resources. Chapman & Hall, London, 47-52.
30. Harcharik D.A. 1997. The future of world forestry. *Unasylyva* 190/191, 48, 4-8.
31. Hilton-Taylor, C. (compiler). 2000. 2000 IUCN Red List of Threatened Species. IUCN, Gland, Switzerland and Cambridge, UK.
32. Identification guide to plants of Georgia. 1969. 2. Georg. Acad. Sci. Publ., Tbilisi (in Georgian).
33. Isik K., Yaltirik F., Akesen A. 1997. The interrelationship of forests, biological diversity and the maintenance of natural resources. *Unasylyva* 190/191, 48, 19-29.
34. IUCN. 2001. IUCN Red List Categories and Criteria: Version 3.1. IUCN Species Survival Commission. IUCN, Gland, Switzerland and Cambridge, UK.
35. IUCN. 2003. 2003 IUCN Red List of Threatened Species. [web application]. Available at [www.iucnredlist.org](http://www.iucnredlist.org). (Accessed: 27 September 2004).
36. IUCN 2004. 2004 IUCN Red List of Threatened Species. [web application]. Available at: <http://www.iucnredlist.org>.
37. IUCN Red List Guidelines 2004 [web application]. Available at: <http://www.iucnredlist.org>.
38. Karagöz Gursel. 2001. Introductory country reports. Turkey. In: Borelli S., Kremer A.,
39. Geburek T., Paule L., Lipman E. (compilers). Report of the Third EUFORGEN Meeting on Social Broadleaves, 22-24 June 2000, Borovets, Bulgaria. International Plant Genetic Resources Institute, Rome, Italy, 11-22.
40. Kimeridze, K. 1966. Kavkasiashi chaobis mcenareulobis gavrcelbis kanonzomierebis sakitkhisatvis. (Distribution pattern of wetland vegetation in Caucasus). *Bull. Georg. Acad. Scien.* 43, 2:234-245.
41. Kimeridze, K. 1975. Sakartvelos mtianetis kolboxovani islianebi. (Tufted sedge wetlands of mountains of Georgia). *Bull. Geor. State Museum.* 28-a.
42. Lanly J.-P. 1997. World forest resources: situation and prospects. *Unasylyva* 190/191, 48, 9-18.
43. Morris P. 1995. Ecology overview. EIA. 197-225.
44. Morris P., Thurling D., Shreeve T. 1995. Terrestrial ecology. EIA, 227-241.
45. Mosyakin S.L., Fedoronchuk M.M. 1999. Vascular plants of Ukraine. A nomenclatural checklist. Kiev.
46. Nakhutsrishvili G. 1999. The Vegetation of Georgia. *Braun-Blanquetia*, 15, 1-74.
47. Nakhutsrishvili G. 2000. Georgia's basic biomes. Biological and Landscape Diversity of Georgia. WWF, BMZ, Tbilisi, 43-68 (in Georgian, English).
48. Northen H.T. 1968. Introductory plant science. Third ed. The Ronald Press Company, New York.
49. Raven P.H., Evert R.F., Eichhorn S.E. 1986. Biology of plants. Worth Publ., New York.
50. Red List of Endangered Species of Georgia. 2003. *Legisl. Proc.* 3, Order N76, GSS Codex, GSS code- [www.gss-ltd.com](http://www.gss-ltd.com).
51. Red List of Georgia. 2006. Internet version, order.
52. Rote Liste gefährdeter Pflanzen Deutschlands. 1996. Schriftenreihe für Vegetationskunde, Heft 28, Bundesamt für Naturschutz, Bonn-Bad Godesberg.
53. Sakhokia M.F. 1961 (ed.). Botanical excursions over Georgia. Tbilisi.
54. Shanshiashvili P. 1998. Developing the system of Georgia's protected territories. *Bull. of the Centre for Strategic Researches and Development (Tbilisi)*. No 16, 2-23.
55. The 2000 IUCN red list of threatened species. 2000 UNEP, WCMC.
56. WDPA Consortium. 2004. 2004 World Database on Protected Areas. IUCN-WCPA and UNEP-WCMC, Gland, Switzerland, Washington, DC, USA and Cambridge, UK.
57. Zazanashvili N., Sanadiradze G. 2000. The system of protected areas of Georgia at the junction of 20th – 21th centuries. Biological and Landscape Diversity of Georgia. WWF, BMZ. Tbilisi, 251-276 (in Georgian and English).

## 9. OVERVIEW OF THE SOCIAL BASELINE CONDITIONS

### 9.1 SOCIAL FEATURES OF IMERETI REGION AS A WHOLE

#### 9.1.1 INTRODUCTION

Imereti is one of the main historical, economic, cultural and educational regions of Georgia with area of 6.6 thousand sq. km (11 % of Georgia), population 700 thousand people (16 % of Georgian population).

Imereti is divided into two parts: Upper (Zemo) and Lower (Kvemo) Imereti. Imereti lies in the central part of Georgia in geographic terms. It is surrounded with distinctive natural borders: Racha-Lechkhumi and Lower Svaneti provinces (separated by Racha ridge) to the north, Inner (Shida) Kartli (separated by Likhi ridge) to the east, Samtskhe-Javakheti (separated by Adzhara-Imereti ridge) to the south and Guria and Samegrelo-Upper Svaneti (separated by r. Supsa and r. Tskhenistkali) to the west. Imereti is mainly located in the zone of humid marine subtropical climate. The marine influence is reduced in the low mountainous and medium mountainous regions of the province, although humid climate still prevails. Winter is cold and summer relatively dry and hot in the area. The average January temperature is +2, +5. The maximal summer temperature reaches +38 and +40 C. The amount of precipitation is 100-200 mm. The number of rainy days averagely is 150 per year; the main water sources are r. Rioni and Kvirila. Local self-governance is implemented through representative (Sakrebulo) and executive (Gangeoba, city hall) bodies according to the following administrative-territorial units: t. Kutaisi, Zestaponi, Tskaltubo, Samtredia, Tchiatura, Sachkhere, Terjola, Vani, Khoni, Tkibuli, Bagdati and Kharagauli municipalities.



**Fig. 9.1 Administrative Division of Imereti Region**

### 9.1.2 Demographic Characteristics

The table below shows the main demographic characteristics of Imereti region and particular districts for years 2010 - 2011.

**Table 9.1 Population of Imereti Region in 2001-2011, Thousand Men (as of 1<sup>st</sup> January)<sup>19</sup>**

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
<b>Imereti</b>	<b>707,4</b>	<b>699,7</b>	<b>694,9</b>	<b>690,2</b>	<b>689,0</b>	<b>700,1</b>	<b>697,6</b>	<b>694,2</b>	<b>693,5</b>	<b>700,4</b>	<b>704,5</b>
T. Kutaisi	187,5	186,0	184,7	183,8	184,5	190,1	189,7	188,6	188,6	192,5	194,7
Baghdati municipality	29,5	29,2	29,0	28,7	28,4	29,0	28,8	28,6	28,5	28,7	28,8
Vani municipality	34,9	34,5	34,3	34,0	33,9	34,2	33,9	33,7	33,7	33,8	33,8
Zestaponi municipality	76,9	76,2	75,7	75,2	75,0	75,6	75,4	75,2	75,1	75,4	75,7
Terjola municipality	46,0	45,5	45,2	44,8	44,7	45,3	45,1	44,8	44,7	45,0	45,1
Samtredia municipality	61,2	60,5	60,1	59,7	59,6	60,4	60,2	59,9	59,8	60,3	60,7
Sachkhere municipality	47,4	46,8	46,5	46,2	46,2	46,4	46,5	46,6	46,9	47,3	47,7
Tkibuli municipality	32,4	31,2	30,9	30,6	30,3	30,6	30,4	30,2	30,0	30,1	30,1
Tskaltubo municipality	74,5	73,9	73,4	72,9	72,7	73,9	73,6	73,2	73,0	73,6	73,8
Tchiatura municipality	57,0	56,3	55,9	55,5	55,2	55,6	55,3	55,0	54,8	55,0	55,2
Kharagauli municipality	28,2	27,9	27,7	27,5	27,3	27,6	27,5	27,4	27,4	27,5	27,5
Khoni municipality	31,9	31,7	31,5	31,3	31,2	31,4	31,2	31,0	31,0	31,2	31,4

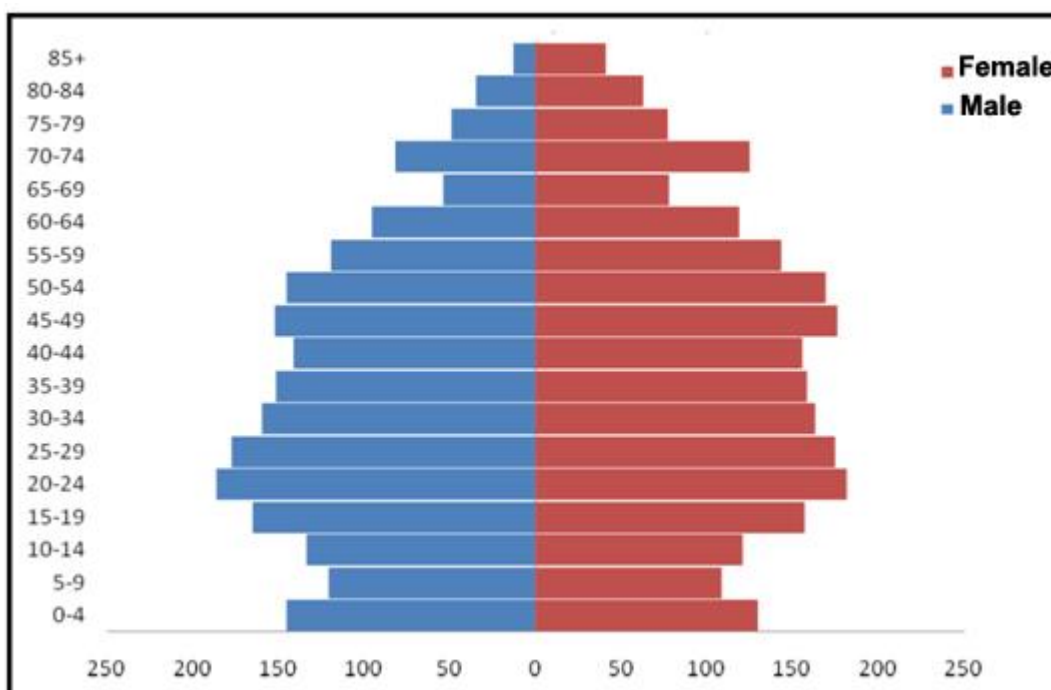
<sup>19</sup> National Service of Statistics of Georgia

The table below shows the main demographic characteristics of Imereti as compared with the whole Georgia for 2010.

**Table 9.2 Demographic Characteristics**

	<b>Birth</b>	<b>Death</b>	<b>Nativity</b>	<b>Marriage</b>	<b>Divorce</b>
<b>Georgia</b>	62,585	47,864	14,721	34,675	4,726
<b>Imereti</b>	10,041	8,726	1,315	5,362	580

The distribution of population in regions of Georgia by gender and age is even. The figure below represents a pyramid reflecting distribution of population of Georgia by gender and age as of 1<sup>st</sup> January, 2011.



**Fig. 9.2 Pyramid of Population by Gender and Age as of 1<sup>st</sup> January, 2011**

The below table 9.3 represents the statistics of women and men receiving state pension at regional level.

**Table 9.3 Distribution by gender of persons of pension age (receiving pension)**

	Women			Men		
	2009	2010	2011	2009	2010	2011
Georgia	548459	550896	548328	290034	285005	278422
Imereti	99705	99018	97620	56334	54666	52879

Within the full scale census conducted by the state department of statistics of Georgia in 2002 the religion related data was revealed for the first time:

Orthodox Christians – 83.9 % (3,666.233);  
 Muslims - 9.9% (433. 784);  
 Armenian Gregorians - 2.9% (171,139);  
 Catholics - 0.8% (34.727);  
 Judaists - 0.1% (3541);  
 Other - 0.8% (33,648);  
 Atheists - 0.6% (28,631).

Orthodox Christianity is the main religion of the country and the majority of Georgians are Orthodox. Orthodox Christianity has played great role in the historical development of the country. Orthodox Christianity was adopted as state religion in IV c.

The below map displays regions of Georgia which are densely populated with ethnical minorities. Except for territories which are not controlled by the government of Georgia (Abkhazia and Southern Ossetia), as the map reveals, Samtskhe-Javakheti and Lower (Kvemo) Kartli are the provinces densely populated with ethnical minorities. Georgians are 83.75 % of the state population (data of 2002 census).

**Distribution of Population of Georgia by Religion in Large Administrative-Territorial Units (Provinces) (as of 2002 Census)**

	<b>Total population</b>	<b>Orthodox</b>	<b>Catholic</b>	<b>Armenian Gregorian</b>	<b>Judaism</b>	<b>Islam</b>	<b>Other religions</b>
Georgia	4371535	3666233	34727	171139	3541	433784	62111
Imereti	699666	693462	478	591	365	1549	3221

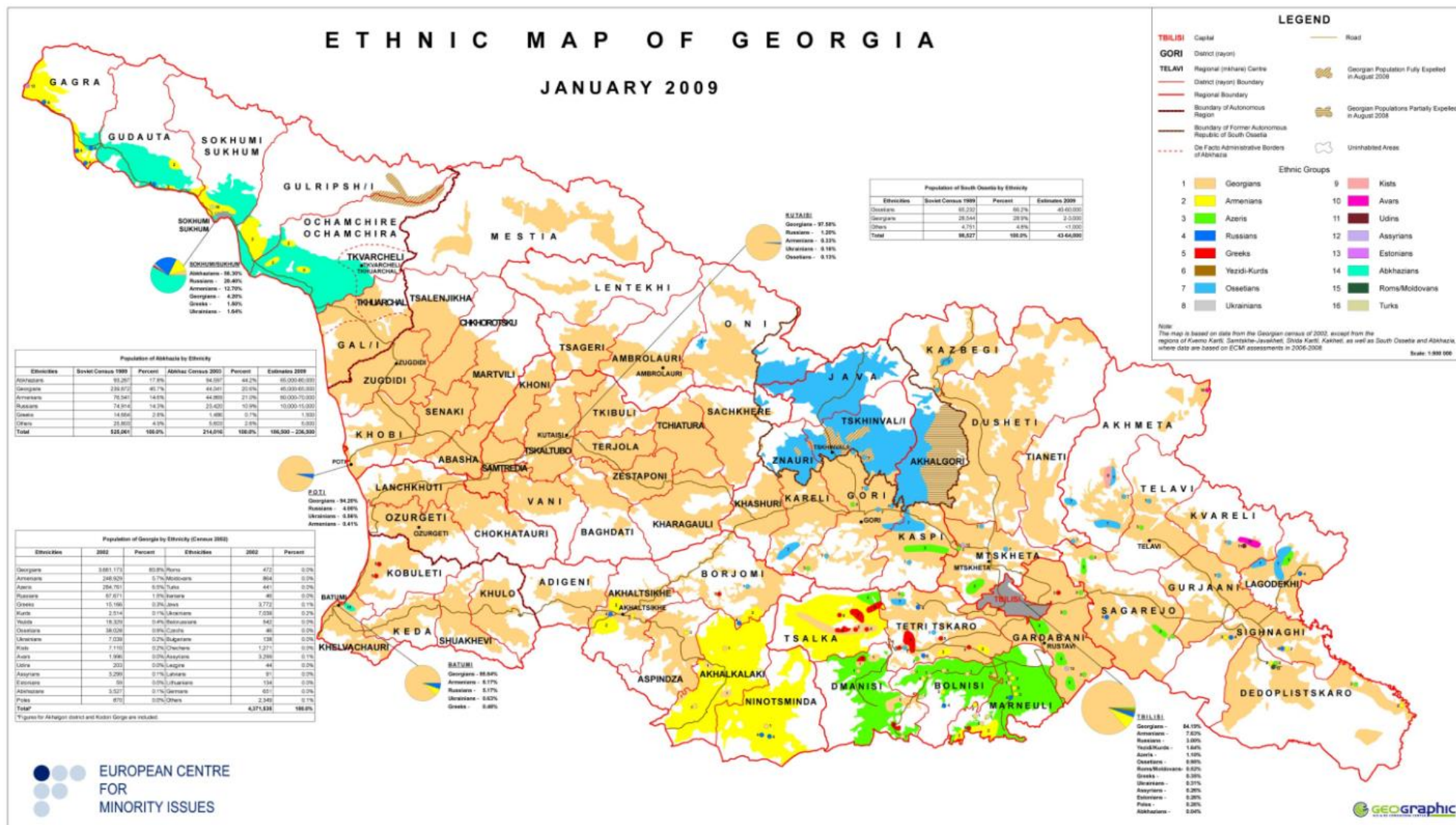


Fig. 9.3 Ethnic Map of Georgia



**Ethnic Distribution of Population in Imereti by Municipalities (as of 2002)**

**Table 9.4**

<b>Province</b>	<b>Total</b>	<b>Georgians</b>	<b>Abkhazians</b>	<b>Ossetians</b>	<b>Armenians</b>	<b>Russians</b>	<b>Azeri</b>	<b>Greek</b>	<b>Ukrainian</b>	<b>Kists</b>	<b>Iezids</b>
Georgia	4371535	3661173	3527	38028	248929	67671	284761	15166	7039	7110	18329
Imereit	699666	689490	388	639	1890	4924	274	242	636	-	56
T. Kutaisi	185965	181465	92	245	613	2223	132	127	293	-	52
Tkibuli district	31132	30656	29	35	41	282	6	10	40	-	-
Tskaltubo district	73889	72885	48	58	130	576	55	16	73	-	2
Tchiatura district	56341	55802	17	22	217	190	10	40	20	-	-
Baghdati district	29235	29073	7	10	22	91	5	1	7	-	-
Vani district	34464	34279	24	13	8	96	18	9	9	-	-
Zestaponi district	76208	75412	53	56	141	370	7	6	72	-	-
Terjola district	45496	45220	29	13	38	150	4	1	15	-	-
Samtredia district	60456	58883	33	39	615	635	24	22	80	-	-
Sachkhere district	46846	46591	11	117	20	84	-	5	8	-	-
Kharaguli district	27885	27728	7	22	20	85	8	2	5	-	-
Khoni district	31749	31496	38	9	25	142	5	3	14	-	1

### Socially Exposed Groups

Socially exposed families comprise the below:

- Lonely pensioners;
- Disabled (1);
- Families who lost their bread winner (2);
- Lonely mothers;
- Families below the poverty line (3).

(1) Citizen of Georgia who has the status of being disabled of I or II group (except for the disabled from childhood and veterans, who have the status of being disabled of III group).

(2) In case of death of a bread-winner – any citizen of Georgia below 18 years of age.

(3) Socially unprotected families registered in the unified database with rating scores below 57 000.

**The number of the disabled persons registered in the database of the social servicing agency of Imereti is as follows:**

**Table 9.4**

Number in registered families		Receiving assistance		Proportion between persons receiving assistance and the registered ones	
Family with a disabled person	Disabled person	Family with a disabled person	Disabled person	Family with a disabled person	Disabled person
23140	26641	9754	11618	42,2	43,6

(As of March, 2012)

The number of helpless (vulnerable) families registered in the unified database and number of families receiving state aid for Imereti region is as follows:

**Table 9.5**

Family	Population
28 849	85 881

(As of March, 2012)

According to the data of the same agency, the number of assistance receiving refugee families and number of population is as follows in the region:

**Table 9.6**

Registered* refugees		Refugees receiving assistance		Proportion between refugees receiving assistance and registered refugees	
4688	12766	2116	5501	45,1	43,1

(As of March, 2012)

### 9.1.3 Main Economic Activities in Imereti Region

Imereti is prominent for diversity of mineral wealth in Georgia. At present more than 100 mineral-raw material resources have been registered in Imereti. More than a half of the mentioned are exported. The main mineral wealth is Tchiatura manganese, the balance and off balance supply of which is 215 million tons by all types of ore (oxides, carbonate, oxidized, mixed, sandstones). Tchiatura is one of the most significant centers of manganese abstraction and processing in Trans-Caucasus. Tchiatura manganese concentrate is supplied to Zestaponi Alloy Plant. The unprocessed manganese supply is suspected in Zestaponi municipality, Chkhari-Ajemeti, Kutaisi and Terjola territories.

Tkibuli and Gelati coal, construction material and clay supply are also significant mineral resources in the region. Kutaisi vicinities are rich in bentonite clays, marble, Eklari limestone, Kursebi teschenite, Bazaleti ores. Imereti plants produce 25-30 % of the production of the country. The majority of the plants are located along the main automobile and railway route in towns of Kutaisi, Zestaponi and Samtredia.

### Main Industrial Characteristics of the Region

Table 9.7

Year	Number of surveyed plants, units	Average number of the employed per year, thousand men	Volume of industrial produce in applicable prices, million GEL
2006	647	14.4	292.3
2007	569	13.6	334.8
2008	454	13.1	525.5

MESD, department of statistics

In 2009 29103 registered units were located in Imereti, which is 11.75 % of the enterprises of Georgia.

The number of economic subjects registered in Imereti increased for 27.55 % in 2003-2007, for 35 % in 2007-2008 and 20 % in 2009. According to the statistic data, the number of registered enterprises increases in Georgia and Imereti as well each year.

### The number of surveyed enterprises in the region

Table 9.8

Number of enterprises			Proportion with sum		
2006	2007	2008	2006	2007	2008
4552	3455	2998	16.0	14.9	13.8

MESD, department of statistics

### Turnover in the region

Table 9.9

Turnover, million GEL			Proportion with sum		
2006	2007	2008	2006	2007	2008
661.1	850.1	1003.4	5.1	4.9	5.1

MESD, department of statistics

## Volume of the produce in the region

Table 9.10

Produce volume, million GEL			Proportion with sum		
2006	2007	2008	2006	2007	2008
418.1	512.7	418.1	5.6	5.3	6.8

MESD, department of statistics

## Value added cost volume in the region

Table 9.11

Value added cost, million GEL			Proportion with sum		
2006	2007	2008	2006	2007	2008
133.3	185.3	303.0	3.8	4.1	5.9

MESD, department of statistics

## Volume of interim consumption in the region

Table 9.12

Interim consumption, million GEL			Proportion with sum		
2006	2007	2008	2006	2007	2008
284.8	327.4	398.0	7.2	6.4	7.8

MESD, department of statistics

## Agriculture

Agriculture is one of the significant fields of economy of the region. The main cultures are maize, grape and vegetables, namely, greens – wild dill, coriander, parsley, spring onion and garden cress all year round as well as production of spices. The raw material base is Tskaltubo district, where dill, coriander, parsley, pepper, saffron, dill and savory. The plant of glass production for spices is being constructed. In Tskaltubo, Vani and Baghdati municipalities vegetables are grown – cucumber, tomato, asparagus, lentil; in Vani, Terjola, Samtredia municipalities fruits are grown – apple, pear, plum, prune, persimmon, cornelian cherry; In Baghdati, Kharagauli, Tskaltubo and Terjola honey is produced.

Tea growing should also be mentioned. The main centers are Tskaltubo, Tkibuli and Khoni.

The following fields are well developed:

- Grain production;
- Tea growing;
- Viticulture;
- Horticulture;
- Vegetable growing;
- Bee keeping;
- Hazel nut production;
- Livestock breeding.

According to export calculation, up to 100 large farms are located in Imereti, which are mainly occupied with livestock breeding, viticulture, pig growing, poultry growing, horticulture, bee keeping, green

growing. As regards agro-centers servicing village households, the number of service-centers and their level of equipment with materials and techniques, such centers have not yet been established in Imereti.

## Land Use

### Agricultural land as of 2006 (thousand ha)

Table 9.13

Land in household use	Of which:		
	Own	Leased	
		From physical person	From State
105	98	0	7

### Use of agricultural arable land in household use as of 2006 (thousand ha)

Table 9.14

Cultivated land, total	Of which:			
	Arable		Hay meadows and pastures	Perennial crops
87	14	52	8	13

(MESD, department of statistics, 2007)

## Tourism

### Tourist Resources of Imereti

Geographic location of Imereti, its landscape, historical-cultural and natural monuments, rich folk and especially hospitality traditions form favorable conditions for tourism development in the region.

More than 250 historical monuments are located in Imereti. They reflect the unique richest culture and history of Georgia from the antiquity to the beginning of 20<sup>th</sup> century. Their location in the picturesque landscapes of Imereti has great impression on the visitors.

Discovery and adventure tourism are developed in Imereti, namely, mountain tracking, horseback riding, speleo tourism. Rafting is practiced on r. Rioni. Eco tourism, which has unlimited opportunities of development in Imereti, should also be noted. Agro-tourism has gained certain significance, as more than 200 peasant households have expressed interest in it. Hunting and fishing tourism has new perspectives through Sachkhere new hunting farm. Tourism of Georgian traditions, wine and cuisine should be separately mentioned. The main tourism resources of Imereti are resorts and health improvement zones. Beautiful scenery, medicinal mineral waters, balneological resorts are great attractions of the area. 53 resort and recreational bases are located in Imereti, of which Tskaltubo, Sairme, Nunisi, Simoneti, Sulori, Satsire, Tchiatura, Khreiti, Samtredia, Zvare, Amaghleba should be noted.

Imereti is rich in flora and fauna. The forest massif occupies 250000 ha. This area is harmoniously settled into hilly-mountainous landscape. The maximal altitude is 2850 m above the sea level.

Coniferous and mixed forests occur along with leaved forests. Typical representatives of Caucasus fauna are present: Caucasian bear, boar, deer, roe deer, fox, wolf and jackal. Avifauna is rich as well. Ecological intactness and wildlife makes the area interesting to travelers. Such zones are Sataplia, Ajameti, Mukhnari, Vani, Tchiatura, Baghdati and especially Borjomi-Kharagauli National Park with the area of 24000 ha. It is the most prominent for its flora and fauna. Tourism and recreational zones are areas of Tkibuli, Shaori and Rioni HPS reservoirs. In addition, there are many natural lakes in Imereti at the altitude of 1000 and 1500 m a.s.l.

According to the data of the statistical department, 15 professional and 9 higher educational bodies have been registered in Imereti region in the recent period. The number of pupils is 85154.

### **Revenue and Poverty**

The average monthly expenses of a family equaled to 408.3 GEL (142 EURO) in 2004. Families in villages mainly do not have cash income, while the revenues of the urban population are determined with high share of salary income.

### **Perspectives of Economic Development**

It is noteworthy that systemic measures are undertaken in Imereti to relieve the economic crisis. However, Imereti region is not very attractive to businesses today.

In the recent period the business environment has more or less improved in Georgia, which is proved by surveys of many international organizations. According to annual researches of the WB “Doing Business 2009”, Georgia got 15<sup>th</sup> place in 181 countries in terms of simplicity of business, which is mostly due to easy procedure of property registration and license obtaining. In the survey the country is one of the last places in terms of protection of property. Despite the above mentioned, entrepreneurs still face many problems, of which tax administration, unstable legislation, low development level of court system and infrastructure, corruption and unequal competition are few, which directly hampers business development in the whole country and Imereti region as well. The historical experience of the Western countries proves that when civil society is based upon guarantees for private property and at the same time the state supports the resolution of the existing problem through formation of subsidy approach towards the region, as a rule, a favorable environment is formed for business development. The latter, in its turn, implies the establishment of favorable environment for business in general terms.

In negative production conditions the aim of the structural policy of Imereti region is social-economic, financial and budget system development with maximal utilization of the regional resources and state support of the integration of the region into the world market system, which cannot be achieved without economic sustainability of the region.

Imereti is a traditional agricultural region, so the tax benefits in agriculture and real estate has great significance for local businessmen.

The region has highly competitive agro-industrial potential and perspective of development of tourist-recreational complex. The economic level of the development of Imereti region is greatly determined by small farms, namely, green houses (only in Tskaltubo farm households grow up to 25000 t greens), tourist centers with related hotel business, folk art or potential of development of other economic fields.

There are 53 resort and recreational bases in Imereti. The region is rich in mineral waters, historical and cultural monuments, the attractiveness of which depends on the existence of infrastructure. Lack of investment impedes the formation of network environment in the region.

Tourist infrastructure needs complete rehabilitation with its recreational and resort zones, the conditions of which do not satisfy modern requirements or in the worst scenario the infrastructure is entirely devastated due to lack of maintenance.

The government of Georgia adopted a resolution on the establishment of a free industrial zone in Kutaisi in 2009. This aims at attracting investors in Imereti, because Imereti region has great potential for development. Through opening more enterprises employment level will increase and unemployment will be reduced, the standard of living improved resulting in the development scale of the region.

Hydro-power base of Imereti also requires attraction of investment. The hydro-power field of Imereti could greatly contribute to the resolution of energy safety of the country.

## Employment

### Statistical Data on Employed in Different Fields in Imereti Region

Table 9.15

Field of employment	Produce (million GEL)			Number of employed			Number of hired			Average wage		
	2008	2009	2010	2008	2009	2010	2008	2009	2010	2008	2009	2010
<b>Industry</b>	525,5	294,9	536,4	13052	13778	13865	12752	13129	13321	382,9	358,6	438,0
<b>Construction</b>	38,1	46,8	39,2	3241	2837	2111	3173	2782	2059	257,2	352,7	454,1
<b>Trade</b>	34,3	33,9	43,0	3859	4359	4384	2687	3027	2728	243,0	240,2	265,0
<b>Hotels and restaurants</b>	6,3	7,0	7,3	877	803	599	756	656	464	95,7	124,9	108,7
<b>Transport and communications</b>	14,4	9,1	18,1	1824	996	1129	1605	812	998	187,0	215,8	285,6

### Distribution of Imereti Population by Economic Status (2008, thousand men)

Table 9.16

<b>Active population (workforce), total</b>	<b>376.0</b>
<b>Employed</b>	<b>331.7 1</b>
<b>Hired</b>	<b>82.8 4</b>
<b>Self-employed</b>	<b>248.9</b>
<b>Undefined employed</b>	<b>0.0</b>
<b>Unemployed</b>	<b>44.2</b>
<b>Unemployment rate, %</b>	<b>11.8</b>
<b>Economic activity level, %</b>	<b>66.4</b>
<b>Employment level, %</b>	<b>58.6</b>

## Economically Active Population of Imereti by Age Groups

Table 9.17

By age groups											
Total	<20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+
376.0	5.9	23.4	32.3	36.6	29.1	36.5	41.8	38.6	35.8	23.4	72.6
Share, %											
100	1.6	6.2	8.6	9.7	7.8	9.7	11.1	10.3	9.5	6.2	19.3

### 9.1.4 Infrastructure

#### Transport and Communications

Significant potential lies within geo-political location of Imereti – transit corridor of Europe and Asia. Distance from the administrative center of the region – Kutaisi to the nearest marine port – Poti is 102 km, to the capital – 236 km. 2 airports function in Kutaisi, at one which (Kopitnari) international flights arrive. Hence, transport and communications are large fields of the economy of the region. Automobile, railway and air transport types are developed. The volume of transport servicing was 5.6 million GEL in 2006 and the number of the employed in the field – 1827. 89 enterprises function in transport and communications field. The total length of the automobile roads is 2754.8 km, railway – 229,285 km.

#### Water Supply

Water supply of Imereti has improved in the recent years. The project of rehabilitation of Kutaisi water supply was undertaken in 2009-2010. Its budget was 33.6 million GEL. The following organizations participated in the financing: MCG, EBRD, SIDA, WB, ADB and the government of Georgia. After the completion of the project water supply is 24 h in Kutaisi. In 2010-2011 EBRD financed the implementation of the rehabilitation project of water supply of Khobi municipality. The investment cost of the project was 2 million 299 thousand 200 GEL. Instead of 4 hour schedule the municipality is supplied with water for 24 h.

Large scale rehabilitation works are planned and already undertaken in Zestaponi municipality with the funding of AGB and EBRD. Construction works should presumably finish in 2014. As a result, Zestaponi population will receive potable water for 24 h from a rehabilitated main building and pipeline. The project cost presumably is 105 million 573 thousand 900 GEL.

With the financing of AGB and EBRD the construction project of water supply system of Vani municipality is finished. Internal distribution network was arranged and the water supply improved additionally to 800 subscribers along with installation of meters.

Projects of rehabilitation of water supply systems are planned and undertaken in the municipalities.

#### Gas Supply

The realization of the presidential program “gas in every village” is undertaken in the region according to the decision of the Ministry of Energy and JSC “Itera Georgia”. Major part of Imereti should be facilitated with gas in the nearest future.

#### Power Supply



Imereti is rich in energy resources, which resulted in functioning of five HPS: Rioni, Gumati, Dzevrula, Shaori and Vartsikhe. Proceeding from the above energy production is one of the most significant fields of the industry of the region with the segment share of 21-23 % of the entire production. 24 h power supply is facilitated in Imereti.

### Healthcare

In the nearest past the healthcare development in Imereti was similar to other regions of Georgia. Due to economic disaster of the 90s of the past century resulted in complete disintegration of ineffective and often corrupted system of healthcare. The main goal of the healthcare reform of the recent period is facilitation of healthcare to the population, which is connected with overcoming the poverty problem. The main concern of the reform is establishment of tools for the majority of the population, which will enable them to receive qualified healthcare services. In spite of positive trend in institutional reforms the material-technical base of the hospitals is quite under-developed. Management practice of the medical organizations is not satisfactory as well. The situation is even more acute in terms of high technology treatment. Healthcare policy is not coordinated. Health insurance system is not developed in Imereti as in entire country. The establishment of the insurance system will take years. In the recent period more funds are allocated for Imereti healthcare and social issues. In 2011 within the program of development of the hospital sector new medical centers were opened in Terjola and Tkibuli. In new clinics meeting EU standards the patients will receive high quality medical service. The hospitals are facilitated with modern equipment and qualified personnel. More than 100 local doctors are employed in the center. 7 more clinics will be opened in Imereti in the nearest future.

### Education

Higher educational institutions function in the region:

P.L.E. Akaki Tsereteli State University;

Kutaisi University of Law and Economics LLC;

Medical Institute Kutaisi LLC;

P.L.E. State University of Sub-Tropical Household of Georgia;

P.L.E. Tbilisi State University of Economic Relationships, branch is in Kutaisi;

P.L.E. Vano Sajarishvili Tbilisi State Conservatoire, ranch is in Kutaisi;

Akaki Chkhartishvili Sokhumi State Economic-Humanitarian University LLC (Zestaponi), etc.

### Number of Higher Educational Institutions in Imereti

Table 9.18

State			Private		
2007/2008	2008/2009	2009/2010	2007/2008	2008/2009	2009/2010
1	1	2	10	9	9

Source: National Service of Statistics of Georgia

### Number of Professional Educational Institutions in Imereti

Table 9.19

State			Private		
2006/2007	2007/2008	2008/2009	2006/2007	2007/2008	2008/2009

12	12	3	15	15	-
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Source: National Service of Statistics of Georgia

The share of the population with secondary and higher education in Imereti is similar to other regions of Georgia. In addition, the decreased quality of education in the recent period supposedly results in the low quality and level of education in Imereti as well as entire Georgia. Even fundamental education received in the past could be unusable in the adaptation to the modern market economy. Comprehensive work should be undertaken in this direction in the country. The part of these works has already started. The majority of the population realizes the priority of the education. However, it is unknown how much resources an average Imereti citizen can allocate for education and what type and level of education is considered desirable. The problems of the educational sector development in Imereti (low wages of the pedagogues, teaching level, gaps of management systems) are not region specific. These are problems to be solved at the national level. Lack of opportunities for the employed in the educational system of the region to participate in international grant programs and qualification courses is also country-wide. In our opinion, if Georgian (including Imereti) population should gain competitive advantage in education level, the budget expenditure on the sector should be respectively increased and serious institutional reforms successfully undertaken, which requires many years. All reforms and reorganizations need qualified personnel. The accumulated staff already needs requalification. Moreover, specialists of such traditional fields as heavy industry, weaving, transport, food production, etc. could be lost in the future generations. Despite the fact that 4 accredited higher educational institutions function in Imereti, attracting the young to the mentioned specialties is difficult, which could be explained by the less opportunities of development of these fields.

## 9.2 SOCIO-ECONOMIC FEATURES OF IMERETI REGION BY MUNICIPALITIES

### 9.2.1 KUTAISI

The most part of the industrial produce of the city is divided between electricity and food industry, namely, bakery and grain processing, wine and alcoholic beverage, beer, mineral and soft drink production, meat and meat produce, confectionary, dairy, macaroni and tea production. Decorative and construction stone processing and laying are also developed along with chemical production, leather and leather goods (especially – footwear) production, clothing industry (sewing company), wood processing and furniture production, metal processing and production, production of plastic goods to be used in construction and plastic production, iron-concrete and concrete structure production, wall block and silicon brick production, production of paint, lacquer, enamel and mineral pigments, spice production, tobacco production, textile, jersey and woven material, wool, narrow fabric production, production of haberdashery, production of technical rubber goods, production of cast iron, production of electric devices and components.

The majority of the listed industries is represented with small and medium size businesses, workshops and mini-plants.

Construction industry and business has significantly developed in the recent period. However, world financial crisis has hampered the growth. Urban infrastructure has greatly improved, i.e. road repair and with the support of EU project water supply and sewerage system is being fully rehabilitated. The major part of the city is supplied with gas. Power supply is fully facilitated. The construction of Samtredia-Zestaponi autobahn is due to start near Kutaisi from the next year.

Energy potential in Kutaisi and its vicinities forms favorable conditions for establishment of large energy base. Two powerful HPS are located in Kutaisi – Rioni and Gumati HPS. In the nearest future (from 2011) a powerful (450 megawatt) HPS will be built in some dozen kilometers from the city – Namokhvani HPS (with the estimated investment of 800 million USD). As regards human resources – throughout the decades experienced and qualified personnel has developed in the city. The mentioned was greatly determined by several higher educational institutions and abundance of industrial units.

The government of Georgia adopted a resolution on the establishment of Kutaisi free industrial zone in 2009.

In terms of favorable geographic location transport-transit functions are important. Geo-political location of Kutaisi has earned new meaning, especially in EU project scope, which aims at connecting Caucasus and Asia to Europe and supporting the economic development of these countries. Significant factor is the proximity of the city to central airlines, which offers nice opportunity of development of air cargo services.

## 9.2.2 TSKALTUBO MUNICIPALITY

The population is 73 800, of which 24.7 % is 1-18 years of age, 75.30 % - above 18 years, men – 47.2 % and women – 52.8 %.

Orthodox Christians are 98 %, others – 2 %. Ethnic minorities comprise: Russians – 375 people, Armenians – 81, Azeri – 17, Greeks – 9, others – 200. 3100 refugees live within the municipality. They are united in 1341 families, who are compactly settled in 17 sanatoriums.

Socially disposed groups who receive assistance and policies comprise 14088 people and policies – 18684. The number of lonely mothers reaches 271.

Economic Structure of the District by Fields and % of Total Income

**Table 9.20**

<b>Sector of Economy</b>	<b>%</b>
Heavy industry	<b>19,3%</b>
Light industry	<b>3,6%</b>
Mineral extraction	<b>2,3%</b>
Agriculture	<b>30,3%</b>
Tourism	<b>0,5%</b>
Trade	<b>25,0%</b>
Service	<b>18,8 %</b>
Other	<b>0,2%</b>

Economic Structure of the District by Forms of Economic Activities

**Table 9.21**

<b>Sector of Economy</b>	<b>%</b>
State sector	
Large private companies	<b>10,0%</b>
Small business	<b>50,3%</b>
Individual entrepreneurship and households	<b>30,3%</b>
Other	<b>9,4%</b>

Characteristics of agriculture are as follows:

Agricultural land is 29200 ha, of which private – 14271 ha. Non-agricultural land is 3733 ha, of which private is 1100 ha.

Total area of pastures is 11994 ha (there are no hay meadows within the municipality). The cultivated crops in the settlement are as follows: maize – 6000 ha, greens – 600 ha, fruits – 500 ha, grape – 1000 ha. Population mainly has cattle, about 2 cattle per family.

Individual households are developed in settlements. They mainly consume agricultural produce for their own need. They export about 30 %. The agricultural produce processing enterprises are: wine factories, oil factories. No livestock produce processing plants function in the area. There is only one agricultural produce market.

Tourism – the tourist flow dynamics is as follows in the recent period (thousand men): 2009 – 12000, 2010 – 25000, 2011 – 100 000.

There are 8 hotels, sanatoriums with settled refugees, museums – 3, reserves – 2 and monuments – 45.

Industry – there is a large industrial unit in the municipality – “Vartsikhe HPS 2005” LLC (electricity production). Sand-gravel and teschenite abstraction is developed.

Small business mainly comprises trade and service fields. Employment in state sector is 8.5 %, service – 4.0 % and private sector – 4.5 %.

Small business share is 11.2 %, agriculture – 16.8 %.

Unemployment rate is 55 %, poverty – 19 %.

Ambulatory-polyclinic and hospital healthcare is available. Pre-school, outside school, musical, painting and public school institutions are present.

Agriculture of the region comprises many fields. Mainly vegetable, fruit, grain growing is developed. Tskaltubo is a resort of world significance. It is prominent for fairly original hydro-geological composition.

The main mineral resource of the region is famous Tskaltubo thermal water, which has unique physical-chemical features. The main peculiarity of the water is radioactivity.

Tskaltubo springs are used for rheumatism, joint and peripheral nerve system treatment. They are also beneficial for heart diseases, neurosis, vascular problems, sclerosis and vein diseases. The natural wealth of Tskaltubo is forest. It reaches 24685 ha according to 2008 data. The forest covered 23706 ha. The majority of forests belong to the first group. The forestation of the region is 34.9 %.

World famous Sataplia reserve is located in Tskaltubo. it comprises 345 ha. Dinosaur traces and karst cave are located in the reserve. The cave is rich in stalactites and stalagmites. Its area is 270 sq. m.

Tskaltubo is also prominent for mineral wealth, of which bentonite clay Gumbrini should be mentioned. The clay is processed in Gumbra village. Two kinds of produce is delivered: whitener used for oil titration and caliber Gumbrini, which is used in metallurgy to make calibers (it is a powder). Clay Gumbrini has also been discovered in Tskhukuni and Bumistavi. Limestone and granite ores also occur. Limestone is used for lime and natural stone construction block production.

Granite ores have been discovered within Jhoneti and Opurchkheti territory, while brick clays are abundant within vil. Geguti, Partskhanakanevi and Gvishtibi territories.

By paving stone production, which has great demand not only in Georgia, but abroad, Tskaltubo will have one of the most significant places.

According to prognoses, Tskaltubo will become a significant resort, tourism and industrial center in terms of local natural resource use (thermal waters, construction material, etc.), which will have great impact on the further development of its economy and improvement of the living standard of the population.

### 9.2.3 TCHIATURA MUNICIPALITY

Population is 55797, age distribution in %: 17.6 % below 18 years of age, 82.4 % - above; gender distribution in %: females – 51.4 % and males – 48.6 %; ethnical distribution: Georgians – 98.3 %, Ossetians 0.7 %, Armenians 0.4 %, Russians 0.2 %, Abkhazians 0.03 %, Greeks 0.02 %, Ukrainians 0.04 %, Azeri 0.02 %; distribution by belief in %: Orthodox Christians – 99 %, other religions – 1 %, Georgians 54995, others – 905. The number of socially exposed category is fairly high. 10997 live below poverty line and receive social aid, 4151 have policies. 400 refugees are registered within the municipality. In 2010 birth rate was 7.6 % (468), death – 11.2 (758), natality 3.6 %. In 2011 birth rate was 6.47 % (397), death rate – 8.4 (519) and natality -1.98 %.

Economic Structure of the District by Fields and % of Total Income

**Table 9.22**

<b>Sector of Economy</b>	<b>%</b>
Heavy industry	-
Light industry	-
Mineral extraction	<b>80</b>
Agriculture	<b>7</b>
Tourism	-
Trade	<b>7</b>
Service	<b>6</b>
Other	-

Economic Structure of the District by Forms of Economic Activities

**Table 9.23**

<b>Sector of Economy</b>	<b>%</b>
State sector	<b>0.5</b>
Large private companies	<b>0.02</b>
Small business	<b>0.3</b>
Individual entrepreneurship and households	<b>95.7</b>
Other	<b>3.5</b>

Characteristics of agriculture are as follows:

Agricultural and non-agricultural land is 32 664 ha, of which agricultural is 73 % and non-agricultural – 27 %. State owns 11 3095.3 ha of agricultural land and 8736.3 ha of non-agricultural land. 12508.2 ha of agricultural land and 3.5 ha of non-agricultural land is privately owned.

Agricultural crops are as follows: maize – 5136 ha (88.5 %), haricot 3102 ha (mixed with maize), grape – 513.6 ha (8.6 5), cucumber – 7.6 ha (0.13 %), tomato 7.8 ha (0.13 %), onion 25.7 ha (0.44 %), garlic 16.8 ha (0.3 %), potato 92 ha (1.6 %); livestock breeding: cattle 22893, small livestock 4632, pigs 4324. 70 % of the agricultural produce is consumed for own needs, 30 % is taken for realization. There are no agricultural processing plants in the settlements. Agro-market functions in the city. It serves the purpose of realization of agricultural produce of the neighboring villages. The number of tourists is very low – 46 tourists and 10 excursion groups in the recent 5 years! The number of museums is 6, historical monuments: church-monasteries and remnants – 31. Industry – one of the large industrial units of the region is “Georgian Manganese” LLC, which abstracts manganese and quartz in open quarries. Small business is developed at average level: abstraction and realization of quartz, trade, collection of dissipated manganese ore, brokerage and mediatory business. Employment is as follows: 4500 in heavy industry (22.3 %), tourism – 9, small business – 1500 (7 %), agriculture – 13677 (67.7 %), service – 606 (3 %). Unemployment rate is 34 %.

Multi-profile medical and first aid medical services are available in the region. There are 43 public and 2 private schools, boarding school “Profinium” LLC. 6400 pupils study in these institutions. Tchiatura is one of the important centers of abstraction industry of Georgia. Its establishment and further development were determined by industry formed on the basis of manganese ore in r. Kvirila gorge. The main settlement of the town is located on both banks of r. Kvirila and lies within a depression restricted with steep high rocks almost from all sides. Industrial districts abut on it with the radius of 2-6 km.

The main field of economy of the city is industry – abstraction and concentration of manganese ore. Manganese complex worked with full load till 1992 (comprised 9 mane departments, concentration plant, mechanized plant and many auxiliary facilities). It still supplies Zestaponi Alloy Plant with manganese ore concentrate and black metallurgic plants outside Georgia.

#### 9.2.4 KHARAGAULI MUNICIPALITY

The population is 28058, of which females are 44.7 % and males 37.3 %, below 18 years of age – 18.0 %, Georgians – 99.85 %, Armenians – 0.02 %, others – 0.05 %, Christians – 100 %, Georgians – 28017, Russians – 21, Armenians – 6, other – 14.

The number of the socially exposed persons is high. 17380 people live below poverty line and receive social assistance. Refugees are registered within the municipality. They are not settled compactly. The number of families who are headed by lonely women is 250.

6.47 % (397), death rate – 8.4 (519) and natality -1.98 %.

Economic Structure of the District by Fields and % of Total Income

**Table 9.24**

Sector of Economy	%
Heavy industry	0
Light industry	0
Mineral extraction	18.6

Agriculture	<b>0</b>
Tourism	<b>0</b>
Trade	<b>0</b>
Service	<b>0.1</b>
Other	<b>81.3</b>

Economic Structure of the District by Forms of Economic Activities

**Table 9.25**

<b>Sector of Economy</b>	<b>%</b>
State sector	<b>10</b>
Large private companies	<b>3</b>
Small business	<b>15</b>
Individual entrepreneurship and households	<b>60</b>
Other	<b>12</b>

Characteristics of agriculture are as follows:

The ownership of agricultural and non-agricultural land is distributed as follows: state property 44 % and private property 54 %. Arable land: state owned is 0, private – 4512 ha, cultivated – 3700 ha. The following agricultural crops are cultivated:

**Table 9.26**

	Ha	%
Grape	664,6	12,89
Maize	2862,6	55,51
Haricot	270,3	5,24
Potato	154	2,99
Vegetables	347,4	6,74
Fruits	858,25	16,64

Livestock breeding: population has cattle, averagely 2 per family. Individual households are developed. About 80 % of the produce is used for own needs, 20 % is sold. There are no agricultural produce processing plants in the municipality. Agro-market functions in the city.

Tourist objects are as follows: family hotels – 5, sanatorium – 1, museum – 1, historical monuments – 70, reserve – 1. The number of tourists is 105-160 people in the recent 5 years.

There are no large industrial units in the district. Marble, limestone, wood, mineral and medicinal waters are noteworthy in the field of mineral and natural resource abstraction. Small business is limited to distribution of local produce and realization of imported goods (very small scale). The employment by sectors is described below:

**Table 9.27**

Sector	Share %
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Large industrial plants	0
Tourism	3
Small business	25
Service	15
Agriculture	47
Other	10

Unemployment and poverty level is presumably medium (exact numbers are not available).

1 hospital, 14 ambulatories, 2 first aid stations are located in the municipality.

2900 pupils study in public schools, pre-school institutions are also available.

The industry of the municipality comprises the following: construction stone block production, bakery, wood processing and realization, alcoholic beverage production and realization. Mineral water “Zvare” production has started in the municipality with the aim of industry development. The municipality is rich in natural mineral waters. Nunisi waters are world famous for prominent medicinal features. Elite mountain resort “Samta Nunisi” functions in the area. It is renowned for historical attractions and naturally warm mineral-sulphur water, which has no analogue in the world.

Kharagauli historical territory was included in Argveti Saeristavo (Feud). It comprised fairly large part of the silk way.

The main fields are agriculture, tourism, trade. Significant part of Borjomi-Kharagauli national forest-park is included into the municipality. The park forms rich landscape with its unique flora and fauna. It is one of the largest in Europe (85 thousand ha). At present 9 tourist trails function in the park with tourist shelters along the trails. Kharagauli is rich in rivers and hydro resources. The longest river is Dzirula.

## 9.2.5 VANI MUNICIPALITY

The population is 34566, of which females are 54 % and males 46 %, Georgians – 99 %, Christians – 99 %, ethnic and religious minorities – 1 %, refugees – 362, of which 186 are compactly settled (100 in tour base “Argo” and 86 in professional educational institution hostel). 9622 receive policy from the socially exposed persons, while 1755 – assistance. 9 lonely women head families.

Economic Structure of the District by Fields and % of Total Income

**Table 9.28**

Sector of Economy	%
Heavy industry	
Light industry	
Mineral extraction	<b>3</b>
Agriculture	<b>70</b>
Tourism	
Trade	<b>14</b>
Service	<b>3</b>
Other	<b>10</b>



Sector of Economy	%
State sector	
Large private companies	10
Small business	25
Individual entrepreneurship and households	60
Other	5

Characteristics of agriculture are as follows:

State owns 30292 ha of non-agricultural land, private sector – 6 ha. State has 902 ha of arable land, private sector – 4718 ha, of which 1960 ha is cultivated. The following crops are grown: garlic – 50 ha, onion – 300 ha, maize – 3500 ha, orchards – 210 ha, haricot (mixed) – 20 ha, potato – 270 ha, cucumber – 200 ha, tomato – 500 ha, annual greens – 460 ha. Livestock breeding: 2 cattle per family along with 1 pig, 2 goats and 10-15 poultry. Individual households are developed. Population mainly consumes the produced agricultural goods, 10-12 % is sold. 2 wine factories, 2 hazel nut factories, 3 agricultural produce markets function within the municipality.

Tourist objects are: sanatoriums – 2 (resort “Sulori”, “Amaghleba” do not function), museums – 4, P.L.E. Galaktion and Titsian Tabidze house-museums, Otar Lortkipanidze Vani Archeological museum, K. Kekelidze museum and museum of painted arts (located in the building of Vani cultural center), hotels – 0. Information on tourist flow dynamics for recent 5-10 years is absent.

Large industrial units of the region are: “Bemoni” LLC (wood processing), “Vani 2008” LLC (filling material processing). Gypsum abstraction, wood and wood processing, filling material processing are noteworthy from mineral and natural resource abstraction. The number of local construction companies is 6, the share of construction sector in the entire economic structure is 14 %. Small business and trade comprises bakery, wood processing, filling material processing, electricity production. Trade is mixed and retail. Employment is as follows: state sector – 1270, private sector – 830, service – 150, small business – 100, agriculture – 8000. Unemployment rate is 35 %, poverty 5 %.

Ambulatory-polyclinic medicinal service is available. “Aditi” LLC is located in t. Vani and represents a polyclinic-hospital union. 29 public schools and 2 private schools, of which 1 is an Orthodox Gymnasium, function in the municipality. 3250 pupils study in these institutions.

## 9.2.6 Khoni Municipality

The population of the municipality is 31575, of which 3.2 % is of 0-6 years, females 1.4 % and males 1.8 %, 8.3 % is of 7-17 years of age, females – 4.3 % and males 4.0 %, 12.1 % - 18-25 years of age, females 6.4 % and males 5.7 %, 3.8 % - 26-35 years of age, females 7.3 % and males 6.5 %, 13.0 % - 36-45 years of age, females 7.0 % and males 5.7 %, 13.7 % - 56-65 years of age, females 7.1 % and males 6.6 %, 23.2 % - above 65 years, females 11.6 % and males 11.6 %, Georgians – 93.2 %, Russians – 0.4 %, Armenians – 0.1 % and others – 0.3 %. Orthodox Christians are 98.4 %, Catholics 1.6 %.

Ethnic structure is as follows: Russians – 142, Armenians – 25, Azeri – 5, Greeks – 3, others – 86. 1445 refugees live within the municipality. They are compactly settled in t. Khoni in former military settlement – 1335. 7262 are socially exposed and receive assistance and policies. 18109 receive policies. Families headed by lonely women reach 141.

Economic Structure of the District by Fields and % of Total Income

**Table 9.30**

<b>Sector of Economy</b>	<b>%</b>
Heavy industry	
Light industry	
Mineral extraction	
Agriculture	<b>44</b>
Tourism	
Trade	<b>25</b>
Service	<b>3</b>
Other	<b>28</b>

Economic Structure of the District by Forms of Economic Activities

**Table 9.31**

<b>Sector of Economy</b>	<b>%</b>
State sector	
Large private companies	
Small business	<b>30</b>
Individual entrepreneurship and households	<b>55</b>
Other	<b>15</b>

Characteristics of agriculture are as follows: distribution of agricultural and non-agricultural land – 81.1 % is agricultural and 18.9 % is non-agricultural, state – 75.3 %, private – 24.7 %, state – 907 ha, private – 6636 ha, cultivated – 3130 ha, pastures/hay meadows – state 7484 ha, private 182 ha, used 7665 ha. Agricultural crops: maize – 5562 ha and 73.7 %, vegetables – 300 ha and 4 %, potato – 130 ha and 1.7 %, others (soy, haricot, orchard crops, etc.) – 45 ha and 0.6 %, 1506 ha is not cultivated.

Livestock breeding – cattle – 21926, average per family 2, pigs – 3100, average per family 0.3, goats and sheep – 1300, average per family 0.1. Livestock produce processing plant association “Gordi” is located in the municipality. Individual households are developed. 35 % of the agricultural produce is sold. Khoni agro-market “Lemepi” LLC functions in the area.

Tourist objects are: hotel – 1, museums – 4, reserves – 1, historical monuments – 40, number of tourists last year – 75. There are no large industrial objects in the municipality. Filling material processing workshop functions at r. Tskhenistkhali. Beech material wood production is present. Local construction company JSC “Specmsheni” participates in the construction business. The share of the construction business in the economic structure is 8 %. 7 gas stations, 16 bakeries, 12 drugstores, 226 commercial objects function from the small business sector. Population arranges trade kiosks and car washing

facilities on their residential plots at roadsides. The number of the employed in the state sector is 1442 (12 %), service – 100 (1.2 %), agriculture – 9250 (77.1 %), industry – 50 (0.4 %), construction – 200 (1.7 %), small business – 958 (7.6 %). Unemployment rate is 25.2 %, poverty – 23.0 %. 2370 persons live below poverty line (registered), policies are received by 5499. Hospital, ambulatory and first aid is available. 4 public and 1 private school functions in the municipality, the number of pupils is 3087.

### 9.2.7 TKIBULI MUNICIPALITY

The population of the municipality is 28511, 24 % - 1-18 years of age, 76 % - above 18 years, males – 46.4 %, females – 53.6 %, Christians – 99 %, others - 1 %, Russians – 186, Armenians – 23, Azeri – 16, Armenians – 18. 445 people live within the municipality, of which 85 families are city dwellers and 7 live in the villages. 7749 are socially exposed and receive assistance and policies. Policies are received by 2579. Families headed by lonely women are 127.

Economic Structure of the District by Fields and % of Total Income

**Table 9.32**

<b>Sector of Economy</b>	<b>%</b>
Heavy industry	<b>10</b>
Light industry	<b>2</b>
Mineral extraction	<b>68</b>
Agriculture	<b>8</b>
Tourism	<b>5</b>
Trade	<b>4</b>
Service	<b>2</b>
Other	<b>1</b>

Economic Structure of the District by Forms of Economic Activities

**Table 9.33**

<b>Sector of Economy</b>	<b>%</b>
State sector	
Large private companies	<b>70</b>
Small business	<b>10</b>
Individual entrepreneurship and households	<b>14</b>
Other	<b>6</b>

Characteristics of agriculture are: 12497 ha is agricultural land, of which private is 4432 ha. Non-agricultural land is 34810 ha, of which private is 64 ha. State land is 572 ha, private – 2024 ha, cultivated – 1100 ha.

Pastures/hay meadows: state – 6298 ha, private – 245 ha, used – 6543 ha. Agricultural crops: maize – 75 %, grape – 22.8 %, haricot – 2.2 %. Livestock breeding is not well developed – mainly cattle are kept, average of 0.5 per family. Individual households are developed. Agricultural produce is mainly used for own needs. 10 % is sold. Only one agricultural market is located in the area. There are no agricultural produce processing plants in the municipality. Tourist objects: hotels – 5, museums – 1, cave – 1 (Tsutskhvati), historical monument – 2 (Gelati, Motsameta). The dynamics of tourist flow in the recent period is as follows: 2009 – 15000, 2010 – 30000, 2011 – 50000. Large industrial objects are “Saknakshiri” LLC, GGI Group (coal abstraction), “Shaori HPS” LLC (power production). Coal, granite, teschenite, agate are noteworthy from natural and mineral resource abstraction. Mainly trade and service field is developed in small business. Roadside feeding objects occur, private kiosks and feeding objects are located near tourist attractions. The share of construction business in the entire economic structure is 0.5 %. There are 3 local construction companies in the district. Employment: state sector – 36 %, private – 58 %, small business – 5.8 %, other – 0.2 %. The total number of employed is 3500, state sector – 1260, private – 2240. Unemployment rate is 60.0 %, poverty 27 %. Ambulatory-polyclinic and hospital healthcare is available.

Pre-school, outside school, musical, painting, choreographic and public schools function in the area. 2761 pupils study in these institutions.

Coal industry is a significant field of Tkibuli industry. Balance supply of coal is 307 million tons, while total geological supply reached 1 billion tons. The main consumer of coal was Rustavi metallurgic plant, Tkvarcheli thermal power station, Azerbaijan and Armenia and many plants-organizations of Georgia. As a result of events of the previous years the coal abstractions has almost ceased, while coal preparation plant was destroyed.

“Saknakshiri GGI Group” LLC bought the mines in 2006. They conducted multi-million investments and rehabilitated the infrastructure. By 2010 the coal abstraction will increase to 3 million tons. The realization of the abstracted coal is undertaken both locally and through export market.

The number of the employed increased from 400 to 1000 men.

“Saknakshiri GGI Group” LLC plans construct thermal power station (12 Megawatt) functioning on coal and semi-coke plant, which will eliminate the problem of coal realization. This problem still hampers the development of coal industry.

The development of the coal industry will support energy safety and independence of Georgia. According to the project of power production based upon the local coal resource, major improvement to the macro-economic indexes of the country is expected (7-10 % increase of GDP, improvement of foreign trade balance by half a billion USD).

The region is rich in hydro resources. A dam was built on r. Shaori and artificial reservoir established. The reservoir supplies “Shaori HPS” built at t. Tkibuli. The project capacity of the HPS is 38.4 Megawatt, average capacity – 28.0 Megawatt.

In addition to coal, the territory is rich in teschenite ore. Its abstraction and processing is also developed. Teschenite is openly abstracted in villages: Kursebi, Okhomira, Koka, Bueti and Tsutskhvati. Large plant of paving tiles of teschenite functions in Kursebi. Several medium size and small workshops of teschenite processing are present in the municipality.

Arable land of Tkibuli is 11700 ha, of which grains are cultivated on 4000 ha, grape – 300 ha, tea (raw material is abstracted) – 200 ha, gardens – 2400 ha, etc. The main agricultural produce is maize. Viticulture is developed in the region.

Tea growing was the leading field in Tkibuli. At present part of tea plantations ran wild and bear no yield. Only 200 ha is productive. Only one agricultural produce processing plant functions in the municipality – Tkibuli tea plant, which is privately owned. The state disbursed grant in the amount of 350 thousand GEL within the cheap loan program for the reconstruction of the plant, which facilitated the re-equipment and revival of the field.

Traditionally horticulture is one of the major fields in the region and Khresili tin plant functioned in the area. At present the tradition has been lost and horticulture serves only local demand.

Livestock breeding – is one of the most profitable fields for rural population. 1200 cattle is present in the district, of which 5200 are cows. Goat numbers have significantly increased.

Due to the known events the field of pig breeding has been entirely eliminated. In the recent period the pig numbers have drastically increased, but they are still well below the figures of the past years. According to statistics, 1200 pigs are present, while in 2006 the number exceeded 5000.

Bee keeping develops quite rapidly. The number of hives has increased and exceeded 6000.

### 9.2.8 ZESTAPONI MUNICIPALITY

Major part of the industrial potential of the country is located in the district, namely, joint stock companies like “Pero”, “Sakkabeli”, “Ion”, “Gratsia”, etc. The main industrial produce is: various alloy products, silico-manganese, electrolyte manganese, aluminum and copper cables, bare conductors, rubberoid, semi-conducting and flint-net high voltage transformers, auto blocking and alarm systems, electricity and voltage transformers for railways, household auto-transformers and generators, electric accumulator charging devices, fire-proof brick, mortar powder and sewing produce.

JSC “Pero” load and unimpeded functioning determines the improvement of infrastructure of all economic fields of the district, i.e. construction, transport and trade-service. In addition, it is the guarantee of further development of the economic potential of Imereti and especially Tchiatura district.

Some opportunity lies within the revival of JSC “Gratsia” (former sewing factory). It is characterized with interesting perspectives.

Significant economic potential could also be developed due to JSC “Sakkabeli”, which is 100 % privately owned. Due to production of high quality, but expensive cables it now works only on private orders. However, the enterprise could produce highly competitive cables of various types, bare conductors, which could compete with imported cheap, but poorly made foreign goods.

Some beneficial trends have developed in construction. A strong construction organization “Imereti-1” functions in the region, which has working objects not only in the district, but in other towns of the country.

Viticulture is the leading field of economy comprising 80 % of the agricultural produce. Vineyards are cultivated on 5000 ha.

Grape is typical to Zestaponi district. Wine factories, which are 100 % privately owned joint stock companies, produce wine and wine material of the best quality.

A French firm “Castelle” has a contract with JSC “Sviri”, the wine of which is entirely exported abroad.

Significant opportunities lie within the further development of the processing industry. “Sakari’s Marani” LLC, JSC “Imereti”, JSC “Vatchevi”, JSC “Sviri” should be especially noted. Large amount of wine, wine material, brandy alcohol and cognacs are produced by these enterprises.

Maize growing is developed in the region. Maize variety “Ajameti Tetri” derived by Ajameti Test Station is adapted to Western Georgia and considered as highly productive variety, the demand on which is significant.

### 9.2.9 BAGHDADI MUNICIPALITY

Favorable climate and fertile soil of Lesser Caucasus foothills forms the opportunity for grape and other fruit and vegetable cultivation. The 2/3 of the southern area of the district is covered with Lesser Caucasus ridge. Densely forested slopes ascend to almost 3000 m height and form unique alpine panorama. Precious woody species like oak, nut, ash, chestnut, spruce, pine, alder, etc. are utilized in different fields of industry. The produce is sent to EU countries. The abundance of wood resources offers the opportunity to increase the production without the risk of forest decline.

Rich quarries of the Lesser Caucasus comprise tuff, granite, marble. These industries are waiting for significant investment as well.

Mineral water resort Sairme is located in the heart of the Lesser Caucasus. It has the capacity to receive 150 000 visitors annually. 80 % of Sairme mineral water is designated for export. Relatively small resort near Sairme is Zekri medicinal sulphur bathes, which remedy many ailments. Sairme is the ideal base for visiting alpine zones located at the highest points of Lesser Caucasus. It is connected with Borjomi-Kharagauli National Forest-Park to the south-east. The natural beauty of the district and many church-monasteries form ideal conditions for tourism development.

67.5 % of Baghdati is covered with forest. The most famous is Vartsikhe cognac factory.

### 9.2.10 SACHKHERE MUNICIPALITY

The main source of income for the village population of the municipality is grain (maize, partially wheat), grape growing, partially poultry and livestock breeding. They mainly have cattle, pigs and sheep.

The below mineral resources are found in Sachkhere municipality: spar sand ore in vil. Otskisi and Itavazi; quartz sand ore in vil. Sareki; coal and agate ore in vil. Tskhami; volcanic breccia in vil. Korbouli; sand-gravel ores in riverbed of Kvirila and Chikhura.

The forests cover 65000 ha. The following rivers flow within the municipality: Kvirila, Dzirula, Dumala, Jruchula, Chikhura, Lashura, Prone.

**As regards the lack of economic subjects, the most under-developed areas are Vani, Sachkhere and Khoni districts.**

## 10. STRATEGIC ENVIRONMENTAL, CULTURAL HERITAGE, AND SOCIAL IMPACTS OF IRDS AND ITDS

### 10.1 STRATEGIC ENVIRONMENTAL AND SOCIAL IMPACTS OF IRDS

Imereti is considered a lagging region and has only 40 percent of the income in Tbilisi. The incidence of poverty in Imereti is 14 percent, which is slightly lower than the Georgia average of 16 percent. The unemployment rate is 11 percent, which is below Georgia's average of 16 percent and Tbilisi's rate of 30 percent. Such a relatively low unemployment rate results from the rural character of the region, with intensive participation of the population in agricultural self-employment and non-paid employment. The expectation is that Imereti's development is anticipated to draw in skilled and unskilled labor from Imereti region itself, as well as surrounding areas and Tbilisi.

Mining and heavy industry used to dominate the region and there are still traces of them (manganese, construction materials and steel production are still important industries). Today, Imereti is based more on service and agricultural economy than industrial. Imereti is the largest producer of meat, milk, and corn in the country. Agriculture contributes with 12 percent of the GDP of Imereti (versus 8 percent for Georgia as a whole). But like the case of the country as a whole, both these sectors are significantly overshadowed by services.

The Imereti spatial economic analysis<sup>20</sup> (ISEA) and IRDS<sup>21</sup> have identified services including tourism, industry and trade as the main drivers of economic growth in the region. Services are today the main driver of economic activities, contributing 73 percent of its total value added. The bulk of services are represented by activities associated with tourism – given the numerous natural and cultural heritage attractions of this region.

Chapter 4 of the IRDS for years 2012 – 2017 developed by MRDI and approved in 2012 defines following priorities:

#### **Industry and Mining Development**

- P. 4.1 Development of Free Industry Zone in Kutaisi (at initial stage it is envisaged that following enterprises will be established in this zone: light bulb production; Chemical plant for polisterine and polivinylchloride production; plant for refrigerator production; Production of construction materials for summer houses and cottages; production of samitaryware items;)
- P. 4.3 Ferrous and non-ferrous metallurgic engineering (Chiatura, Kutaisi and Zestaphoni)
- P.4.4 Coal exploration (in Tkibuli)
- P.4.5; Production of construction materials
- P. 4.6 Production of furniture
- P. 4.7 Development of several directions of the chemical industry (Kutaisi)
- P. 4.8 Clay material exploration and processing (Argveta; Shrosha; Terjola; Sachkhere; Samtredia; Tskaltubo; Khoni;)

#### **Transport Communications and International Transit Cargo Traffic Development**

- P. 4.2 Transport Communications and International Transit Cargo Traffic Development (Kutaisi Kopitnari airport; Zestaphoni – Kutaisi bypass- Samtredia section of the E-60 highway; railway junction in Samtredia)

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<sup>20</sup> Imereti spatial economic analysis was prepared in the framework of Project preparation to underpin its design.

<sup>21</sup> Imereti Regional Development Strategy has been prepared with technical and financial support from the EU.

### **Tourism Development**

- P. 4.10 Healthcare tourism
- P. 4.11 Adventure, religious and discovery tourism
- P. 4.15 Facilitation of handicraft and national souvenirs production

### **Agriculture Development**

- P.4.12 Greenhouse development
- P. 4.13 Food processing industry
- P. 4.14 Logistic Center for storage and utilization of agricultural products (Samtredia)
- P. 4.16 Tea production

### **Trade**

- P. 4.17 Development of modern trading network

### **Infrastructure**

- P. 4.19 Development of infrastructure and social services (roads; water supply and sewerage systems; housing; rehabilitation of schools;

### **Environmental Protection**

- P. 4.20 Improvement of Waste Management (Development of Waste Management Plan; Improvement of waste collection systems and facilities in Kutaisi, other cities, and resort destinations; Closure and reinstatement of incompliant landfills; Construction of new regional sanitary landfills; Facilitation of development of the waste processing small enterprises)
- P. 4.21 Efficient use of energy resources (development of small and medium scale hydropower plants with total generation of 135 MGW; Development of wind and solar energy sector)

The above components (development programs) of IRDS are predominantly complementary and synergetic, rather than competitive. Implementation of each program is supportive for implementation of other components of IRDS. The overall expected outcome is improvement of socio-economic conditions and employment opportunities at regional level.

Industry also is not viewed in IRDS and ISEA as a sector competitive or incompatible with tourism development. However, it is clear that industrial zones and most of tourism clusters should be spatially separated. SECHSA report in line with the ITDS, recommends to develop only “soft” sectors of tourism (healthcare and wellness; soft nature; cultural tourism etc.) in “non-industrial” zones and reject “hard” tourism alternatives. On the contrary, industrial zones is preferable for developing “hard” tourism activities, like motor-biking, paint-ball, extreme and adventure sports etc., while “soft” alternatives have less prospective here. Besides that, SECHSA reviews cumulative and/or inter-sectoral impacts of industry and tourism and recommends development of Regional Pollution Prevention Plan to minimize industry related pollution and its impact on tourism development.

One of the Strategic impacts of the IRDS as an entire program is creation of employment opportunities in the Imereti region and improving local and overall demographic situation, which suffers from emigration of local population in Tbilisi and abroad. This, on its turn, may have indirect input in improving demographic situation in Tbilisi, which is disproportionately overloaded by influx of people from regions.

In terms of its influence on tourism sector, it is obvious, that development of infrastructure, agriculture, trade networks and environmental protection programs are supportive for tourism development in the



region. At the same time, tourism development increases demand and supports development of agriculture, infrastructure and implementation of environmental protection programs.

It is obvious that development of the trade network will support development of tourism and agriculture, as well as induced development and demographic trends caused by industry and agriculture development. Improper planning in this sector may result in disproportional increase of imported products on a local market, replacing local products. The proper strategy is developing such trading networks that maximally utilize local products and facilitate development of local businesses.

The strategic impacts related to development of agriculture and trade networks are mostly limited to the abovementioned general effects of overall socio-economic improvement and related demographic trends. Strategic (indirect, cumulative etc.) impacts of industry, infrastructure and hydropower sectors are more diverse, as well as the indirect influence of these sectors on tourism development and ITDS goals. These relations are schematically presented in the tables below.

### 10.1.1 INDUSTRY AND MINING DEVELOPMENT COMPONENTS OF IRDS

Direct Impact (negative or positive)		Strategic Impacts		Impact on Tourism Development and ITDS		
Environmental Aspect	Impact	Environmental Aspect	Impact	Factors	Impacts	Mitigation or Enhancement Considered in ITDS
Climate	<p>Increased greenhouse emissions;</p> <p>Minor impact as the input in global climate change is negligible;</p>					
Air Pollution	<p>Increased emission of toxic substances;</p> <p>High impact for Zestaphoni, Chiatura, Kutaisi and Tkibuli;</p> <p>From minor to medium impact in Samtredia, Tskaltubi, Khoni, Argveta, Sachkhere, Srosha, Terjola)</p>	Air Pollution	<p>Air pollution caused by industry development may negatively affect tourism development at the tourism destinations located near the sources of pollution and in the region as a whole.</p> <p>Pollution with heavy metals and other toxins may negatively affect development of agriculture sector.</p>	Air Pollution	<p>Air pollution caused by industry development may negatively affect tourism development at the tourism destinations located near the sources of pollution and in the region as a whole.</p>	<p>Improvement of pollution control and enforcement systems in Country and in the region</p>

Surface and groundwater resources	<p>Increased discharges of toxic substances;</p> <p>High impact for Zestaphoni, Chjiatura, Kutaisi and Tkibuli;</p> <p>From minor to medium, impact in Samtredia, Tskaltubi, Khoni, Argveta, Sachkhere, Shrosha, Terjola)</p>	Surface and groundwater resources	<p>Surface- and groundwater pollution caused by industry development may negatively affect tourism development at the tourism destinations located near the sources of pollution and in the region as a whole.</p> <p>Pollution with heavy metals and other toxins may negatively affect development of agriculture sector.</p>	Surface and groundwater resources	Surface- and groundwater pollution caused by industry development may negatively affect tourism development at the tourism destinations located near the sources of pollution and in the region as a whole.	Improvement of pollution control and enforcement systems in Country and in the region
Waste generation and pollution	Increased generation of hazardous and non-hazardous industrial wastes and wastewater;	Pollution and aesthetic impacts caused by improper waste management	<p>Landscape disfiguration, poor sanitation and pollution caused by increased waste generation may negatively affect tourism development, agriculture;</p> <p>Impact on infrastructure development plans and priorities:</p>	Pollution and aesthetic impacts caused by improper waste management	Landscape disfiguration, poor sanitation and pollution caused by increased waste generation may negatively affect tourism development, agriculture;	<p>Development of waste management system, administrative structure, infrastructure and facilities, management plans and capacity building programs;</p> <p>Improvement of pollution control and enforcement systems</p>

			facilities for hazardous and non-hazardous waste should be developed in the region as a first priority.			in Country and in the region;
Triggering hazardous geological processes; Erosion and desertification of land	From medium to high in mining industry sites (Chiatura; Tkibuli);  From minor to medium impact at other industrial sites;					
Landscape degradation	Footprint on landscape and landscape degradation impacts varies from medium to high in mining industry sites (Chiatura; Tkibuli);  From minor to medium impact at other industrial sites;	Landscape degradation	Landscape disfiguration, poor sanitation and pollution caused by increased waste generation may negatively affect tourism development, agriculture;	Landscape degradation	Landscape disfiguration, poor sanitation and pollution caused by increased waste generation may negatively affect tourism development, agriculture;	EMPs and landscaping for industrial projects. Urban planning and landscaping;
Impact on flora	Impact on flora is medium in mining industry sites (Chiatura; Tkibuli);  From minor to medium impact at other industrial sites;		Development of furniture production enterprises will facilitate economically more efficient use of natural resources (wood) as instead of exporting			

	<p>The impacts on flora are not high as the activities are focused in industrial zone and ecologically sensitive areas are not affected.</p>		<p>raw materials, final products will be exported. This will increase the value of economic profit of the explored natural resources.</p> <p>Both, positive and negative effects are potentially expected. The intensity of woodcutting may increase in case of improper management. On the other hand, development of the furniture business may result in introducing better long-term forestry management schemes.</p>			
Impact on fauna	<p>Impact on fauna is low mining industry sites (Chiatura; Tkibuli) and at other industrial sites; The impacts on fauna are not high as the activities are focused in industrial zone and ecologically</p>					

	sensitive areas are not affected					
Impact on natural resources	Development of furniture production enterprises may increase wood cutting.	Natural resource management	Development of metallurgical plants, chemical industry and furniture production enterprises will facilitate economically more efficient use of natural resources (manganese, coal; wood etc.), as instead of exporting raw materials, final products will be exported. This will increase the value of economic profit of the explored natural resources.			
Cultural Heritage (CH)	Construction of new facilities may have negative impact on monuments and archaeological sites;	Cultural Heritage	Overall improvement of the socio-economic conditions will enable local and central governments to implement CH protection programs	Cultural Heritage	Negative impacts on cultural heritage will negatively affect tourism, while implementation of CH protection programs will support tourism development in the region.	Minimize negative impacts through implementing proper EIA and EMS;  Support CH and conservation programs;

Landuse	Development of the industrial sector is planned for the areas, which are already industrial and this will not cause significant change of landuse patterns (e.g. diminishing of agricultural activities)	Induced development	Development of industry will increase employment opportunities and need of specialists This may cause influx of new people into the area and even development of new local settlements. Besides, development of industrial sector indirectly will stimulate development of trading and services.			
Demography	May slightly increase the number of new settlers/employees of new enterprises and mostly will affect demography in terms of retaining the local residents	Induced development	Improved employment opportunities, due to development of industry and indirectly stimulated development of trading and services, will increase influx of new people into the region and retaining of local population.	Induced development	Induced development caused by overall development of the regional economy should not be a problem for tourism development. Induced development will improve demographic situation in region and support normal functionality of services, trade, agriculture and other sectors important for tourism development.	

Socio Economic impact on country level	Tangible positive direct economic impact (increased GDP and tax incomes in central budget).		Tangible positive indirect impacts  development of industrial sector indirectly will stimulate development of trading and services, will increase country credibility for investors;			
Socio Economic impact on local level	Significant positive impact (tax incomes in local budget).  Improved employment opportunities for local population;.		Tangible positive indirect impacts  development of industrial sector indirectly will stimulate development of trading and services, improve employment opportunities and spending power of local population;			
Employment	Significant positive impact at local level					



**10.1.2 INFRASTRUCTURE DEVELOPMENT (TRANSPORT COMMUNICATIONS, INFRASTRUCTURE AND WASTE MANAGEMENT FACILITIES) COMPONENTS OF IRDS**

<b>Direct Impact (negative or positive)</b>		<b>Strategic Impacts</b>		<b>Impact on Tourism Development and ITDS</b>		
<b>Environmental Aspect</b>	<b>Impact</b>	<b>Environmental Aspect</b>	<b>Impact</b>	<b>Factors</b>	<b>Impacts</b>	<b>Mitigation or Enhancement Considered in ITDS</b>
Climate	<p>Increased greenhouse emissions from increase traffic;</p> <p>Minor impact as the input in global climate change is negligible;</p>					
Air Pollution	<p>Increased emission of toxic substances;</p> <p>Medium impact for areas adjacent to the international highways and national roads and Kopitnari airport;</p> <p>Minor impact not comparable with the industry effects.</p>	Air Pollution	<p>Air pollution caused by transport infrastructure development will not have tangible impacts on tourism and other sectors. However, control of the fuel quality should be considered as an issue that should be addressed at the national level to minimize lead content in emissions.</p>	Air Pollution	<p>Air pollution caused by transport infrastructure development will not have tangible impacts on tourism and other sectors.</p>	<p>However, control of the fuel quality should be considered as an issue that should be addressed at the national level to minimize lead content in emissions.</p> <p>Special attention should be paid to</p>

	Construction of sanitary landfill in Kutaisi and closure of incompliant landfills will minimize waste related emissions and odors.		Improvement of landfills and related minimization of waste generated emissions and odors will have positive impact on tourism development.		Minimization of waste related emissions and odors will have positive impact on tourism development.	waste management in tourist destinations.
Surface and groundwater resources	<p>Increased discharges of toxic substances;</p> <p>Medium impact for areas adjacent to the international highways and national roads and Kopitnari airport;</p> <p>Development of wastewater treatment plants and arrangement of proper sewerage and storm-water drainage systems will have positive impact on sanitation and water quality.</p> <p>Development of sanitary landfills and closure of incompliant</p>	Surface and groundwater resources	<p>Surface and groundwater pollution caused by transport infrastructure development will not have tangible impacts on tourism and other sectors.</p> <p>Improvement of water quality due to development of wastewater treatment plants and arrangement of proper sewerage and storm-water drainage systems will support tourism development and agricultural sector.</p> <p>Improvement of water quality due to</p>	Surface and groundwater resources	<p>Improvement of water quality due to development of wastewater treatment plants and arrangement of proper sewerage and storm-water drainage systems will support tourism development.</p> <p>Improvement of water quality due to development of sanitary landfills and closure of incompliant landfills will support tourism development.</p>	

	landfills will have positive impact on water quality and sanitation.		development of sanitary landfills and closure of non-compliant landfills will support tourism development and agricultural sector.			
Waste generation and pollution	<p>Development of sanitary landfills and closure of non-compliant landfills, as well as improvement of waste management practices, will minimize adverse impacts of waste generation.</p> <p>Development of sewerage systems and wastewater treatment plants will decrease generation of polluting wastewater.</p> <p>Increased generation of mostly non-hazardous wastes associated with construction and operation of transport and other type of infrastructure is of</p>	Pollution and aesthetic impacts caused by improper waste management	<p>Development of sanitary landfill, closure of non-compliant landfills, construction of waste-water treatment plants and sewerage systems will lead to minimization of waste related pollution and aesthetic and health impacts, which is supportive for tourism and agriculture development, food processing sector etc.</p> <p>Development of industrial, construction and hazardous waste landfills and treatment facilities will support industry development.</p>	Pollution and aesthetic impacts caused by improper waste management	Development of sanitary landfill, closure of non-compliant landfills, construction of waste-water treatment plants and sewerage systems will lead to minimization of waste related pollution and aesthetic and health impacts, which is supportive for tourism development.	

	medium scale impact, which could be mitigated through proper management.					
Triggering hazardous geological processes; Erosion and desertification of land	From minor to medium impact at most sites;					
Landscape degradation	Footprint on landscape and landscape degradation impacts varies from medium to high ;	Landscape degradation	Landscape disfiguration may negatively affect tourism development, agriculture;	Landscape degradation	Landscape disfiguration, may negatively affect tourism development,;	Ensure provision of EIAs, EMPs and landscaping for infrastructure projects. Enusre implementation of the EMPs.
Impact on flora	Impact on flora could be from medium to high for the highway projects and other major infrastructure facilities (Kopitnari airport; water supply mainlines tec.).  No infrastructure projects are planned in protected areas or extremely sensitive ecological areas.	Landscape degradation	Landscape disfiguration may negatively affect tourism development, agriculture;	Landscape degradation;  impact on protected areas and other eco-tourism destinations	Landscape disfiguration, may negatively affect tourism development,;  No infrastructure projects are planned in protected areas or extremely sensitive ecological areas. Thus the impact on protected areas and other eco-tourism destinations will not be tangible.	Ensure provision of EIAs, EMPs and landscaping for infrastructure projects. Enusre implementation of the EMPs.

Impact on fauna	Impact on fauna could be from medium to high for the highway projects and other major infrastructure facilities (Kopitnari airport; water supply mainlines tec.).  No infrastructure projects are planned in protected areas or extremely sensitive ecological areas.			impact on protected areas and other eco-tourism destinations	No infrastructure projects are planned in protected areas or extremely sensitive ecological areas. Thus the impact on protected areas and other eco-tourism destinations will not be tangible.	
Cultural Heritage (CH)	Construction of new facilities may have negative impact on monuments and archaeological sites;	Cultural Heritage	Overall improvement of the socio-economic conditions will enable local and central governments to implement CH protection programs	Cultural Heritage	Negative impacts on cultural heritage will negatively affect tourism, while implementation of CH protection programs will support tourism development in the region.	Minimize negative impacts through implementing proper EIA and EMS;  Support CH and conservation programs;
Landuse	Development of the infrastructure will support diversification of landuse patterns supporting development of	Induced development	Improvement of infrastructure will support development of industry, agriculture, food processing, tourism, and increase			

	agriculture, industry, tourism		employment opportunities. All this may result in influx of new people into the area and even development of new local settlements. Besides, development of industrial sector indirectly will stimulate development of trading and services.			
Demography	May increase the number of new settlers/employees of new enterprises and besides will affect demography in terms of retaining the local residents	Induced development  Improvement of infrastructure will support development of industry, agriculture, food processing, tourism, and increase employment opportunities. All this may result in influx of new people into the area and even development of new local settlements.	Theoretically, intensive induced development indirectly caused by infrastructure development may lead to exceeding carrying capacity of the developed infrastructure. However, poor demographic situation in the region and high rate of emigrated residents allows us to consider positive role of induced development. Induced development will improve demographic situation in region and	Induced development	Induced development caused by overall development of the regional economy should not be a problem for tourism development. Induced development will improve demographic situation in region and support normal functionality of services, trade, agriculture and other sectors important for tourism development.	

			<p>support normal functionality of services, trade, agriculture and other sectors of economy.</p> <p>Overall, development of region may have positive indirect impact on country demographic patterns, redistributing population from overloaded Tbilisi to region.</p>			
Socio Economic impact on country level	Tangible positive impact		<p>Tangible positive impact</p> <p>Improvement of infrastructure will support development of industry, agriculture, food processing, tourism, and increase employment opportunities. All this may result in influx of</p>	Socio Economic impact on country level	Overall improvement of socio-economic conditions will positively affect the tourism development in country;	

			new people into the area and even development of new local settlements. Besides, development of industrial sector indirectly will stimulate development of trading and services			
Socio Economic impact on local level	Significant positive impact		Development of industry, agriculture, trading, tourism, services	Improvement of infrastructure and indirect impact on development of industry, agriculture, trading	Local improvement of socio-economic conditions will positively affect the tourism development in region, making it more attractive tourist destination as compared with the less developed regions;	
Employment	Tangible positive impact	Employment	Significant indirect positive impact		Tangible indirect positive impact for people engaged directly in tourism sector or services, food processing and other sectors dependent on tourism development	



### 10.1.3 IRDS COMPONENTS RELATED TO DEVELOPMENT OF SMALL AND MEDIUM SCALE HYDROPOWER, WIND AND SOLAR ENERGY SECTOR

Direct Impact (negative or positive)		Strategic Impacts		Impact on Tourism Development and ITDS		
Environmental Aspect	Impact	Environmental Aspect	Impact	Factors	Impacts	Mitigation or Enhancement Considered in ITDS
Climate	Negligible  Small and medium HPPs have very minor impact on local climate conditions;	Climate	Decreased greenhouse emissions due to increase of share of non-combustion energy sources in overall energy balance of country			
Air Pollution	Negligible	Air Pollution	Decreased emissions of toxic substances due to increase of share of non-combustion energy sources in overall energy balance of country	Air Pollution	Improved air quality is beneficial in terms of attracting tourists	
Surface and groundwater resources	Small and medium HPP projects have potential direct impact on the water quality of the surface water resources used for plant operations.	Surface and groundwater resources	In general, decreased discharges of toxic substances due to increase of share of non-combustion energy sources in overall energy balance of country will lead to	Surface and groundwater resources	Improved surface water quality is beneficial in terms of attracting tourists.	

			improvement of water quality. This indirect positive effect is much more tangible than very minor direct adverse impact of HPP plants on local water quality, which is manageable through application of proper management and water quality control practices.			
Waste generation and pollution	Small and medium HPPs and solar and wind power generating plants are not considered as generators of gross amounts of hazardous or non-hazardous waste. Waste production and pollution risk is minimal.	Pollution and aesthetic impacts caused by improper waste management	In general, increase of share of non-combustion energy sources in overall energy balance of country will lead to reduction of hazardous waste production related to operation of Thermal Power plants and enterprises utilizing fossil fuel as an energy source. This indirect positive effect is much more tangible than very minor direct adverse impact of HPP plants	Pollution and aesthetic impacts caused by improper waste management	Minimization of waste related pollution and aesthetic and health impacts is supportive for tourism development.	

			on local waste generation;			
Triggering hazardous geological processes; Erosion and desertification of land	From minor to medium impact at most sites;					
Landscape degradation	Footprint on landscape and landscape degradation impacts varies from medium to high ;	Landscape degradation	Landscape disfiguration may negatively affect tourism development, agriculture;	Landscape degradation	Landscape disfiguration, may negatively affect tourism development,;	Ensure provision of EIAs, EMPs and landscaping for e projects. Ensure implementation of the EMPs.
Impact on flora	Impact on flora could be from medium to high	Landscape degradation	Landscape disfiguration may negatively affect tourism development, agriculture;	Landscape degradation;  impact on protected areas and other eco-tourism destinations	Landscape disfiguration, may negatively affect tourism development,;	Ensure that no energy sector projects are implemented in the protected areas.  Ensure provision of EIAs, EMPs and landscaping for infrastructure projects.  Enusre implementation of the EMPs.
Impact on fauna	Impact on fauna could be from medium to high			impact on protected areas and other eco-tourism destinations	impact on protected areas and other eco-tourism destinations may adversely affect	Ensure that no energy sector projects are implemented in the protected areas.

					tourism development in these areas	Ensure provision of EIAs, EMPs and landscaping for infrastructure projects.  Enusre implementation of the EMPs.
Cultural Heritage (CH)	Construction of new facilities may have negative impact on monuments and archaeological sites;	Cultural Heritage	Overall improvement of the socio-economic conditions will enable local and central governments to implement CH protection programs	Cultural Heritage	Negative impacts on cultural heritage will negatively affect tourism, while implementation of CH protection programs will support tourism development in the region.	Minimize negative impacts through implementing proper EIA and EMS;  Support CH and conservation programs;
Landuse	Development of the energy infrastructure may require substantial areas of land (for HPPs or for wind farms)	Induced development	Improvement of energy infrastructure and sustainable energy supply will support development of industry, agriculture, food processing, tourism, and increase employment opportunities. All this may result in influx of new people into the area and even			

			development of new local settlements. Besides, development of industrial sector indirectly will stimulate development of trading and services.			
Demography	May increase the number of new settlers/employees of new enterprises and besides will affect demography in terms of retaining the local residents	Induced development  Improvement of energy infrastructure and sustainable energy supply will support development of industry, agriculture, food processing, tourism, and increase employment opportunities. All this may result in influx of new people into the area and even development of new local settlements.	Theoretically, intensive induced development may lead to exceeding carrying capacity of the developed infrastructure. However, poor demographic situation in the region and high rate of emigrated residents allows us to consider positive role of induced development. Induced development will improve demographic situation in region and support normal functionality of services, trade, agriculture and other sectors of economy.	Induced development	Induced development caused by overall development of the regional economy should not be a problem for tourism development. Induced development will improve demographic situation in region and support normal functionality of services, trade, agriculture and other sectors important for tourism development.	

			Overall, development of region may have positive indirect impact on country demographic patterns, redistributing population from overloaded Tbilisi to region.			
Socio Economic impact on country level		Tangible positive impact	Tangible positive impact  Improvement of energy infrastructure will support development of industry, agriculture, food processing, tourism, and increase employment opportunities. All this may result in influx of new people into the area and even development of new local settlements.	Socio Economic impact on country level	Overall improvement of socio-economic conditions will positively affect the tourism development in country;	
Socio Economic impact on local level	Significant positive impact		Development of industry, agriculture, trading, tourism, services	Improvement of infrastructure and indirect impact on development of	Local improvement of socio-economic conditions will positively affect the tourism development in region, making it	

				industry, agriculture, trading	more attractive tourist destination as compared with the less developed regions;	
Employment	Tangible positive impact	Employment	Significant indirect positive impact		Tangible indirect positive impact for people engaged directly in tourism sector or services, food processing and other sectors dependent on tourism development	

## 10.2 STRATEGIC (INDIRECT/CUMULATIVE) IMPACTS OF THE ITDS AND APPLICABLE MITIGATION STRATEGIES

### 10.2.1 INTRODUCTION

The SECHSA report provides an overview of the medium and long term risks which may arise from induced development in the project area and from cumulative impacts of its implementation. Such risks are moderate in the medium term perspective, because (i) economic activity and - in most parts of Imereti - tourism as well is currently down as compared to the levels at Soviet times and rebounding to the historical volumes would not carry unexpected or heavy implications, (ii) the project aims to support responsible tourism and development of tourist products for the target clientele interested in healthcare and wellness, history, culture, fine arts, quality wine, and adventurous natural settings, which tend to create less social pressure and bring more benefits to the host areas. A longer term vision of risk mitigation includes development of master plans and zoning for regional development, enhancing utilities and other public services, and strengthening governance at the regional and municipal levels – which come as recommendations to the Government applicable to regional development policy in Imereti as well as other regions nationwide.

While discussing carrying capacity concept and other methodological aspects (Chapter 4), we proposed to apply tiered approach for management arrangements and planning, through identification of required immediate measures, medium-term actions and long-term plans or programs.

### 10.2.2 TIER 1 ACTIONS

In this section we will be focused on factors affecting all environmental components, as natural, cultural heritage and social environment. In the following sections we will discuss the medium and long term risks and mitigation measures more specific for each of these components.

Following the general methodological approach for analysis of carrying capacity, as described in chapter 4, we applied tiered approach and for elaborating strategy for immediate actions (tier 1) we have focused our efforts on identification of the major factors limiting the carrying capacity of the tourist destination sites at present and proposed relevant mitigation strategy.

GNTA reports (based on surveys) that between May 2011 and February 2012 (ten months) there were 740 000 visitors to Imereti, out of which 155 000 were foreigners and 585 000 Georgians. This data extrapolated to annual number of visitors would give us 888 000 visitors to Imereti, out of which 186 000 were foreigners and 702 000 Georgians. About 54 percent of foreigners reported that they visited Georgia for leisure, 21 percent were visiting friends or relatives, 8 percent were on a business trip and 17 percent reported that they arrived for “Other” purposes. In contrast, only 13 percent of Georgians travelled for leisure, with a majority travelling to either visit friends or relatives (42 percent) or for “Other” purposes (45 percent). The majority of visitors, about 85 percent, visited sites located in or near Kutaisi (*i.e.*, Gelati Monastery, Bagrat’s Cathedral, Tskaltubo Caves).

According to Geostat there were a total number of 596 000 visitors in Georgia in 2010 that stayed in a hotel. Out of these 306 000 were foreigners and 290 000 Georgians. Overall the total number of visitors grew from 73 000 to 596 000 over the period of 1999 to 2010. The highest growth happened from 2009 to 2010 when total number of visitors grew by over 70 percent, albeit from a small base after the 2008 war. If viewed separately, Georgian and foreigner visitors that stayed at a hotel grew by 46 and 103



percent respectively. Geostat also reports number of visitors separately for each region. About 47 percent of total visitors staying in hotels stayed in Tbilisi hotels, followed by 26,5 percent in 2010. Rest of the regions have smaller shares, most significant ones being Kakheti (6,1 percent), Samtskhe-Javakheti (5,8 percent) and Imereti (3,6 percent).

There are two sources for forecast of total number of visitors to Georgia: Georgian National Investment Agency (GNIA) and Georgian National Tourism Agency (GNTA). GNIA made a forecast in 2010 and made a forecast for three subsequent years with an average of 35 percent growth rate each year, hitting 4 920 000 visitors in 2013. GNTA has a forecast for 2012 for each month separately. According to them there will be a total of 3 373 000 visitors in 2012 with visitors peaking in August at 396 000 tourists. As a result of the integrated development approach:

- Both domestic and international tourist arrivals are expected to increase by 5% per annum during the life of the project and 2% thereafter;
- Overnight stays are expected to increase from 1.68 days to 2.5 days on average (by the end of the project);
- Expenditures on food, lodging, new activities (e.g., guided tours), and purchase of local products and handicrafts are expected to increase by 5% per annum during the life of the project and 2% thereafter.

**The following critical factors have been identified and mitigation strategies proposed as tier 1 actions:**

### **1. Limited Natural Resources**

In case of balneal resorts, the lack of mineral water resources as compared to the planned development capacities may become an issue limiting further development of the resort, or at least some specific activities associated with mineral water consumption. Stakeholder consultations revealed that this could be an issue in case of Tskaltubo. Uncontrolled and uncoordinated development of private balneal facilities using mineral water resources may lead to exceeding of carrying capacity of the resort and cause deficiency of water resources.

**Mitigation:** SECHSA recommends that the resort development plan should be based on thorough assessment of the capacity of mineral water resources and hydrogeological features of the area.

**2. Infrastructure limitations:** In general, most critical possible impacts, related to exceeding of the carrying capacity of sites are:

- pollution due to poor sanitation, lack of toilets and sewage systems at the sites of destination
- pollution due to improper waste collection system at the sites of destination and lack of waste collection facilities
- pollution due to improper waste management and lack of waste disposal facilities region-wide
- bad quality of local roads and associated travel risks and discomfort, dust
- lack of integrated site management (deterioration of storm-water drainage systems, lack of electricity resulting in uncontrolled tree felling) causing development of erosion and local landslides

**Mitigation:** The issue is clearly recognized by the Government as major problem. The most part of these negative factors are addressed in the RDP II subprojects and mentioned impacts will be mitigated through installing proper toilets, sewages, water supply systems, electricity, waste collection facilities and establishing efficient management systems. The same approach will be applied for developing tourism clusters and related destinations proposed in ITDS. The urgent issue to be resolved is construction of regional sanitary landfill for final disposal of wastes generated by tourists and local population.

**3. Uneven distribution of tourist flows and creation of peak flows at limited areas, which may result in local exceeding of carrying capacity:** Imereti region has transitional location connecting Eastern Georgia with the Black-Sea Coastal zone and significant flows of tourists is expected to pass through this region regularly. Uncoordinated development of the regional tourist infrastructure may result in focusing the tourist flows within limited areas, around the most advanced sites of destination.

**Mitigation:** The proposed investment program considers integrated management and coordinated plan of rehabilitation of infrastructure and monuments in different parts of Imereti (different clusters comprise Kutaisi, Tskaltubo, Chiatura-Sachkhere area, Mountainous Imereti area etc.). Recommendation of SECHSA is to define as a priority for rural destinations construction of small boutique hotels (cluster 4 Imereti Mountains, Cluster 1 the heart of Imereti) and support construction of large hotels only in cities (Kutaisi) and balneal resorts (Tskaltubi, Sairme etc.). All this will enable distribution of the tourist flows according to carrying capacity of destinations and minimize risks of local overload. Small hotels spread along the tourist circuits will have less concentrated emissions, discharges, competition for resources, impact on traditional way of life and lower risks of revenue leakages, as compared with the scheme of developing large hotels.

**4. Rapid growth of tourist visits in most fragile, pristine areas and natural heritage sites, which may result in local exceeding of carrying capacity.**

The magnitude and scale of impacts depend on the size and type of tourism development proposed, relative to the fragility of its proposed environment. Recreational tourism involving a variety of sporting activities and a large hotel complex infrastructure has a greater potential to degrade fragile ecosystems than projects which attempt to attract tourists with scientific or educational interests such as birding, nature photography, or ethnography, historical sites and archaeology. As it has been demonstrated in Chapter 8, the most valuable and fragile environmental receptors are located at destinations included in Cluster 4 (Borjomi-Kharagauli National Park) and cluster 1 (Sataplia Managed Reserve and Imereti Caves; Gordi canyon)

**Mitigation:**

SECHSA recommends diversification of the spatial distribution of tourism sectors and facilities: the sports and extreme types of tourism (like climbing, downhill biking, Canyoning, paintball, etc ) should be developed in environmentally less sensitive areas, like surroundings of Chiatura-Sachkhere industrial zone (cluster 3). Large hotels and SPA and healthcare facilities will be developed in traditional resort areas, like Tskaltubo, Sairme, Sulory, etc. These resort areas were very popular in Soviet time and allowed to accommodate large amount of tourists without unacceptable load on environment (Tskaltubo was especially popular in the Soviet era, attracting around 125,000 visitors a year). In case of improving general and specific SPA and healthcare facilities, these resorts can rapidly increase their capacity and receive much more tourists than current flows (Currently the spa receives only some 700 visitors a year). For protection of sensitive environmental sites, like protected areas (Borjomi-Kharagauli National Park, Adjameti and Sataplia Managed Reserves, Gordi Canyon), it is recommended that only small boutique hotels are developed in areas adjacent to these sensitive sites, while the tourists accommodated in larger hotels located in urban areas (Kutaisi, Tskaltubo etc.) will have a chance to visit these environmentally sensitive destinations for short time through touring activities. On the positive side, we would recommend to support 'ecotourism' projects, which can combine conservation of natural and cultural sites with economic and recreational benefits. Introducing an accepted world-wide practice of tourists contribution in favor for Ecological Funds could be also considered as a mitigation strategy aimed on creation of resources for better planning and management of protected areas.

**5. Rapid growth of tourist visits in holy sites and operational churches and monasteries.**

The carrying capacity of the operational churches and monasteries is not determined only by physical conditions and characteristics of the monuments and related infrastructure. The amount of tourists, movement of tourist flows and their activities should not affect the church services, routine life of the clergymen and prayers. As noted by the Georgian Orthodox Church representatives, *the clergymen*

*should not become just a tour guides and/or part of attraction, but should have opportunity to conduct undisturbed routine church services.*

**Mitigation:**

Obligatory procedure of consultations with the central and local representatives of Church should be established, to ensure harmonization of tourism activities with the normal day to day operations of monasteries. Admissible peak amount of tourists visiting churches and monasteries, sites and trails allowed for tourists, as well as time schedule for visits, dress-code and behavior norms should be agreed with the clergymen.

### **10.2.3 TIER 2 ACTIONS ARE AIMED TO ADDRESS MEDIUM AND LONG-TERM IMPACTS**

Tiered approach for remedying medium and long-term impacts does not mean that no immediate actions are considered in that regard. The specificity is that the immediate actions of tier 2 are focused on further in-depth assessment and evaluation and development of medium-term action plans to address medium and long-term impacts.

1. One of such proposed immediate actions is detailed elaboration of carrying capacity concepts, while developing new updated versions of the management plans for the protected areas located in Imereti region. The old management plans have expired for time being. Currently, temporary regulations are at place and the Agency of Protected Areas is planning to update the Management Plans. SECHSA report proposes to analyze within these management plans the impact scenarios related to increase of visitors and to provide set of managerial measures aimed on control of number of visitors and their distribution along the trail routes. In particular, SECHSA report recommends Agency of Protected Areas to initiate in-depth studies of tourist flow impacts on macroclimate and air quality, water resources, stability of the karstic landscape and specific fauna of the Imereti caves. The outcomes of such studies should be used for determining acceptable tourist loads and carrying capacity of caves.

2. SECHSA recommends NACHP to assess in more details the expected change of spectrum and magnitude of potential impacts on cultural heritage, related to expected growth of tourist flows in long-term perspective. Adequate mitigation program and set of specific limitations could be elaborated based on the proposed in-depth assessment. Principles and methodology for estimation of carrying capacity similar to those proposed in the study “Sustainable Tourism Development in Kakheti through Cultural Heritage, 2012”, financed by WB could be applied for Imereti region as well.

3. SECHSA recommends initiating a comprehensive Regional Waste Management Plan (RWMP) related to waste management in Imereti region. The RWMP should cover issues of waste collection throughout the Imereti region, separation, transportation and final disposal. Optimal number and location of disposal facilities should be determined. The non-compliant old landfills should be properly closed and sites reinstated. The RWMP should be developed under the context of IRDS launched by MRDI and should adequately address industrial, municipal and tourism related waste management issues. It should be stressed that not only wastes generated by tourism sector, but industrial waste and pollution has its negative impact on tourism development. Implementation of the RWMP and in particular, development of waste collection system at tourism destinations and disposal facilities in region is necessary for the overall success of the ITDS.

4. SECHSA recommends initiating a comprehensive Regional Pollution Prevention Plan (RPPP) related to management of industrial pollution in Imereti region. Industrial pollution is one of the important inter-sectoral impacts adversely affecting tourism development in Imereti. Air and water pollution due to operations of Zestaphoni Metal Alloy Plant and Chiatura Manganese mines and manganese processing plants will definitely have negative impact on Imereti’s image as ecologically

attractive tourism destination, especially for developing cluster 3 in Chiatura region and healthcare sector of tourism. Specific black color of r. Kvirila polluted by manganese wastes will not be appreciated by tourists. Zestaphoni Metal Alloy Plant related fugitive emissions sometimes extend far beyond Zestaphoni, but this is only one aspect of the issue. It should be also considered that Metal Alloy Plant is located just along the major highway connecting Eastern Georgia with Imereti and the emissions from the plant are often visible for tourists. Regional Pollution Prevention Plan should support strict control over the industrial pollution and adoption of efficient enforcement mechanisms to ensure application of clean technologies in industrial sector and minimization of pollution to acceptable level.

5. Strategic assessment and planning is required also to estimate specific safety risks for tourists (particularly, environmental risks) and for planning emergency response and salvage operations. SECHSA recommends following specific risks to be analyzed and addressed in follow up strategic assessments and management plans:

- Geohazard risks are characteristic to Imereti region (see chapter 8). Risks of natural disasters and hazardous processes (flashfloods and flooding, debris-flows and mudflows, landslides, avalanches, etc.) should be assessed. Zoning of risks, notification system, prevention and response plans and salvage operations should be described in the plan and the relevant response systems should be developed.
- Forest fire risks: Development of Regional Fire Protection Plan, fire prevention guidelines, notification system, response plans and salvage operations should be described in the plan and the relevant response systems should be developed. This is important for the forested sites close to the tourist routes, as well as for the most valuable forest in more remote areas.
- Risks of transmission disease and Zoo-anthropogenic assessment of risks of the hazardous human and animal diseases: about 678 sites defined as potential anthrax pestholes are recorded for Imereti (Distribution by administrative districts: 50 in Bagdadi district, 37 in Vani, 88 in Zestaphoni, 69 in Terjola, 82 in Samtredia, 79 in Sachkhere, 26 in Tkibuli, 115 in Tskaltubo, 73 in Chiatura, 27 in Kharagauli and 32 in Khoni district). These are not precisely identified locations and confirmed pest-holes, but sites under the suspicion. Any development related with the earthworks and excavations near the pestholes are associated with the risks of secondary recontamination and spread of disease. Preliminary more detailed Risk Assessment with thorough analysis of different archives and development of management and monitoring plan is required. Current capacity of the MoA is not sufficient to carry out relevant studies. Two aspects should be stressed in relation with the risks of Zoo-anthropogenic diseases, and particularly anthrax:
  - i) probability of secondary recontamination due to direct impacts of tourism activities is low, although the consequences could be high.
  - ii) probability of Zoo-anthropogenic diseases is increasing significantly **due to indirect and cumulative impacts** related to the tourism development: major transport infrastructure projects, like construction of Zestaphoni- Samtredia and Samtredia-Grigoleti sections of highway and Khashuri-Kharagauli section of the railway are associated with the large scale earth-works and high risks of recontamination by soil infections.
- Risks related to uncontrolled contact with wild animals: during the recent years many cases are registered in Georgia, and particularly in Imereti region, of hazardous contacts with wild animals: wolves and jackal attacks and transgression of reptiles to the residential areas have been recorded. Proliferation patterns for wolves and other vermin animals should be studied, proliferation should be controlled and set of protection measures and notification/salvage system to be implemented. Contact with wolves and snake-bites are more probable in remote areas, for eco-tourists. Serpent vaccine storages should be ensured as well.

## 6. Selection of investment projects

The RDP II does not include the component aimed on supporting private investments. However, within the context of the ITDS it is expected that the Government will support selected private investment projects by developing related infrastructure and facilitating fundraising. The environmental and social impacts of the investment projects will depend on criteria applied by the Government during the project selection.

**Mitigation:** Success depends on informed site selection, sound design and operating guidelines which take into account the sensitivity and capacity of the resources which form the tourist attraction. Consequently, a major concern in planning other types of development and analyzing their impacts is to avoid foreclosing tourism development options by degrading resources especially well-suited to it. Comprehensive environmental and land-use planning can identify options and alternatives over the long term and balance single and multiple use concepts. SECHSA provides criteria for selecting investment projects (see chapter 12). In particular, investment proposals (tourism facilities) considered under ITDS context or supporting sectors (e.g. food-processing plants) for protected areas and high sensitive areas are prohibited. Construction and operation of tourist or food processing facilities, which may change traditional features of the site and monument (historical, religious, aesthetical perception etc.) and lead to erosion of local way of life will be rejected. E.g. no casinos or beach-tourist facilities will be constructed near monasteries and historical monuments. The facilities planned for construction near the monasteries will be first discussed and agreed with the Georgian Orthodox Church.<sup>22</sup>

7. An important positive externality of tourism development is increased environmental awareness, both in the local population and governments on municipal as well as national levels. The main attractions of Imereti are natural and cultural heritage based, and if natural resources dwindle, then so will the inflow of tourists. As a consequence, environmental and cultural heritage protection issues are treated with increasing attention. These medium term positive impacts could be enhanced, and SECHSA recommends including awareness building programs for local population, tourists and investors aimed on protection of natural and cultural heritage. The awareness building programs could be coordinated by MoE, Agency of Protected Areas, National Tourism Agency and NACHP, within the frames of their competence.

### 10.2.4 IMPACTS ON BIOPHYSICAL ENVIRONMENT

There is evidence at the aggregate level that economic development may damage environmental carrying capacities. Tourism is not solely responsible, but tourism related development might be intensive in many of the most serious pressures: damage to fragile ecosystems, consumption of fresh water, aggregates, high quality (low, flat, stable, fertile) land and production of non-biodegradable solid waste.

Key possible impacts and mitigation measures to the biophysical environment may include:

- **Impact:** Loss of ecological resources and biodiversity in extremely sensitive areas due to greater access to remote destinations, increased tourist numbers, uncontrolled tourist behavior, introduced external species, and disturbance of habitats. Sometimes, tourists worn down the marked trails and created alternate routes, contributing to soil impaction, erosion, and plant damage. Most aggressive tourist sectors, like trophy hunting, biking, illegal poaching or other misbehavior of tourists could be a reason for significant biodiversity losses.

**Mitigation:** As a short-term system of actions, proper instructions and *management plans* are required for *tourism operator companies*, to control the tourist's behavior and to exclude high impact tourism activities within the sensitive areas. In long term perspective, SECHSA

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<sup>22</sup> In some places in Georgia one may observe diversity of churches and religious facilities of different confessions. However, along the tourist circuits in Imereti region only Georgian Orthodox Church facilities are located.

recommends to conduct in-depth assessment of correlations between the increase of number of visitors and threshold of tolerable impacts. The results of these strategic assessments should be used for developing management plans for medium and long-term management purposes. Awareness building programs for tourists, as well as phyto-sanitary control measures will be part of these management schemes. Phyto-sanitary measures should be implemented also country-wide. The capacity building needs for the MoA to ensure efficient control needs to be assessed and measures recommended.

- **Impact:** Increased tourist flow and induced development could be related to the loss of ecological resources and biodiversity in sensitive sites adjacent to tourist circuits (see sensitive sites defined in chapter 8) and competition for natural resources. Floodplain forest patches or fragments of medium- and high-mountain forests adjacent to project sites and roads are main receptors, as well as surface water resources. Induced development is probable for the areas located close to the tourist circuits. Illegal woodcutting, poaching, overgrazing and overall deterioration of environment could be a result of uncontrolled development and increased tourist flow. Because of the seasonal nature of many tourist activities, wildlife may be affected by large influxes of people at the critical times of migration, feeding, breeding or nesting

**Mitigation:**

- Restrict unplanned development and illegal construction through improving regulatory basis and enforcement mechanisms; Prepare land use maps and integrated development plans for the areas of concern around the tourist clusters and circuits in Imereti region.
  - Rehabilitate infrastructure and ensure power supply and, where possible, gas supply to minimize use of fire wood.
  - Develop efficient system for combating forest fires at national and municipal level.
  - Improve the efficiency of environmental inspectorate and clearly distinguish responsibilities of the MoE and MoENR in that regard. Ensure strict control on poaching, illegal woodcutting related to tourist activities, as well as induced development.
  - Encourage implementation of energy saving facilities and renewable energy schemes for use on tourism facilities and residential areas, as well as for investment projects. Consider energy saving and energy efficient technologies as one of beneficial criteria during the selection process. In future planning in addition to evaluating environmental and cultural factors, an integral part of ecotourism is the promotion of recycling, energy efficiency, water conservation, and creation of economic opportunities for local communities.
- **Impact:** Induced development could be related to landscape and visual impacts caused by road construction, unplanned development, illegal construction, and inappropriate solid waste storage and disposal.

**Mitigation:** Development of Master Plans and establishment of strict control on urban and rural design and construction, which is practiced in relation with the protected areas, should be expended for all important tourist destinations, scenic landscapes, resort areas and recreational zones. Restrict unplanned development and illegal construction through improving regulatory basis and enforcement mechanisms.

- **Impact:** Deterioration of surface and groundwater quality due to inadequate wastewater treatment facilities and dumping of solid waste into surface water bodies.

**Mitigation:** Eutrophication of sensitive lakes (e.g. Tkibuli lake) may occur even in case if the treatment facilities for the wastewater comply with common national standards. Requirements for the quality of discharged water in valuable lakes with the specific and fragile ecosystems should be stricter, than common standards. The simplest solution, however, is to restrict construction of hotels or residential houses, as well as any food processing plant at a distance less than 200m from the lake or stream inflowing into the lake. Strict control on compliance with the standard wastewater discharge requirements still should be valid for these facilities.

## 10.2.5 SOCIAL IMPACTS

Tourism is often viewed as an engine of economic growth that can generate considerable amounts of foreign exchange for the host countries. As a result many poorer countries are putting emphasis on the promotion and development of this industry for future economic prospects. However, the economic impacts of tourism, particularly certain types of tourism are far from clear cut and many of the negative consequences are understated.

Indirect linkages between tourism and local cultures, businesses, resident populations and workforces are potential problems. Failure to recognize them can diminish project benefits, as well as inflict adverse socioeconomic impacts on the local population.

### **Local infrastructure and services**

#### **Impact:**

Tourists increase demands on local infrastructure- transportation, energy and water supply, wastewater collection and treatment, solid waste disposal, and healthcare facilities- and on the variety of public services that are usually the responsibility of local government. Often the demands have significant seasonal peaks. Competition with the local population for the resources and infrastructure may become a serious issue. Without coordination and planning, service demands may exceed capacity with adverse results for residents, as well as tourists.

Availability of clean water for drinking, provision of wastewater treatment consistent with the capacity of local water bodies to assimilate pollution load, and adequate facilities for solid waste disposal are critical issues for this sector. If these services are provided by local government or independent utilities, the project sponsor should demonstrate that detailed information on the tourism development has been furnished to those agencies and that they are prepared and able to meet the project's needs. If the services are not available from local agencies, the plan for the project should show clearly how the developer proposes to provide them, and the impacts of the proposal should be considered in any EA or other environmental analysis.

#### **Mitigation:**

In case of Imereti RDP II, MDF, which is the implementing agency, during the recent years has already implemented in Imereti region large scale and local municipal projects aimed on improvement of the municipal infrastructure (water supply and wastewater systems, local roads). MDF has the exhaustive information regarding the existing utilities and their deficiency region-wide. The investment program is designed in a way that it includes improvement of water supply and wastewater systems in all project destinations, where the systems are deficient. Rehabilitation of infrastructure is considered also as a support for private investments in tourism and food processing sector. The same approach should be applicable for the overall frame defined by ITDS.

### **Socio-Economic Impacts**

#### **Impact:**

Assessments of tourism projects should include analysis of the projected distribution of costs and benefits. Whereas the benefits of tourism may be assumed to accrue to local residents, residents are likely to incur more of the costs and may enjoy less of the benefits than visitors, immigrant workers or commercial intermediaries. For example, if high-quality employment opportunities are expected to result, how many jobs will be made available to local residents and for how long, especially if training

is required to qualify them for the work? National or regional laws and regulations concerning expatriate employment will provide a base for evaluation of probable impacts

The other socio-economic impact often associated with tourism is leakage. Leakage is the loss of tourist expenditure as a result of goods and services being brought in from outside the area. These may be the import of foods and other hotel requirements, outside managerial expertise, repatriation of profits by owners, overseas marketing costs, transport and other services from the tourist source country. Loss of business by local enterprises as all-inclusive supplies practiced by the large hotels and resort complexes. According to the UNEP 'about 80% of travelers' expenditures on all-inclusive package tours leak out of the country. Most of the money goes to airlines, hotels and other international companies and not to the local areas where the tourist facilities are located' (<http://www.unep.org/pc/tourism/sust-tourism/economic.htm>).

From time to time the economic impact analysis needs to be updated in terms of where the money is being spent. These are most likely to have all-inclusive packages providing everything the visitor needs leaving fewer opportunities for local businesses to prosper. The large hotel chains are particularly prone to leakages. This is because they tend to supply common standards across all their hotels. In countries with small domestic markets that may not supply or meet international standards for particular goods the hotels will import equipment, food and drink and other goods. Therefore much of the tourist expenditure ends up abroad. There are also prone to "export leakages" which result when the overseas investors repatriate profits. This is most likely when it is an international hotel chain. Where smaller-scale community based tourism dominates there is a near complete reliance on local goods and services. Although hotel operators are entitled to duty relief on imported goods only one hotel has taken advantage of this.

#### **Mitigation:**

Administration system regulating private investments in tourism and supporting businesses (food processing and supply; healthcare services etc.) should include mechanisms (legal, contractual, selection principles, conditions for supporting etc.) creating incentives for the private investors to employ local population, use local products and suppliers;

The local labor force may need training in order to compete for jobs generated by the project and thus to participate fully in its benefits. Small business management, tourism management and similar training tools will be required.

At the criteria for investment projects, SECHSA recommends to support those of the food processing proposal, which envisage production of ecologically pure food products from local sources and traditional technologies. This should be beneficial for tourists, as well as for producers and will also serve to minimize the revenue leakages.

Marketing and advertising of high quality and ecologically pure products should be supported by the Government policy, as well as quality control mechanisms.

#### **Impact:**

As an indirect result of the planned tourism development, significant socioeconomic benefits can be expected to accrue, particularly in the rural areas. The greatest challenge is ensuring that economic benefits are shared equitably amongst local communities.

**Mitigation:** all the households, businesses and other stakeholders will receive their benefits equally and no preferences for selected households are practiced under the projects implemented within the frames of the ITDS. This is relevant for business selection process in programs supporting private



investments, selection of private buildings for rehabilitation, provision of equal opportunities for employment etc. No discriminative selection practices will be allowed.

**Other social Impacts:**

Other examples of the social impacts are summarized below:

- **Impact:** Developers are requiring the Government to improve the basic infrastructure before they move in. This diverts public money to upgrade public services away from where it is required most.  
**Mitigation:** MDF has already implemented a lot of projects for improving municipal infrastructure in Imereti region and this program financed by different donors is ongoing. Additional financing for the infrastructure needed for developing tourist facilities will not affect this basic program of municipal infrastructure rehabilitation.
- **Impact:** Implementation of the infrastructure improvement projects may lead to increase of tariffs. Differentiation of tariffs for water, sewerage, and other services may be necessary to avoid burdening local users unfairly.  
**Mitigation:** no additional increase of tariffs related to tourism related infrastructure component is envisaged.
- **Impact:** Construction of planned tourist facilities may cause displacement and involuntary resettlement. Construction of the proposed tourist facilities under RDP II does not require resettlement (only temporary impact on some small businesses is envisaged). However, the projects that will be implemented under the ITDS may impose resettlement impacts.  
**Mitigation:** WB OP/BP 4.12 Safeguard Policy for Involuntary Resettlement will be applied to ensure full compensation of lost assets at the replacement cost, and additional rehabilitation of vulnerable and severely affected households. In order to reconcile the gaps between the Georgian legislation and WB requirements, MDF has elaborated Resettlement Policy Framework for RDP II. The RPF includes also compensations for the temporary impacts. SECHSA recommends the Government of Georgia to apply principles similar to those adopted in RPF for execution of resettlement related to the other projects under ITDS.

Loss of access to grazing land	Domestic animal owners	An alternative temporary access route or grazing land will be provided for the duration of impact	
Structures knocked down during construction	Owners of the affected assets	Assets will be restored at the same place after construction	
Loss of income due to loss of access to business location	Owners of the affected assets	Cash compensation equal to the lost income during construction	
Temporary displacement from residence during construction	Occupants of affected housing structures	Temporary housing will be provided during construction. Cash compensation for transportation costs and for any loss of income, if impacts affect livelihood.	Temporary support after displacement to restore reasonably their livelihood and standards of living

- **Impact:** The influx of large numbers of foreign tourists into a local culture and the likely clash of contrasting life styles that may result can have impacts on local cultures; lead to change of

traditional values. Stimulation of prostitution, drug proliferation, increase of criminality and transmission diseases is often associated with rapid development of tourism industry.

**Mitigation:** The proposed RDP II project, as well as ITDS strategy is focused on developing healthcare and wellness, cultural heritage, wine, eco – and agri-tourism sectors, for which the mentioned impacts are less severe. Large amounts of tourists will be concentrated only in traditional resort sites, like Tksaltubo and Sairme, which are adjusted to accommodation of significant amounts of tourists and have traditions of managing healthcare facilities. The motivation of tourists in this sector is taking care of their health, rather than amusement. In other clusters and tourism sectors, mostly small scale boutique hotels managed by local residents will be stimulated rather than large scale hotels owned by transnational companies. This will support local small and medium size business, employment of local residents and support for popularization of local traditions, lifestyle. Small hotels and cultural tourism have less impact on traditional values as compared with large transnational hotels, casinos, entertainment oriented facilities. Georgia is multiethnic and tolerable society and no religious conflicts are expected due to tourist influx. Specific behavior rules in certain religious or traditional sites will be explained to tourists through preliminary instructions given by tourist operators.

- **Impact:** Development of fast-food industry may affect local cousin and related small business. Changes to traditional lifestyles may result in negative social effects. For example, communities living in remote areas may find that they lose supplemental income from sources such as hunting, collection of fire wood, fishing, etc if access to these resources is restricted for tourism development.

**Mitigation:** The strategy proposed by ITDS aims restoration of traditional activities and lifestyle of old resorts (Tksaltubo, Sairme, Nunisi, Sulori). Besides that the ITDS is focused on developing cultural heritage, wine, national cousin and agri-tourism. Small scale boutique hotels and commercial and traditional food processing facilities managed by local residents will be stimulated rather than large scale hotels and large plants owned by transnational companies. This will support local small and medium size business, employment of local residents (mostly – family business) and minimization of leakages, support for popularization of local cousin, traditions. Development of supporting infrastructure will minimize the need for fire – wood. The project will not create new restricted zones.

- **Impact:** Induced development may occur at the fringes of tourist areas, including migration to the better developed areas. Given the limited carrying capacity of the sites in terms of space and infrastructure, in addition to cultural differences, migration can become a potentially important problem. Under-regulated housing development is a recurring problem in many developing country contexts and is not limited to tourism development. The latter exacerbates the problem however, with what are often large and aesthetically unpleasing buildings. A lack of zoning laws and the fact that land is almost exclusively privately owned may lead to a frontier mentality and result in unplanned construction activities and architectural mismatches. This is potentially a problem in Imereti, where lack of construction guidelines could jeopardize the colonial look of the town as it expands accommodations to receive more tourists.

**Mitigation:** The Government is planning development of strategy for sectoral ministries and local self-governments and some strategic plans and guidelines will be developed and implemented to improve spatial planning and to introduce integrated Master Plans.

## 10.2.6 IMPACTS ON CULTURAL HERITAGE

Socio-cultural considerations are particularly important in impact assessment of the multi-component ITDS program, as well as for RDP II. The relationships between cultural property issues and a project can range from direct to indirect.

Most typical of the direct impacts are outlined as follows: Any project which involves excavation, leveling or filling of earth as a part of construction or operational practices, is a potential threat to archaeological and historical remains. Construction related dust, emissions and vibration may damage the monuments. The visual as well as the physical impact of accommodations and other structures that will be built to serve tourists should be considered. Ease of construction and 'efficient' design should be tempered by considerations for harmony with the surrounding natural environment and socio-cultural context.

More general cultural heritage impacts are related to heritage-based tourism, particularly cultural immersion tourism activities. Cultural sites can tolerate finite numbers of visitors, just as natural sites, and this should be assessed in project design. The number of visitors and areas of access need to be controlled in order to prevent sites from deterioration due to overuse and physical proximity (visitors touching walls, paintings, sculptures). Carrying capacity limits of the tourist sites are discussed in general in section 10.2.1. The other particular aspects of the project impact on CH sites are discussed below.

### **Impact**

RDP II will invest in the upgrade and development of infrastructure in the historical settlements as well as in the proximity to the cultural and natural heritage sites. Though limited restoration activities are planned in CH buildings or their immediate proximity, such interventions carry additional risks of damaging monuments in case the design and methodological approaches used are unfit for conservation of the historical and aesthetic value of these sites or if tourist visitation of these sites, increased as a result of the project interventions, is not managed in a sustainable manner. ITDS in broader context considers possibility of rehabilitating or restoring CH buildings. Cumulative impacts of developing various elements of infrastructure in and around historical settlements, in or around natural sites of recreational and aesthetic value also add to the potential risks of the project.

### **Mitigation**

All the designs within the project related to conservation-restoration of historical buildings, blocks and cultural heritage monuments should be managed by NACHP. The works should be designed in compliance with the national legislation and international best practices. NACHP will recommend PIUs specialist for supervising the works. NACHP will take part in acceptance of completed works related to restoration-rehabilitation of historical buildings. Infrastructure rehabilitation projects will be supervised by MoCMP. Public and stakeholders will be consulted at the early stage of project development.

### **Impact**

Activities such as tours of archaeological sites may conflict with local traditions and/or religious beliefs. Investments in new facilities, where sites are considered as sacred, as in the case of religious shrines, the impact is complex. It is important that such interventions be scientifically sound, and that they respond, as completely as possible, to patterns of social organization and existing social and cultural institutions. Traditions should be taken into account during operation of the tourist facilities.

### **Mitigation**

All the designs within the project related to conservation-restoration of historical buildings, blocks and cultural heritage monuments are managed by NACHP. The MDF and NACHP will consult local

communities in project destinations regarding the design of facilities and planned activities. In case if there are some specific restrictions and limitations from the point of view of local traditions and religious opinions, this will be considered and adequately addressed in the projects developed under ITDS. Project staff should ensure that the cultural heritage of non-dominant cultures are accorded the same care as that of the dominant cultures. In such instances it is strongly advised that a team be formed to develop mitigation measures. The team should have an art or architectural historian knowledgeable about the particular cultural tradition, an architectural conservator, an anthropologist familiar with the population of the area, and a coordinator who would bring together the relevant government organizations, experts, and community leaders. Consultations with CH authorities (MoCMP, NACHP; Georgian Orthodox Church; Local Communities).

Following request the representatives of Georgian Orthodox Church will be regarded:

“The representatives of the Patriarchate should participate in the preparation of the program in question right from the beginning. In addition to the Patriarchate departments, the representatives of the eparchies and churches and monasteries officially covered by the program should be engaged in the process. As for the plan to consider the issues and agreement, this should be organized as follows:

- The plan of the rehabilitation works at the churches and monasteries and on their adjacent territories must be worked out by the Church servants jointly with the relevant departments of the Patriarchate.
- As for the tourist infrastructure, naturally this will be worked on by the relevant branch specialists.
- The parties will let one another know about the plans of the works to be accomplished and discuss the prospects and feasibility of their realization.

On the territories adjacent to churches and monasteries in the first instance, we should try to create the environment and schedule the events for the visitors in the way, which will maximally preserve the cozy environment necessary for the Church Service. For this, the following issues should be specified for the visitors:

- The number of group members
- Permissible visit duration to the territory, and
- Strictly and partially limited areas and code of dressing and behavior.

It is similarly important for this process to be controlled and managed by the church parish under the guidance of the Church servants.”

Dress code at monasteries. Restrictions come from the patriarchate of Georgian Orthodox Church and monastery authorities.

The following restrictions may be recommended to visitors:

- Women are requested to put skirts on over their trousers. Skirts are already available at all entrances for free.
- Women and men are required not to wear shorts or open t-shirts;
- Women are required to cover head with scarf; also already available at all entrances for free.
- Men are required not to cover heads with sport caps;
- Noise and shouting are forbidden at the territory of monastery complex;

Photography at the monasteries: photography without verbal permission at some monasteries is not recommended to avoid conflict with monastery representatives. At the monasteries to take photos of nuns and monks without their permission is not allowed. There are some exceptions with prior agreement to monastery authorities.

**Impact:** Influx of tourists may stimulate illegal trade with movable archaeological remains and activities of remain searchers.

**Mitigation:** Control mechanisms should be enhanced

**Impact:** Commercialization of traditional artisan industries can lead to loss of authenticity with negative results for the artisans and possibly for the buyers as well.

**Mitigation:** This issue could be a subject for further in-depth study and recommendations for obtaining and managing certain donor grants and Governmental subsidies on support of truly traditional artisan production (individuals or family business).

**Impact:** Shooting photos of wall paintings may result in damage due to photochemical reactions induced by flashing.

**Mitigation:** Shooting photos should be limited to in monasteries and especially near the wall paintings

## 11. ANALYSIS OF ALTERNATIVES

### 11.1 INTRODUCTION

Several strategic studies were carried out recently in Georgia to define priority economic sectors for Imereti Development. On June 25, 2010, the Government approved the State Strategy for Regional Development of Georgia for 2010-2017, prepared by the Ministry of Regional Development and Infrastructure (MRDI). The main objective of the strategy is to create a favorable environment for regional socio-economic development and improve living standards. Under this national strategy, two supplemental strategic studies were undertaken particularly for the Imereti Region - one is IRDS by MRDI with support from the EU, and the other is Imereti Tourism Development and Marketing Strategy by GNTA. Both of these documents were approved in September 2012. Present SECHSA overviewed expected board environmental, social and cultural heritage impacts of these strategies (Chapter 10) and analyzed alternatives for RDP II interventions in this region in order to recommend project design that would (i) fit under the strategic development framework formally established by the Government, (ii) support achievement of the strategic goals of boosting tourism and economy, and (iii) amplify positive social outcomes of regional development while minimizing possible negative implications for the natural and cultural environment as well as any undesired social aspects.

### 11.2 REGIONAL DEVELOPMENT STRATEGY FOR IMERETI AND ALTERNATIVE SCENARIOS

Imereti occupies a territory of approximately 6,552 km<sup>2</sup> (9.4 percent of Georgia area). Imereti consists of 12 administrative districts: Kutaisi (the Capital of the region), Tkibuli, Tskaltubo, Chiatura, Baghdati, Vani, Zestaponi, Terjola, Samtredia, Sachkhere, Kharagauli, Khoni. There are 542 settlements in the region of which: 10 cities (Kutaisi, Tkibuli, Tskaltubo, Chiatura, Baghdati, Vani, Zestaponi, Terjola, Samtredia, Sachkhere, and Khoni); 3 towns (Shorapani, Kulashi and Kharagauli); and 529 villages. The population of Imereti is about 703,485 (16 percent of Georgia population) at density 107 people/km<sup>2</sup>.

Imereti is considered a lagging region and has only 40 percent of the income in Tbilisi. The incidence of poverty in Imereti is 14 percent, which is slightly lower than the Georgia average of 16 percent. The unemployment rate is 11 percent, which is below Georgia's average of 16 percent and Tbilisi's rate of 30 percent. Such a relatively low unemployment rate results from the rural character of the region, with intensive participation of the population in agricultural self-employment and non-paid employment. The expectation is that Imerati's development is anticipated to draw in skilled and unskilled labor from Imererti region itself, as well as surrounding areas and Tbilisi.

Mining and heavy industry used to dominate the region and there are still traces of them (manganese, construction materials and steel production are still important industries). Today, Imereti is based more on service and agricultural economy than industrial. Imereti is the largest producer of meat, milk, and corn in the country. Agriculture contributes with 12 percent of the GDP of Imereti (versus 8 percent for Georgia as a whole). But like the case of the country as a whole, both these sectors are significantly overshadowed by services.

The Imereti spatial economic analysis<sup>23</sup> (ISEA) and IRDS identified services including tourism, industry and trade as the main drivers of economic growth in the region. Services are today the main driver of economic activities, contributing 73 percent of its total value added. The bulk of services are represented by activities associated with tourism – given the numerous natural and cultural heritage attractions of this region.

Tourism, services and trade prioritized within IRDS, as well as agriculture, are not competitive sectors of economy. On the contrary, agriculture, trade and services are sectors supporting tourism and parallel development of these sectors is essential prerequisite for success. Industry also is not viewed in IRDS and ISEA as a sector competitive or incompatible with tourism development. However, it is clear that industrial zones and most of tourism clusters should be spatially separated. SECHSA report (chapter 10), in line with the ITDS, recommends to develop only “soft” sectors of tourism (healthcare and wellness; soft nature; cultural tourism etc.) in “non-industrial” zones and reject “hard” tourism alternatives. On the contrary, industrial zones are preferable for developing “hard” tourism activities like motor-biking, paint-ball, extreme and adventure sports etc, while “soft” alternatives have less prospective here. SECHSA reviewed cumulative and/or inter-sectoral impacts of industry and tourism and recommends development of Regional Pollution Prevention Plan to minimize industry related pollution and its impact on tourism development.

### 11.3 TOURISM DEVELOPMENT STRATEGY FOR IMERETI AND ALTERNATIVE SCENARIOS

The proposed tourism development vision for the region envisages developing Imereti as a high quality geo-tourism destination throughout the year through attracting domestic and international tourists; building on its wellness/spa tourism, cultural heritage and nature/adventure; and focusing on quality (tourist spending) rather than quantity (tourist arrivals). Success of tourism will depend on the use of an integrated approach, using the geo-tourism and applying vertical approach to a comprehensive urban regeneration effort in key centers of attraction. These will attract private investments, revitalize local business activity, develop a full-fledged regional tourism circuit, and foster two leisure travel clusters: cultural sightseeing and nature/adventure tourism.

When planning the development of the tourism in Imereti, it is critical to define the niches in which to compete, since Imereti should develop specific products intended for customers with a specific motivation, distributed through specific intermediation channels and communicated in specialized media. The assessment of attractiveness and the competitiveness of destination demonstrated that there are areas in which Imereti should be:

#### **Excellent (priority 1)**

Touring  
Wellness  
Cultural  
Health care  
Sports and adventure

#### **A key player (priority 2)**

Wine and gastronomy  
Soft nature  
Meetings and incentives

As it is clear from this list, quite a broad spectrum of tourism activities, which could be developed in Imereti region, is considered as prospective and desirable. In fact only illegal or socially unacceptable activities, like sex tourism, treasure hunting, drug tourism, as well as such specific subsectors, which are not considered as environmentally friendly (hunting tourism etc.) are rejected by default as unacceptable. All of the listed activities are considered as acceptable in principle and adequate environmental protection is viewed as a matter of proper mitigation planning and environmental

<sup>23</sup> Imereti spatial economic analysis was prepared in the framework of Project preparation to underpin its design.

management, rather than rejection of type of activity. The proposed sectors of tourism are considered as alternatives for different locations and preferable options are selected according to specific environmental and other features of each sub-region.

In order to concentrate and prioritize efforts, to stimulate cooperation and competition, as well as to make a territory more understandable to tourists, 4 clusters have been identified, described and prioritized. Within each cluster, only several tourism subsectors from the entire package are selected as feasible, while other alternatives are rejected. E.g. environmentally sensitive cluster “Mountainous Imereti” does not include hard tourism activities or touring and development of extensive tourist centers. Hard tourism activities are proposed for industrial “Unexpected Imereti” cluster and touring for large urban areas and administrative centers (Kutaisi, Tskaltubo).

Alternative Sectors of Tourism	Tourism Clusters According to ITDS			
	The heart of Imereti	Tskaltubo Resort	The Unexpected Imereti	The Imereti Mountains
Touring	+			
Wellness	+	+		+
Cultural	+		+	
Health care		+		
Sports and adventure	+		+	+
Wine and gastronomy				
Soft nature	+		+	+
Meetings and incentives	+	+		+

- The heart of Imereti: the hub with main touring attractions and tourism services; area to be settled with the highest priority in order to create an initial critical mass pulling the tourism development of the region. No environmental constrains are envisaged to prohibit development of each of the tourism sector selected sector for this cluster.
- Tskaltubo resort: the spa area; it will feasibly gain the strength to be considered an independent cluster and be marketed as an integrated resort in the short-to-medium term. No environmental constrains are envisaged to prohibit development of each of the tourism sector selected sector for this cluster.
- The unexpected Imereti: adventure/ rural destination, taking advantage of existing structures and landscape, there is an opportunity for locals to develop it on the medium term. No environmental constrains are envisaged to prohibit development of each of the tourism sector selected sector for this cluster. Development of Wellness, Healthcare, Meetings and Incentives sectors is not feasible because of mostly industrial character of the area and related environmental problems. Due to the same reason, development of the Soft Nature Tourism and Touring is limited here to few particular destinations.
- The Imereti mountains: family-oriented spa, leisure and natural experiences’ area; it would require creating in the long term few other settlements like Sairme and Nunisi. No environmental constrains are envisaged to prohibit development of each of the tourism sector selected sector for this cluster.



The Proposed clusters and sectors are not competitive or incompatible. ITDS provided harmonized scheme of spatial distribution of different tourism sectors and activities. The tourism types, having severe environmental impacts, like trophy-tourism are not supported in ITDFS. SECHSA (chapter 10), in line with the ITDS, recommends to develop only “soft” sectors of tourism (healthcare and wellness; soft nature; cultural tourism etc.) in “non-industrial” zones and use industrial zones as preferable for developing “hard” tourism activities, like motor-biking, paint-ball, extreme and adventure sports etc.

## 11.4 ALTERNATIVES OF PROJECT IMPLEMENTATION SCHEMES

### **Several Alternative strategies for the Project implementation have been proposed for RDP II:**

Scenario 1 considers Vertical Provision of Investments and Integrated Program, comprising infrastructure development, construction and rehabilitation of tourism facilities (parkings, shops, café, information centers etc.), restoration/conservation of cultural heritage attractions, support for private investments in tourism and food processing. The program envisages parallel development of key centers of attraction.

Scenario 2 envisages Horizontal Management of Investments, as it was for several years applied by MDF in WB and ADB financed municipal development programs. Scenario 2 envisages horizontal provision of investments for municipal and tourist infrastructure across several regions and local-self governments (LSGs).

Scenario 3 considers that no special intervention is required from the Government side and the process should be allowed to evolve spontaneously, as it goes.

### **Socio-Economic Impacts**

Tourism development vision proposed in TDS for Imereti region envisages developing of these region as a high quality geotourism destination throughout the year through attracting domestic and international tourists; building on its cultural heritage and biodiversity; and focusing on quality (tourist spending) rather than quantity (tourist arrivals). Success of tourism will depend on the use of an integrated approach, using the geotourism and applying vertical approach to a comprehensive urban regeneration effort in key centers of attraction. These will attract private investments, promote PPP, revitalize local business activity, develop a full-fledged regional tourism circuit, and foster two cost efficient leisure travel clusters:

These beneficial outcomes are expected as a result of the integrated development scheme (scenario 1): development of the ITDS tourism vision and proposed clusters and sectors will require, at a minimum: infrastructure improvement to attract private sector investments; improved planning and organization (e.g. destination management organization and office); institutional strengthening and capacity building; association/cluster development; geotourism mapping and tour circuit development; improved visitor services, signage and interpretation; and marketing activities. Without such integrated (vertical) management, e.g. through decentralized horizontal management of investments directly to the municipalities (scenario 2) it is impossible to achieve such rapid economic growth.

### **Social Impacts**

Integrated approach allows to better manage social impacts related to growth of tourist flows, like increased demand for infrastructure, sanitation, waste management, water and energy supply. Vertical scheme allows parallel development of general and specific tourist infrastructure and scheduled planning of enterprising campaigns. In case of horizontal schemes of management lack of coordination in developing tourism infrastructure and supporting infrastructure will result in local and temporary increase of tourist flows impacted by lack of water supply and sanitation infrastructure, safe roads, waste collection and disposal facilities. Such imbalance will adversely affect environment (pollution),

local residents and tourists. Lowering the quality of services and in medium term perspective, resulting in decreasing tourist flows and related benefits.

Integrated management and clear policy aimed on comprising as much as possible local beneficiaries (employees, small businesses etc.) enables to minimize revenue leakages. Parallel investments aimed on support of local food processing enterprises, local cousin, wineries, system of small boutique hotels, shops and cafes, artisans and producers of souvenirs is a remedy against leakages.

The influx of large numbers of foreigners (tourists or migrant workers) into a local culture and the likely clash of contrasting life styles that result, can have serious impacts on local cultures, lead to erosion of traditional values. Stimulation of prostitution, drug proliferation, increase of criminality, transmission diseases is often associated with tourism industry. The integrated management involving central and local government, engaging healthcare and social protection institutions, Church and other stakeholder groups enables to better manage these risks. Horizontal investment schemes, as well as large scale resort complexes are less manageable in that regard.

One more example of a negative externality is induced development and misbalanced migration related to tourism sector. Development of regional and local Master Plans and coordinated spatial planning, as well as managed distribution of facilities around the major tourist circuits enables to balance induced development. Horizontal schemes do not provide balancing mechanisms and construction of large complexes stimulated induced development concentrated around these centers.

### **Environment Impacts and Impacts on Cultural Heritage**

Implementation of the complex program of rehabilitation of old and construction of new infrastructure of course will have certain negative impact on the natural environment and cultural heritage. However, as it has been demonstrated in Chapter 10, the direct impacts of projects implemented in urban areas are mostly limited to typical environmental and social impacts related to civil works and transportation of construction materials. Besides the dust, emissions, noise, disturbance, safety risks, traffic disruption etc., cultural heritage impacts are of particular importance. Construction activities within the historical/cultural zone are always associated with certain risks of physical damaging valuable historical or architectural buildings, monuments or archaeological sites. Excavations in close vicinity with the buildings, vibration related to vehicle operations and heavy equipment may lead to structural damages of historically valuable buildings. Excavations may damage archaeological artifacts.

Direct impacts related to Construction of Facilities in Rural Area and Natural Landscapes are more diverse and add some more features:

- Footprint on natural landscape in cases, where the new infrastructure is built
- Risks of soil and/or water contamination due to improper waste and hazardous material management, improper vehicle maintenance and fueling operations, fuel leakages etc.
- Damage to natural vegetation
- Disturbance of fauna
- waste and pollution due to poor sanitation in workers camps
- temporary or permanent occupation of private land, resettlement impacts related to the necessity of land acquisition (at present stage of planning no resettlement impacts are reported, however, as the extremely important issue, this should be under strict control)
- Specific type of indirect impacts on cultural heritage is related to the cases when unsuitable facilities are constructed and operated near the historical monument, sacred sites, cemeteries, traditional recreational or leisure zone change the perception and “atmosphere” of monument or site, affect traditional way of life and habits of local community.

**Conservation-restoration of historical buildings and monuments** by definition is aimed on preservation of cultural heritage. However, improper planning and design, misbalance between reconstruction/restoration and preservation/conservation strategies may lead to unacceptable changes of materials/features and diminishing of the cultural heritage value of the affected monument. All interventions during the conservation-restoration works should be in compliance with the requirements of the Georgian Law on Cultural Heritage and the designs should be approved by the **NACHP**. However, besides the approval of the NACHP, appropriate public consultations and consensus with the local communities, general society, Church and academicians is required.

All these risks are manageable through application of good design, construction and operation practices.

The mentioned direct environmental and cultural heritage impacts are relevant to all of the 3 reviewed scenarios. However, application of vertical scheme of management, better inter-sectoral coordination and more strict overall control makes more reliable that efficient mitigation will be achieved through application of best construction and environmental practices. More efficient strict procedure for site selection will enable to avoid impacts on protected areas and sensitive habitats.

The coordinated development of tourist facilities and supportive infrastructure (water supply, wastewater, waste management etc.) envisaged by the vertical scheme of management (scenario 1) allows to solve the problem of increased waste and wastewater generation and to prevent related pollution. Misbalance of increased tourist flows and deficiency of sanitation infrastructure, which is the case currently and is characteristic to uncoordinated development schemes (scenarios 2 and 3) will lead to environmental pollution.

The proposed integrated and coordinated development plan envisages parallel development of different tourist destinations of the region. This will enable to more evenly distribute the tourist flows and avoid local overloading. Large tourist complexes, which support high local concentration of tourists and impose high load on local environment, are limited to the traditional resort zones (Tsakaltubo, Sairme etc.), which have sufficient carrying capacity to accommodate large amounts of tourists.

Integrated development of Master Plans and Spatial Zoning will balance induced development and related impacts on natural landscapes and ecosystems. Uncontrolled induced development associated with scenarios 2 and 3 is related to significant impacts on undisturbed natural landscapes, as well as with visual impacts and disfiguring urban and rural landscaped due to unplanned construction.

Coordinated management between agencies responsible for tourism, protected areas management, and pollution control will enable to avoid the deterioration of environmental resources. Integrated scheme enables preparation of tier 2 managerial actions through initiation of necessary strategic studies: Preparation of Regional Waste Management and Pollution Prevention Plans, updating of management plans for protected areas, development of Regional Forest Fire Protection Plan, Assessment of Epizootic Risks and planning prevention strategy against increase of sexually transmitted diseases etc., which are important in the context of increasing environmental risks related to tourism development.

## **Conclusion**

Geotourism is the "best practice" tourism that sustains, or even enhances, the geographical character of a place, such as its culture, environment, heritage, and the well-being of its residents. Project scenario selected for implementation (scenario 1) envisages an integrated geotourism development approach which bases itself on multisectoral investments and integrated management of vertical investments, aimed on coordination of developing tourism attractiveness of destination sites, increase of carrying capacity, sustainable support of most cost efficient tourist clusters and protection of natural and cultural heritage.

The major impact of scenarios 2 and 3 is reduction of sustainability of the economic development of region and related benefits for the local population.

## 12. MANAGEMENT FRAMEWORK FOR ENVIRONMENTAL, SOCIAL AND CULTURAL HERITAGE PROTECTION

### 12.1 ENVIRONMENTAL AND SOCIAL DIRECT IMPACTS OF RDP II COMPONENTS AND THEIR MITIGATION

Subproject-specific direct impacts usually have less regard to the Strategic ESIA, and they should be addressed in site-specific ERs. Typical impacts relevant to most of the subprojects and related mitigation strategies, as well as template management plans are usually provided in programmatic documents, which could be standing alone Environmental Framework documents or part of Strategic Environmental Assessment. For RDP II the framework safeguard documents were prepared by MDF in consultation with the WB. These are Environmental Management Framework (EMF) and Resettlement Policy Framework (RPF). However, the scope of present SECHSA extends beyond the frames of the RDP II and comprises all the potential subprojects that could be developed as components of the ITDS. This includes infrastructure projects similar to RDP II, as well as projects aimed on restoration/rehabilitation of cultural heritage monuments and support of private investment project. SECHSA provides the Government of Georgia with the recommendations how to manage the projects to ensure compliance with the international best practices and safeguards requirements:

- It is recommended that the management principles set forth in EMF and RPF developed for RDP II and described in chapter 12.5 of this SECHSA, should be applicable as a good practice sample to all subprojects developed under the context of ITDS
- SECHSA provides criteria for selecting private projects (chapter 12.4), which should be used as a tool for assessing project eligibility and preferences from environmental and social standpoint.

Mitigation strategies integrated as EMF and RPF, as well as project selection criteria are based on understanding of typical impacts associated with the different phases of the subproject implementation. Below we provide brief overview of the tourism sectors and clusters proposed in ITDS, related activities and associated typical (mostly direct, and partly also – indirect) impacts, to make clear the basis of programmatic provisions given in EMF and project selection criteria.

Analysis of the proposed tourism sectors and clusters and related development and operational activities (see chapter 2) enables us to separate two ranges of activities corresponding to development and operation phases:

#### **1. Development of sector- and cluster resources and general tourism infrastructure**

- Rehabilitation of historical and architectural monuments, museums and sites;
- Development of sightseeing infrastructure and routes within the natural landscapes – caves, national parks, lakes; development of SPA and wellness facilities)
- Development of sports and adventure resources, facilities and services (horse and bike renting centers; camps; huts )
- Rehabilitation of existing balneal and lodging facilities and construction of modern SPA and healthcare facilities;
- Development of supporting facilities for sport and leisure: parks, rest sites; tennis-courts, other sport facilities)
- Development of the local facilities of the general tourism Infrastructure in all destinations of the tours (parking; information centers; café; toilets etc.)

#### **2. Tourism sector- and cluster- specific activities**

Tourism sectors, Clusters and Resources	Specific Activities Related to Development and Operation of Clusters and Resources
<p><b>Touring</b>  <b>Cluster 1. The heart of Imereti</b>  <b>Kutaisi, Churches and monasteries Vani archaeological site; Caves Protected areas</b>            (Sataplia Natural reserve, and Ajameti Protected Area; Tkibuli lake); <b>Gorda Canyon; Tskaltubo</b></p>	<p><b>Touring activity</b> mostly considers organized transportation of the small groups of tourists to the destination sites, observation of the cultural heritage monuments and natural sightseeing, enjoying relaxation in SPA destinations; shopping; participation in some traditional activities or cultural events (professional or folk-concerts; festivals, wedding-parties or traditional wine ceremonies and feast; religious celebration etc.)</p>
<p><b>Sports &amp; Adventure (soft)</b>            sports or activities like Hiking, Trekking, Biking, Canyoning, Escalade, Caving, Horse riding  <b>Cluster 1. The heart of Imereti</b>  <b>Cluster 3. The Unexpected Imereti</b>  <b>Chiatura industrial area; Katsyki pillar,</b>  <b>Cluster 4. The Imereti Mountains</b>  <b>Borjomi-Kharagauli National Park, Nunisi</b></p>	<p><b>Sports &amp; Adventure activity</b> mostly considers:            - organized transportation of the small groups of tourists to the destination sites;            - training and practicing specific sport-activities (hiking, biking, canyoning, escalade, caving, horse-riding etc) in small groups</p>
<p><b>Wellness</b>            This sector is specially focused on spa resources.  <b>Cluster 1. The heart of Imereti (Tksaltubo)</b>  <b>Cluster 2. Tskaltubo Resort</b>  <b>Cluster 4. The Imereti Mountains</b>  <b>Sairme, Nunisi</b></p>	<p><b>Wellness related activity</b> could be limited to short-term (1 or 2 days) relaxation procedures practiced by the tourists as only a part of their touring program or a medium-term activities (1 or 2 weeks) specifically aimed on wellness. Anyway, the character of the activities envisages simultaneous presence of a large amount of tourists in a site of destination. Usual activities include SPA procedures, Soft sport activities, participation in some traditional activities or cultural events (professional or folk-concerts; festivals; theatres, shows etc.)</p>
<p><b>Health care</b>            .  <b>Cluster 2. Tskaltubo Resort</b></p>	<p><b>Healthcare and Wellness related activity</b> could be limited to medium-term activities (1 or 2 weeks) aimed generally on wellness or more specific and long-term healthcare program requiring 1 or 2 month. Anyway, the character of the activities envisages simultaneous presence of a large amount of tourists in a site of destination. Usual activities include Healthcare and SPA procedures, soft sport activities, participation in some traditional activities or cultural events</p>
<p><b>Soft nature (relax)</b>  <b>Cluster 1. The heart of Imereti</b>            Sataplia and Ajameti Protected Areas; Tkibuli Reserve and lake; Gordi Canyon;  <b>Cluster 3. The Unexpected Imereti</b>  <b>Katsyki pillar, Chiatura - Sachkhere area;</b>  <b>Cluster 4. The Imereti Mountains</b>  <b>Borjomi-Kharagauli National Park, Nunisi</b></p>	<p><b>Touring activity</b> mostly considers organized transportation of the small groups of tourists to the destination sites to spent there at least several days. The character of the activities envisages simultaneous presence of a some medium amount of tourists at the site of destination. Typical activities: observation of the natural sightseeing, spectrum of more specific activities: bird-watching; , nature photography, fishing, walking, rowing, picnics etc.</p>
<p><b>Culture (soft &amp; hard)</b>  <b>Cluster 1. The heart of Imereti</b>  <b>Kutaisi, Churches and monasteries Vani archaeological site; Gorda Canyon; Tskaltubo</b>  <b>Cluster 3. The Unexpected Imereti</b>  <b>Katsyki pillar, Mghvimevi monastery, Koreti Church; Rural wine cellars</b></p>	<p><b>Culture (soft &amp; hard) tourism</b> mostly considers concentration of larger groups of tourists in one destination center (like Kutaisi or Tskaltubo) and organized transportation of the small groups of tourists to the destination sites for observation of the cultural heritage monuments and participation in some traditional activities or cultural events (professional or folk-concerts; festivals, wedding-parties or traditional wine ceremonies and feast; religious celebration etc.)</p>
<p><b>Meetings &amp; incentives</b>            .  <b>Cluster 1. The heart of Imereti</b>  <b>Kutaisi, Tskaltubo</b>  <b>Cluster 2. Tskaltubo Resort</b>  <b>Cluster 4. The Imereti Mountains</b>  <b>Borjomi-Kharagauli National Park</b></p>	<p><b>Meetings &amp; incentives</b> mostly considers organized transportation of the special small groups of persons, united by common professional or educational interests, to the destination sites and organization of meetings, conferences, workshops, trainings etc. Secondary activities may include short tours to cultural heritage or natural valuable sites, wellness activities using local SPA and sport facilities, relaxation and soft nature tourism activities, entertainment etc.</p>

### 12.1.1. DEVELOPMENT OF SECTOR- AND CLUSTER RESOURCES AND GENERAL TOURISM INFRASTRUCTURE

Direct impacts of the development phase are mainly related to construction activities: construction of general infrastructure (roads, water supply and wastewater systems; energy supply; communication etc.) and specific tourist infrastructure. More specific impacts are related to restoration/rehabilitation works conducted directly on historical and architectural monuments. Such subprojects have limited scale within the RDP II but are expected to be represented within the ITDS development package in higher proportion. Depending on tourism sector and cluster, construction activities could be limited to urban areas or expand on rural and natural landscapes.

The typical environmental and social impacts related to civil works within the urban area and natural landscapes are given below (Boxes 10.1 and 10.2 respectively).

#### **Box 12.1 Non-specific possible impacts related to civil works in urban area\*:**

- Temporary change of urban landscapes;
- Generation of construction waste;
- Noise, emissions and dust generation at the construction sites and material transportation routes;
- Vehicle and pedestrian safety;
- Safety on construction site;
- Reduced pedestrian access to adjacent areas;
- Traffic disruption;
- Damage of existing underground infrastructure and utilities;
- Damage of vegetation within the urban landscapes, parks, squares etc.
- Construction run-off leading to soil/ water pollution
- Exploration of quarries for the needs of construction and finishing material supply
- Construction activities within the historical/cultural zone are always associated with certain risks of physical damaging valuable historical or architectural buildings, monuments or archaeological sites. Excavations in close vicinity with the buildings, vibration related to vehicle operations and heavy equipment may lead to structural damages of historically valuable buildings. Excavations may damage archaeological artifacts. Indirect impacts on cultural heritage resources may be related to stimulation of erosion processes and changes of hydrological patterns (drainage patterns; local flooding, river bank erosion), as well as triggering local landslides in case of improper design of cuttings and slope benching etc.

\* Note: under this item we consider only the impacts related to the civil works on infrastructure rehabilitation. Impacts on cultural heritage related to specific conservation/restoration activities focused directly on the monuments is considered in Box 12.3 as a category of impacts specific for this project.

### **Box 12.2 Non-specific possible impacts related to construction of facilities in rural areas and natural landscapes**

In addition to the impacts described in Box 10.1, civil works within the rural and natural landscape may be related with following types of impacts:

- Footprint on natural landscape in cases, where the new infrastructure is built
- Risks of soil and/or water contamination due to improper waste and hazardous material management, improper vehicle maintenance and fueling operations, fuel leakages etc.
- Damage to natural vegetation
- Disturbance of fauna
- waste and pollution due to poor sanitation in workers camps
- temporary or permanent occupation of private land, resettlement impacts related to the necessity of land acquisition
- Specific type of indirect impacts on cultural heritage is related to the cases when unsuitable facilities are constructed and operated near the historical monument, sacred sites, cemeteries, traditional recreational or leisure zone change the perception and “atmosphere” of monument or site, affect traditional way of life and habits of local community.

Mitigation of the abovementioned impacts is usually limited to the requirements of being compliant with the accepted international construction standards and good environmental practices and giving due consideration to environmental and social issues during the site selection for the facilities. Typical mitigation measures and template EMP are provided in chapter 12.4. Analysis of alternatives is viewed as important tool for preventing damage of valuable landscapes in many specific cases. *For example, feasibility of the extensive intrusion in Gordi canyon unique landscape and construction of massive tourist infrastructure (a sky walk-way over the gorge) may be questionable and thorough analysis of alternative facilities is necessary (smaller platforms for viewpoints; balloons used as viewpoints; hiking and trekking within the canyon).*

More specific socio-cultural and socio-economic impacts are related to the restoration/conservation works on cultural heritage monuments (see Box 12.3).

### **Box 12.3 Possible specific impacts related to civil works in urban areas:**

- **Reconstruction/rehabilitation of residential houses** and change of facade architecture is related to involuntary intervention within private residential space. Improvement of the architectural features generally is perceived as positive impact increasing real estate value of affected buildings. However, in some particular cases the attitude of the owners of apartments may be negative. This is less probable for big apartment block houses, but could be an issue in cases when private houses are affected. The owners may be reluctant to changing traditional features of their house. Any case, consultations with the affected households is



crucially important. At this stage the project does not envisage demolishing of any residential buildings. In case the detailed design will require dismantling of some buildings owned by private persons or entities, the WB Safeguard Policy on Involuntary Resettlement (OP/BP 4.12) will be triggered and relevant procedures should be applied, including preparation of abbreviated or full scale RAP, consultations with the affected households, compensation at replacement cost etc. The WB procedures are described in chapter 4 of this report and in more details in the Resettlement Policy Framework document developed by MDF in consultation with WB.

- **Reconstruction/rehabilitation of residential houses** and apartment buildings will have also a component of impact, which is of temporary character: disturbance of residents caused by dust, noise, limitations of access and increased safety risks. These temporary impacts require adequate mitigation, in certain cases – compensation and in all cases, - meaningful consultation with the affected households. Some of the affected households may chose to live in temporary dwelling premises for the period of rehabilitation works (in a safe and undisturbed conditions) and in that case, compensation of their additional expenses related to the temporary change of residential place is required.
  
- **Conservation-restoration of historical buildings and monuments** by definition is aimed on preservation of cultural heritage. However, improper planning and design, misbalance between reconstruction/restoration and preservation/conservation strategies may lead to unacceptable changes of materials/features and diminishing of the cultural heritage value of the affected monument. All interventions during the conservation-restoration works should be in compliance with the requirements of the Georgian Law on Cultural Heritage and the designs should be approved by the NACHP. However, besides the approval of the NACHP, appropriate public consultations and consensus with the local communities, general society, Church and academicians is required. *As an example of difficulties in this respect, we can mention reconstruction of the Bagrati Cathedral in Kutaisi. The cultural heritage protection specialists, including UNESCO experts, have not achieved consensus on the methodology and approaches applied for reconstruction. We do not claim that the innovative approaches applied in this case (full restoration instead of conservation of ruins) are unacceptable, but we have to state that the consultations with the Georgian and international experts, general public and Georgian Orthodox Church should be organized better and with more patience paying due respect to the sensitivity of the issue.*

### 12.1.2. TOURISM SECTOR- AND CLUSTER- SPECIFIC ACTIVITIES

Typical Impacts related to tourist activities are summarized below in Box 12.4

<b>Box 10.4 Typical Impacts related to tourist activities</b>	
<b>Tourism Sector - Specific Activities</b>	<b>Related Impacts</b>
<b>Touring activity</b> mostly considers organized transportation of the small groups of tourists to the destination sites, observation of the cultural heritage monuments and natural sightseeing, enjoying relaxation	<ul style="list-style-type: none"> <li>▪ increased traffic and related risks (safety risks for pedestrian and vehicles, emissions, dust, noise, pollution related to fuel leakages disruption of local traffic)</li> <li>▪ increased waste generation</li> </ul>

<p>in SPA destinations; shopping; participation in some traditional activities or cultural events (professional or folk-concerts; festivals, wedding-parties or traditional wine ceremonies and feast; religious celebration etc.) The character of the activities envisages simultaneous presence of a some medium amount of tourists at the site of destination.</p> <p><b>Sports &amp; Adventure activity</b> mostly considers:</p> <ul style="list-style-type: none"> <li>- organized transportation of the small groups of tourists to the destination sites;</li> <li>- training and practicing specific sport-activities (hiking, biking, canyoning, escalade, caving, horse-riding etc) in small groups</li> </ul>	<ul style="list-style-type: none"> <li>▪ contamination related to improper sanitation (lack of toilets, sewerage system)</li> <li>▪ competition with the local population for resources and infrastructure (water supply, energy supply)</li> <li>▪ potential impact on fauna due to disturbing noise, poaching etc.</li> <li>▪ impact on flora (increased forest fire risks, potential impact on local habitats of endangered species etc.)</li> <li>▪ general disturbance of local population</li> <li>▪ competition with the local population for resources and infrastructure (water supply, energy supply)</li> <li>▪ increase of risks of transmission diseases</li> <li>▪ risks of physical damaging cultural heritage due to increased tourist influx (possible vandalism; limitations of physical carrying capacity of site, especially in case of deteriorated or not sufficiently preserved sites), influence of increased traffic (vibration; potential impact of emissions on cover of monuments and paintings), influence of flash exposure on a wall paintings during photographing etc.</li> </ul>
<p><b>Healthcare and Wellness related activity</b> could be limited to medium-term activities (1 or 2 weeks) aimed generally on wellness or more specific and long-term healthcare program requiring 1 or 2 month. Anyway, the character of the activities envisages simultaneous presence of a large amount of tourists in a site of destination. Usual activities include Healthcare and SPA procedures, soft sport activities, participation in some traditional activities or cultural events</p>	<ul style="list-style-type: none"> <li>▪ increased waste generation</li> <li>▪ contamination related to improper sanitation (lack of toilets, sewerage system)</li> <li>▪ competition with the local population for resources and infrastructure (water supply, energy supply)</li> <li>▪ general disturbance of local population</li> <li>▪ increase of risks of transmission diseases</li> </ul>
<p><b>Culture (soft &amp; hard) tourism</b> mostly considers concentration of larger groups of tourists in one destination center (like Kutaisi or Tskaltubo) and organized transportation of the small groups of tourists to the destination sites for observation of the cultural heritage monuments and participation in some traditional activities or cultural events (professional or folk-concerts; festivals, wedding-parties or traditional wine ceremonies and feast; religious celebration etc.)</p>	<ul style="list-style-type: none"> <li>▪ increased traffic and related risks (safety risks for pedestrian and vehicles, emissions, dust, noise, pollution related to fuel leakages disruption of local traffic)</li> <li>▪ increased waste generation</li> <li>▪ contamination related to improper sanitation (lack of toilets, sewerage system)</li> <li>▪ competition with the local population for resources and infrastructure (water supply, energy supply)</li> <li>▪ potential impact on fauna due to disturbing noise, poaching etc.</li> <li>▪ risks of physical damaging cultural heritage due to increased tourist influx (possible vandalism; limitations of physical carrying capacity of site, especially in case of deteriorated or not sufficiently preserved sites), influence of increased traffic (vibration; potential impact of emissions on cover of monuments and paintings), influence of flash exposure on a wall paintings during photographing etc.</li> </ul>
<p><b>Meetings &amp; incentives</b> mostly considers organized transportation of the special small groups of persons, united by common professional or educational interests, to the destination sites and organization of meetings, conferences, workshops, trainings etc.</p> <p>Secondary activities may include short tours to cultural heritage or natural valuable sites, wellness activities using local SPA and sport facilities, relaxation and soft nature tourism activities, entertainment etc.</p>	<ul style="list-style-type: none"> <li>▪ increased waste generation</li> <li>▪ contamination related to improper sanitation (lack of toilets, sewerage system)</li> <li>▪ competition with the local population for resources and infrastructure (water supply, energy supply)</li> <li>▪ general disturbance of local population</li> <li>▪ increase of risks of transmission diseases</li> </ul>

Measures aimed on mitigation of the aforementioned direct impacts are summarized in chapter 12, paragraph 12.4.

Positive indirect impacts of the reviewed project components will be discussed in p. 10.2. However, the project has also direct positive social impacts:

- Rehabilitation of infrastructure, public and residential houses
- Increase of real estate value of the rehabilitated houses
- Creation of local job opportunities related to construction activities (short term) and operation of newly constructed tourist facilities (kiosks, shops, cafes, parking etc.)
- Conservation of cultural heritage

### 12.1.3. PROVISION OF PUBLIC INFRASTRUCTURE TO PRIVATE SECTOR INVESTMENTS

Direct environmental and social impacts of the private sector investments in tourism, as well as construction phase impacts of investments in food processing are in general very similar to those described for components in Boxes 10.1, 10.2 and 10.3.

More specific impacts are related to the operation of food processing plants. These impacts will be analyzed within the project-specific EIAs and EAs for A or mostly B category projects and mitigation measures will be integrated in relevant EMPs. So far as no tentative list of facilities and proposed locations are available at present, there is no sense in reviewing potential specific impacts of the facility operations. We would like just to stress importance for different food processing activities of such common issues, like waste management, control of discharges in surface water, emission control, pollution prevention and abatement.

## 12.2 ADMINISTRATIVE ORGANIZATION AND CAPACITY BUILDING (GAP ANALYSIS AND RECOMMENDATIONS)

The Government of Georgia approved in June 25, 2010 (Government resolution no. 172), the State Strategy on Regional Development of Georgia for 2010-2017, prepared by the Ministry of Regional Development and Infrastructure (MRDI). The main objective of the strategy is to create a favorable environment for regional socio-economic development and improve living standards. These objectives will be attained through a balanced socio-economic development, increased competitiveness and increased socio-economic equalization among the regions.

Within the regional development framework, Georgia intends to fully tap its potential to promote sustainable tourism in promising regions, such as Kakheti and Imereti. In the framework of the Country Partnership Strategy Progress Report (CPS-PR) for FY10-FY13 presented to the Board in April 2011 (Report Number: 58287-GE), the Government asked the WB to support regional development by applying a programmatic approach. As part of the identification of the RDP II program for Imereti region, the government is launching in parallel to this assignment two supplemental strategies - one is IRDS by MRDI with support from the EU (expected to be completed in 2013), and the other is Imereti Tourism Development and Marketing Strategy by GNTA (expected to be completed in September 2012).

According to ITDS (August 2012), regarding **management and organization** of the tourism system, the management of Imereti as a destination is still missing. There are two key factors that should be considered in order to develop an appropriate framework for tourism management and organization: coordination and strategy definition.

On the first hand, currently there is **limited coordination** between the agents of the system. The main feature is in fact, the lack of information exchange or contact between them.

Thus, the main characteristics of this organization are:

- Centralization of the activities in Tbilisi: most of the improvement initiatives and marketing activities related to Imereti are defined and managed by institutions that not based locally.
- Absence of a local organization of tourism stakeholders for encouraging or helping coordination.
- Lack of professional associations to provide assessment.
- Most of the stakeholders miss the “big picture”, while they concentrate their attention on relatively small local issues.

The same is to great extent valid in relation with the system of managing environmental and social aspects of the tourism related projects.

SECHSA recommends that the vertical management scheme applied for WB financed RDP I program for Kakheti region should be applied for RDP II and other subprograms to be implemented in Imereti under the ITDS.

### **Institutional and Implementation Arrangements**

The investment programs (RDP II and similar programs under the ITDS) are supposed to be multi-sectoral and many different entities are engaged in preparation and implementation of the program. The roles of engaged entities is illustrated by the table 11.1. Key lessons learned and innovations that have been considered in the design of this Project:

- Key difference between RDP II and the previous RMIDP implemented by MDF under the WB financing is that this program is vertical which makes it different from horizontal, i.e. sectoral projects. This verticality is to result in better targeting, leveraging and geographic concentration of effort for higher impact. This approach provides framework conditions for private sector investment in the target areas.

When resources are limited and expectations are high by citizens and investors, effort must be made to avoid situation where project resources are scattered too thin, thus overstretching the notions of feasibility, visibility and results-orientation.

### **Working Group**

Due to the multi-sectoral nature of the Project, a Working Group has been established for RDP I in Kakheti region, which involves all agencies concerned- namely, GNTA, Culture Heritage Fund, MDF, Protected Areas Agency, Governor’s Office, Ministry of Finance and MRDI. The Working Group is ensuring coordination and efficient involvement of concerned agencies and is responsible for strategic decision making. In particular, the Working Group is responsible for selection of subprojects for further development and implementation. Formally, working group has not been established for RDP II, however, the group is functioning in the same way as for RDP I. SECHSA proposes that the management scheme approved for RDP I should be applied for RDP II and any other regional subprograms implemented under the ITDS context.

### **Implementing Agency**

MDF is responsible for project implementation in case of RDP I and RDP II. The MDF has grown up to become a solid non-bank financial intermediary (FI) that plays very substantial role in funding and implementing regional and municipal infrastructure development. MDF has been successfully implementing a series of IDA and IBRD financed regional and municipal development project since 1998 (MDDP, MDDPII, RMIDP and RMIDP-AF). Good performance of the MDF is well appreciated and reflected by the growing interest both of the Government and the donors in using the MDF as primary organization for channeling grants and credits to the Georgian regions and LSGs.

Governance structure of MDF: For the purpose of ensuring proper coordination and execution of the Project, the Government shall maintain the Supervisory Board of the MDF, chaired by the Prime Minister of Georgia, and comprising Minister of Finance, Minister of Economy and Sustainable Development, Minister of Regional Development and Infrastructure, Minister of Justice. The functions of Board include, inter alia: (a) overall supervision of the implementation of the Project; (b) inter-agency coordination of day-to-day operations to achieve the Project objectives; and (c) review and approval of the annual work programs, budgets and reports for the operation of the MDF.

SECHSA recommends that all subprograms under the ITDS should be implemented by PIUs having experience of international project management (MDF or more sector-specific PIUs).

### **Leading Agency**

The leading agency for each type of activity is the entity managing the day-to-day activities related to the particular project component and responsible for achieving its objectives. For strategic decisions, like selection of the subprojects, the Working Group is considered as a Leading Agency. For development of infrastructure projects and for implementation of infrastructure and conservation-rehabilitation projects MDF, as the Implementing Agency for this program has the leading role. In preparation of the conservation-rehabilitation projects the NACHP is the leading entity. At the stage of operation and maintenance of all provided assets, the LSGs will take responsibility. MDF and the LSGs will sign subproject investment agreements which will clearly assign LSGs the responsibility of operation and maintenance of all provided assets.

### **Supporting Entity**

The supporting entity for each type of activity is the entity possessing specific capacity, experience and functional role in respect with the particular activity and thus efficiently supporting the Leading Agency during the implementation of this particular project component. NACHP is considered as the agency supporting MDF during the implementation of conservation-rehabilitation projects, while the local self-governments are supporting entities for implementing infrastructure rehabilitation subprojects.

Due to the complex character of the program and a lot of stakeholders engaged or affected by the project implementation, the Consultation Board will be created for periodic and day-to-day consultations on particular sensitive matters. The Consultation Board will include representatives of Georgian Orthodox Church; Local Self-Governments; Cultural Heritage Fund; Local communities and NGOs; Specialists in environmental, social and cultural heritage protection.

### **Regulatory Bodies**

The regulatory bodies are the state entities having a role of issuing permits for implementation of the subprojects or supervising the implementation process. The Construction permit for most of the subprojects is issued by the local Self Governments. Construction Permits for large scale infrastructure, like airports, mainline water supply or gas supply systems, landfills – by the MESD. Positive conclusion of the MoE (through the procedure of Ecological Expertise of submitted EIA document) and of MoCMP is required for issuing Construction Permit for the project types listed in the law on Environmental Impact Permits (2008). The other subprojects do not require preparation of EIA and Ecological Expertise. However, any construction activities within the protected areas or buffer zones, as well as within general or particular protection zone for cultural heritage monuments, should be carried out after obtaining relevant consent from the regulatory agencies: MoCMP and Protected Areas Agency. Approval of conservation-restoration subprojects issues by the NACHP.

Throughout project preparation process, all agencies involved at the national, regional and local levels were engaged in the development of the Project design to ensure good utilization of local knowledge, their buying in and sustainability of their ownership;

**Project administration mechanisms Established During the Project Appraisal**

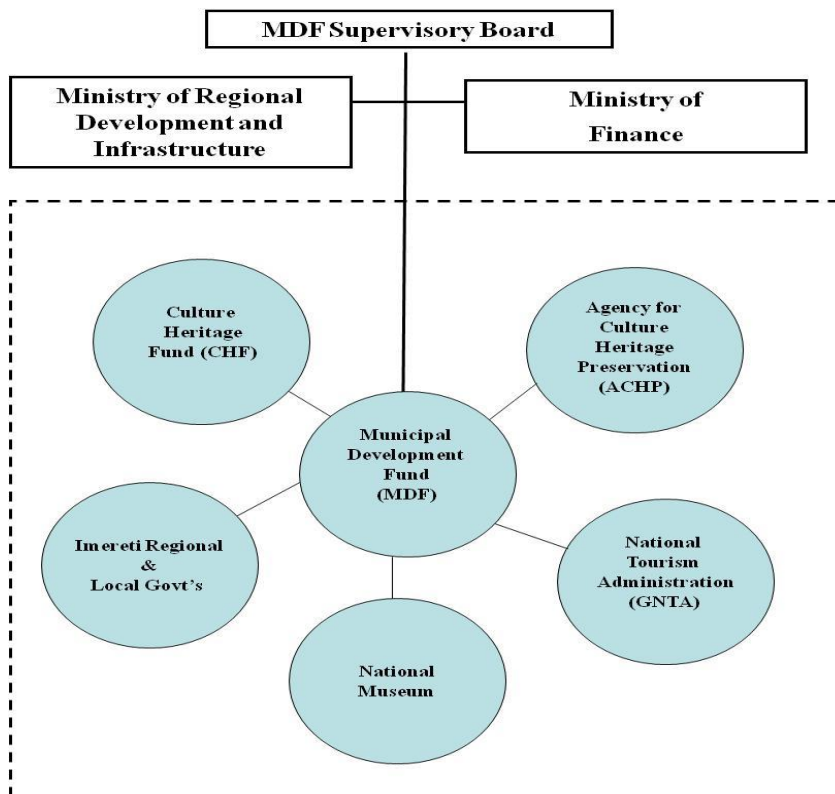
The above proposed administration schemes have been to great extent regarded and reflected in project appraisal documents. The established project administration schem is described below:

MDF will be responsible for project implementation. The MDF has grown to become a solid non-bank financial intermediary (FI) that plays a very substantial role in funding and implementing regional and municipal infrastructure development. MDF has been successfully implementing a series of IDA and IBRD-financed regional and municipal development projects since 1998. Its good performance is well appreciated and reflected by the growing interest both of the Government and donors in using the MDF as the primary organization for channeling grants and credits to the Georgian regions and LSGs.

MDF’s governance structure. For the purpose of ensuring proper coordination and execution of the Project, the Government shall maintain the Supervisory Board of the MDF, chaired by the Prime Minister of Georgia, and comprising all ministers involved. The Board’s functions include, inter alia: (a) overall supervision of Project implementation; (b) inter-agency coordination to achieve the Project objectives; and (c) review and approval of the annual work program budgets and reports for operating the MDF.

A Working Group has been established to prepare the Project. Each of the agencies in the Working Groups and the LSGs Imereti have been actively involved with MDF in preparing their respective investment subproject and will be involved in various aspects of bid evaluation and supervision. The institutional and implementation arrangement are show in chart below.

**Implementation and Institutional Arrangements**



**Table 12.1 Institutional Structure**

<b>Program Component</b>	<b>Leading Agency</b>	<b>Supporting Entity</b>	<b>Inter-sectoral Coordination Body</b>	<b>Consultation Board</b>	<b>Regulatory Bodies</b> (Permits -Supervision)	<b>Gaps</b>
<b>Strategic analysis, planning</b>	Working Group		Working Group	Georgian Orthodox Church;  Cultural Heritage Fund;  ICOMOS  NGOs;		Working group needs to be established for entire program aimed on implementation of the ITDS,
<b>Development and approval of the infrastructure rehabilitation subprojects</b>	MDF  (Implementing Agency)		Working Group	Georgian Orthodox Church;  Local Self-Government  Cultural Heritage Fund;  Local communities and NGOs;	MoCMP;  Agency of Protected Areas;  Agency of Natural Resources;  Local Self-Government	
<b>Implementation of the infrastructure rehabilitation subprojects</b>	MDF  (Implementing Agency)	Local Self-Government	Working Group	Local communities and NGOs;	MoCMP;  Agency of Protected Areas;	Needs Capacity Building

					Agency of Natural Resources;	
					Local Self-Government	
<b>Operation of facilities and/or day to day activities</b>	Agency Operating Facilities	Local Self-Government				Needs Capacity Building
<b>Development of conservation-rehabilitation projects</b>						
	NACHP		Working Group	MoCMP;	NACHP;	
				Georgian Orthodox Church;	MoCMP;	
				Cultural Heritage Fund		
<b>Implementation of conservation-rehabilitation projects</b>	MDF (Implementing Agency)	NACHP Local Self-Government	Working Group		NACHP;	MoCMP;
<b>Operation of facilities and/or day to day activities</b>	<b>Agency Operating Facilities</b>	Local Self-Government				
<b>Selection of investment projects under the ITDS</b>						
	Working Group		Working Group	NGOs		



## 12.3 STRATEGIC ENVIRONMENTAL, SOCIAL AND CULTURAL HERITAGE PROTECTION PLAN FOR ITDS

Strategic (indirect and cumulative) impacts and mitigation measures related to the ITDS program and RDP II, viewed as subprogram within the ITDS frames, are described in chapter 10, paragraph 10.2 Below we provide management matrix, which integrates the mitigation measures proposed in p.10.2 in a form of action plan

### ENVIRONMENTAL, SOCIAL AND CULTURAL HERITAGE MANAGEMENT PLAN

<i>No.</i>	<i>Issue/Action</i>	<i>Source of Requirement (WB Safeguards, Georgian Legislation etc.)</i>	<i>Date to be complete</i>	<i>Approx. investment need (USD)</i>	<i>Responsible Party</i>	<i>Measure of success</i>
<b>Reporting</b>						
01	Submit report on environmental, social and cultural heritage performance	WB	According to approved EMF presented below	-	MDF or other PIU	Submission of report. Content to be agreed with WB.
02	Report on implementation of the Public Consultation and Stakeholder Engagement Plan as part of the general Environmental and Social reporting mechanisms mentioned under Action Items	WB	Each six months during construction, annually thereafter	-	MDF or other PIU	Submission of report. Content to be agreed with WB.
<b>1. Environmental, Social and Cultural Heritage Management System</b>						
1.1	Arrange Preparation of Strategic Environmental, Cultural Heritage and Social Assessment	Best practice WB OP/BP 4.01	August/September, 2012	25000	MDF	Submission of report. Content to be agreed with WB.

1.2	<p>Develop an Environmental, Social and Cultural Heritage Management System (ESCH-MS) Develop organizational structure and ensure staffing in accordance with the capacity building recommendations provided in this SECHSA:</p> <ul style="list-style-type: none"> <li>▪ PIU should procure services of environmental and social safeguard specialist to arrange trainings for PIU Environmental Specialist and Public Communication Specialist on WB Safeguards Policy and Procedures, including public disclosure and consultation matters.</li> </ul>	Best practice WB OP/BP 4.01 OP/BP 4.11	Q 3, 2012 for RDP II	-	<p>PIU in general (MDF for RDP II) Leading</p> <p>NACHP supporting</p>	System established for RDP II
	<ul style="list-style-type: none"> <li>▪ PIU should hire Social and Resettlement specialist with good knowledge of WB safeguard policies, especially the OP/BP 4.12 on Involuntary Resettlement</li> <li>▪ PIU should engage Cultural Heritage specialist recommended or allocated by NACHP in the selection of investment projects and for establishing cultural heritage monitoring capacity within the MDF monitoring team</li> </ul> <p>Enhancement of the monitoring capacity of the PIU team. PIU should procure services of environmental and social safeguard and cultural heritage protection specialists for providing trainings to PIU staff on the matters of ESCH monitoring at the project implementation stage.</p>					
1.3	<p><b>Develop Environmental Management Framework and Guidelines for Contractors and Self Governments</b></p> <p>To be provided as a standing alone document for RDP II</p>	Best practice WB OP/BP 4.01	June, 2012	-	PIU in general (MDF for RDP II)	Report submitted and agreed with WB for RDP II. Content to be agreed with WB.

1.4	<b>Develop Eligibility Criteria and Checklist for Selection of Investment Projects</b> and include it into SECHSA  To be provided as part of the SECHSA	Best practice WB OP/BP 4.01	June, 2012	-	PIU in general (MDF for RDP II)	Report submitted and agreed with WB as recommendation for ITDS.. Content to be agreed with WB.
1.5	<b>Develop a Public Consultations and Stakeholder Engagement Plan</b>  To be provided as part of the SECHSA	Best practice WB OP/BP 4.01 WB Policy on Access to Information of July 2010	August/September, 2012	-	PIU in general (MDF for RDP II)	Submission of report. Content to be agreed with WB.
<b>2. Tier 1 Actions</b>						
2.1	Conduct detailed assessment of mineral water resources and hydrogeological regime in balneal resorts as Tskaltubo, Sairme, Nunisi etc. Develop mineral water resource management plan	Best practice SECHSA	Throughout project implementation	Included in Project Costs	Working Group; Local self-government	Submission of report.
2.2	Develop adequate infrastructure at the tourist destination sites; Install proper toilets, sewages, water supply systems, electricity, waste collection facilities and parkings at the sites of tourist destination facilities and establish efficient management systems.	Best practice ESCH Management Framework SECHSA	Throughout project implementation	Included in Project Costs for RDP II	PIU in general (MDF for RDP II) Local self-government	Project Implemented
<b>3. Tier 2 Actions</b>						
3.1	Included carrying capacity concepts as a tool within the new updated versions of the management plans for the protected areas located in Imereti region	Best practice SECHSA	“According to the schedule approved by NAPA for developing management plans for Imereti Protected Areas”.	around 100,000	Agency of Protected Areas; Biodeversity department of MoE	Plan Adopted

3.2	Included carrying capacity concepts as a managerial tool for NACHP and National Tourism Agency and local self-governments to control the tourist flows at each CH site	Best practice SECHSA	Till 2017	-	NACHP (development of plans)  National Tourism Agency local self-governments (implementation)	Plan Adopted
3.3	Develop and implement Regional Waste Management Plan and Regional Pollution Prevention Plan. Select optimal sites for landfills and waste treatment facilities.	Best practice SECHSA MoE recommendation	Till 2017	around 300,000	MoE	Plans Adopted
3.4	Develop and implement Regional Plan for Forest Fighting.	Best practice SECHSA	Till 2017	-	MoI	Plan Adopted
3.5	Develop Regional Geohazard Risk Assessment and Emergency Response Plan	Best practice SECHSA	Till 2017	-	MoE	Plan Adopted
3.6	Conduct Regional Epizootic Risk Assessment and determine zones risky for extensive earth works	Best practice SECHSA	Till 2017	-	MoA and Experts (e.g Agro-ecological Society)	Risk Assessment submitted
3.7	Assess risks of sexually transmitted diseases in relation with forecasted growth of tourist flows. Develop and implement awareness programs among the local population. Enhance the system controlling prostitution.	Best practice SECHSA	Till 2017	-	MoHLSA; PIUs	Risk Assessment submitted
3.8	Assess risks of contact with Wildlife and develop response plan	Best practice SECHSA	Till 2017	-	MoE	Risk Assessment submitted
3.9	apply accepted world-wide practice of tourists contribution in favor for Ecological Funds, created for supporting and regeneration of the valuable natural areas affected by tourists	Best practice SECHSA	Till 2017	-	MoE	Funds established and charter published
3.10	Assess the risks of invasion of introduced plant species in relation with the tourist flow growth and induced development and improve phyto-sanitary control system	Best practice SECHSA	Till 2017	-	MoA	system at place

3.11	Restrict unplanned development and illegal construction through improving regulatory basis and enforcement mechanisms; Develop Regional and local Master Plans and Spatial Zoning and planning	Best practice SECHSA	Till 2017	-	Government, MoESD Local self-governments	Regional and local Master Plans adopted
3.12	Ensure strict control on poaching, illegal woodcutting related to tourist activities, as well as induced development. Improve the efficiency of environmental inspectorate and clearly distinguish responsibilities of the MoE and MoENR in that regard.	Best practice SECHSA	Till 2017	-	MoE MoENR	Roles of MoE MoENR clearly distinguished and needed capacity building completed
3.13	Assess the needs for local labor force need for training in order to compete for jobs generated by the project. Organize training sessions	Best practice SECHSA	Till 2017	-	Regional Governor's Office	Training programs developed and trainings arranged
3.14	Apply WB OP/BP 4.12 Safeguard Policy for Involuntary Resettlement and RFP developed by MDF (RDP II) or PIU for other programs to ensure full compensation of lost assets at the replacement cost, and additional rehabilitation of vulnerable and severely affected households, in case if the resettlement impacts will be imposed by project.	Best practice SECHSA	Throughout project implementation	-	MDF	RAPs developed and implemented if required in relation with particular projects
3.15	Specific restrictions and limitations in relation with the "sacred" sites, religious and traditional sites, behavior and dress code etc. should be regarded during construction and operation of facilities. Consultation with the local communities and Church is required. Tourist operators should be informed and instructed in that regard to ensure tourist awareness.	Best practice SECHSA	Consultations throughout project implementation;  Development of guidelines for tourists and operators: Till 2017	-	Architecture and Arts Department of the Georgian Patriarchy; PIU (MDF and others) NACHP	Codes developed; Monitoring system working
3.16	Enhance control mechanisms to prevent illegal trade with movable archaeological remains.	Best practice SECHSA	Till 2017	-	MoCMP; MoIA	Monitoring system established

## 12.4 ELIGIBILITY CRITERIA AND CHECKLISTS FOR SELECTION OF INVESTMENT PROJECTS

### INTRODUCTION

To encourage private sector investments in the region in line with the ITDS, the strategy of the Government is creation of beneficial environment for investments. In particular, it is expected that the Government will apply the scheme approved under the Kakheti RDP, considering provision of financial resources to LSGs to provide public infrastructure to private sector investments in tourism and food processing.

This component is to support a selected number of private sector entities, which show interest and capacity to invest in Imereti in a selected number of tourism, food processing or other tourism-supporting sectors, but seek complementary public infrastructure necessary to make their investments viable (e.g. public facilities within vicinity of the investments, road/sidewalk, water/sanitation, etc). They would be subject to screening by a selection committee and there will be appropriate conditions tied to that.

A package of incentives will be provided to selected domestic and international investors to locate in Imereti, including transparent and competitive selection, streamlined business start-up procedures, provision of public infrastructure, and possible credit provided by IFC to a selected number of investments that pass the IFC standard criteria.

### 12.4.2 POTENTIAL IMPACTS ASSOCIATED WITH INVESTMENT PROJECTS

Civil works related to the investment projects, which are aiming construction of hotels, shops, other tourist facilities or food processing plants in urban areas, have the same type impacts as are described in chapter 10. Typical environmental and social impacts related to civil works in urban and rural areas and transportation of construction materials are listed in Boxes 10.1 and 10.2; paragraph 10.1.1. Mitigation of the abovementioned impacts is usually limited to the requirements of being compliant with the accepted international construction standards and good environmental practices. The proposed typical mitigation measures are provided in the summary table 12.1.

Impacts related to operation of tourist facilities is listed in Box 10.4 (chapter 10). More specific impacts are related to the operation of food processing plants. These impacts will be analyzed within the project-specific EIAs and EAs for A or mostly B category projects and mitigation measures will be integrated in relevant EMPs. So far as no tentative list of facilities and proposed locations are available at present, there is no sense in reviewing potential specific impacts of the facility operations. We would like just to mention that most part of the operation stage impacts described in box 10.4 will be likely applicable and besides, we stress importance for different food processing activities of such common issues, like waste management, control of discharges in surface water, emission control, pollution prevention and abatement.

The range of impacts of the investments in small scale tourist and food-processing facilities is believed to be from low to moderate. However, the geographical area proposed for the potential investment proposals comprises several extremely sensitive areas, natural and cultural heritage sites. Therefore certain restrictions will be introduced for the project selection, in order to exclude the projects that may have

moderate scale impacts on sensitive sites. This will be achieved through a set of eligibility criteria. The project proposal that do not match these criteria will be deemed as ineligible.

The other set of criteria will be used as one of components for complex assessment of pros and cons. These criteria will be used for scouring the project proposals based on balance of positive and negative environmental, social and cultural heritage impacts.

### 12.4.3 ELIGIBILITY CRITERIA

#### **Restriction Criteria**

- a) Development of any project (hotels; food processing plants etc.) within the protected areas is completely prohibited.
- b) Construction of food processing plants or tourist facilities is restricted within the individual zones of protection of cultural heritage monuments and within the sanitary protection zones of water supply headworks.
- c) It is assumed that for the facilities located outside the protection zone of the historical monument, the residual impacts on monuments are unlikely. However, in case of any residual physical impact on monuments the project will be considered as ineligible.
- d) Any adverse functional or perceptual impacts on cultural heritage or other traditionally valuable sites (religious sites, cemeteries, traditional ritual or recreational sites etc.) are restricted. Any installations or operations not fitting the functional, traditional or aesthetic character of such site or traditional restrictions and specific code of conduct related to the site, will be prohibited.
- e) Projects considering construction of food processing plants or tourist facilities imposing significant pollution (emissions, discharges, waste generation) are deemed ineligible

#### **Additional Criteria for Selecting Preferable Projects (Enhancement Criteria)**

So far as the projects in most sensitive zones (protected areas, CH protection zones), as well as major pollution related projects are restricted by default (criteria a-e), the eligible projects are supposed not to have significant adverse environmental impacts. Therefore, the additional ECHS criteria that might be useful during the selection process, could be used for encouraging certain activities, rather than imposing any additional restrictions.

SECHSA proposes following preference criteria, increasing the chance of the private investment to be accepted:

- Projects, which do not impose any involuntary resettlement, have preference against the projects considering resettlement impacts
- Projects classified according to IFI regulations as Environmental B category have preferences against A category projects, which are associated with major environmental impacts
- Projects including as a component construction of private waste management facilities serving for separation, recycling, disposal or elimination of municipal solid waste, hazardous waste or construction waste in the project area

- Food processing enterprises supporting production of ecologically pure food, using local products and/or traditional technologies
- Tourist facilities aimed on increasing ecological and cultural heritage awareness of tourists
- Tourist and food processing facilities including components related to use of renewable energy sources and energy saving and energy efficient technologies (solar energy, wind energy, thermal resources, micro-hydropower etc.)
- More than 50 direct and permanent beneficiaries (employees, business shareholders, leaseholders etc.)
- Other components that could be clearly accepted as having beneficial impact on natural or cultural environment

Projects matching with the above additional criteria are supposed to have preferences, in case if the major economic and financial parameters of the projects are comparable and eligibility criteria are met.



**ELIGIBILITY SCREENING FORM FOR SELECTING PRIVATE INVESTMENT PROJECTS  
(PROJECT COMPONENTS 1.2)**

**A. GENERAL INFORMATION**

<b>PROJECT TITLE:</b>	.....
<b>REGION:</b>	.....
<b>CITY:</b>	.....
<b>PROJECT SITE:</b>	.....
<b>BENEFICIARY:</b>	.....

**(B). RESTRICTION CRITERIA**

**B 1. What is the screening category of the project according to OP/BP 4.01<sup>24</sup>) (screening checklist included in Management Framework – see paragraph 12.4**

**B 2. Is project located within any of the Protected Areas listed below:**

Protected Area	National Category	Yes/No
Borjomi-Kharagauli National Park	National Park	
Ajemeti Managed Nature Reserve	Managed Nature Reserve	
Imereti Caves Protected - Sataplia State Reserve	State Reserve	
Imereti Caves Protected – Natural Monuments	11 Natural Monuments	

**B 3. Is project located within any of the Restriction Zones listed below:**

Other Restriction Zones	Yes / No
Individual zones of protection of cultural heritage monuments	
Sanitary Protection Zone of Water Supply Headworks	
Local sensitive and valuable habitat not included in Protected Areas	

**(B 4). Other Restriction Criteria**

Impact Factor	Project Phase	Yes/No
Does the project impose residual physical impact on CH Monuments or other valuable sites?	Implementation	
	Exploitation	
	Implementation	

<sup>24</sup> Screening classification and criteria applied by other IFIs is very similar

Does the project impose any adverse functional or perceptual impacts on cultural heritage or other traditionally valuable sites (religious sites, cemeteries, traditional ritual or recreational sites etc.)? Are any installations or operations not fitting the functional, traditional or aesthetic character of such site or traditional restrictions and specific code of conduct related to the site?		
	Exploitation	
	Exploitation	

**(C). PREFERENTIAL CRITERIA FOR PRIVATE INVESTMENTS**

**Enhancement Factor**

Does the Projects include as a component construction of private waste management facilities serving for separation, recycling, disposal or elimination of municipal solid waste, hazardous waste or construction waste in the project area

Is the proposed investment used for a food processing enterprise supporting production of ecologically pure food, using local products and/or traditional technologies

Is the proposed investment used for a tourist facility aimed on increasing ecological and cultural heritage awareness of tourists

Is the proposed investment including components related to use of renewable energy sources and energy saving and energy efficient technologies (solar energy, wind energy, thermal resources, micro-hydropower etc.)

Does the proposed investment support more than 50 direct and permanent beneficiaries (employees, business shareholders, leaseholders etc.)

Other components that could be clearly accepted as having beneficial impact on natural or cultural environment

## 13. STAKEHOLDER CONSULTATIONS

### 13.1 PROJECT STAKEHOLDERS

This section of the document identifies key stakeholders. These include individuals and organizations that may be directly or indirectly affected by the project either in a positive or negative way, their representatives in local and national government agencies, and nongovernmental organizations with an interest in the project.

These Stakeholders identified so far include the following main groups:

#### **Project Developing parties:**

- Project Proponents: MDF, as RDP II Implementing Agency, and NACHP and GNTA as supporting entities
- Government of Georgia as the party having major interest in the project development and in more general terms – implementation of the ITDS; Governmental bodies and Statutory organizations with specific responsibilities related to the Project (included in Informal Working Group)

#### **Beneficiaries and affected parties:**

- Entire population of Imereti Region as main beneficiary
- Affected Communities, including households residing close to the project sites and within the proposed tourist cluster zones.
- District level Municipal authorities, Village Local Governments
- Georgian Orthodox Church
- Interested or affected business sector
- NGOs and civil society members who are concerned about environmental, CH protection and social, or other issues associated with the Project.
- Employees of the operating units of the newly constructed facilities

#### **Affected Communities**

Various members of affected communities could have different interests in the projects:

- Owners of affected private land and buildings. Loss of the land plots and attached assets where project facilities are located; loss of crops and permanent loss of agricultural land; Loss of existing residential houses. These are potential direct impacts, although at present minimum of resettlement impacts are envisaged within the RDP II according to provided design documents. However, the resettlement impacts may be related to further proposed investment projects during the implementation of ITDS.
- Potential opportunities for temporary or permanent employment. Direct impact of the project is related to creation of jobs at the facilities implemented by the project. Indirect opportunities are related to growth of tourist flows and increased tourist demand for services, food etc.
- Induced development, general socio-economic trends triggered by implementation of the ITDS, change of cultural patterns and other indirect impacts of the program.

### **NGOs and civil society members**

The primary interests of NGOs and members of civil societies would include protection of communities from negative social impacts of the Project (resettlement impacts; health and community safety; etc.) and protection of environment and cultural heritage (particularly, forest eco-systems affected by the project).

### **Project Proponents**

#### **Informal Working Group**

Due to the multi-sectotal nature of this Project, an Informal Working Group has been established which involves all agencies concerned- namely, GNTA, Culture Heritage Agency, Culture Heritage Fund, MDF, Protected Areas Agency, Governor's Office, Ministry of Finance and MRDI. The Working Group is ensuring coordination and efficient involvement of concerned agencies and is responsible for strategic decision making. In

MDF will be responsible for RDP II project implementation. For strategic decisions, like selection of the subprojects, the Working Group is considered as a Leading Agency. For development of infrastructure projects and for implementation of infrastructure and conservation-rehabilitation projects MDF, as the Implementing Agency for this program has the leading role. In preparation of the conservation-rehabilitation projects the NACHP is the leading entity. At the stage of operation and maintenance of all provided assets, the LSGs will take responsibility. MDF and the LSGs will sign subproject investment agreements which will clearly assign LSGs the responsibility of operation and maintenance of all provided assets.

#### **Municipal Authorities**

The interests of municipal authorities include sustainable development of tourist sector in region and in particular municipalities, creation of new jobs and support to small businesses, development of food processing business, improvement of municipal infrastructure, improved waste management and sanitation, minimizing resettlement impacts, and additional interfacing between communities, government agencies and Ministries.

#### **Regulatory Bodies**

The regulatory bodies are the state entities having a role of issuing permits for implementation of the subprojects or supervising the implementation process. The Construction permit for most of the subprojects is issued by the local Self Governments. The subprojects proposed for RDP II do not require preparation of EIA and Ecological Expertise. However, any construction activities within the protected areas or buffer zones, as well as within general or particular protection zone for cultural heritage monuments, should be carried out after obtaining relevant consent from the regulatory agencies: MoCMP and Protected Areas Agency. Approval of conservation-restoration subprojects issues by the NACHP.

## **13.2 CONSULTATIONS WITH PROJECT PROPONENTS AND GOVERNMENTAL INSTITUTIONS**

During the years 2010 – 2012 the project proponents, MDF, GMTA, Governor of Imereti region and representatives of Government conducted series of consultation meetings, workshops and presentations for general public and targeted focus groups to present and discuss the regional development strategies and tourism development strategy related to Imereti region. Most of the meetings and workshops were conducted with the participation of donor organizations and consultants working on ITDS and RDP II. Public consultation meetings have been conducted for each particular subprojects included in RDP II.

During the development of SECHSA report, following parties have been consulted:

### **Project Proponents**

During May - August 2012 several consultation meetings have been conducted with:

- **MDF** (project Implementing Agency)
- **NACHP**
- **Georgian National Tourism Agency**
- **WB country office and missions**

Details of information have been obtained regarding the overall concept of the project, project components, design, administrative and legal aspects, existing tourist flows and trends, expected social and cultural heritage impacts, project management and development policy. Methodology, scope of work and structure of SECHSA has been discussed with the WB representatives.

**Meeting in offices of the Agency of Protected Areas has been conducted May 16 of 2012.** The Deputy Head of the Agency of Protected Areas Mrs. Tamar Pataridze has provided legal documents, the description of the planned Gordi Canyon development project, map of the Imereti protected areas, statistic data on visitors of protected areas and shared their views regarding the project, related positive and negative impacts and ways for better management.

The agency has been informed in relation with the objectives and concept of the RDP II. It is acknowledged that despite the fact that ecotourism component is not the major for the program; the gradual growth of tourist flows within the region will to certain extent result in growth of eco-tourists as well. Number of visitors of the protected areas will increase. At present the agency does not apply the concept of carrying capacity to determine limits of visitors. It was agreed that during upgrading of the expired management plans for the protected areas of Imereti region, the carrying capacity concept or similar tools will be used to define roughly the number of visitors, which is tolerated by the ecosystems.

### **Meeting in offices of the Georgian National Tourism Agency**

Mr. Beka Jakeli, the Deputy Chairman and Mrs. Rusudan Mamatsashvili – specialist of the statistics department have been met several times for discussions regarding the ITDS issues and for obtaining statistical information regarding tourist flows in Imereti.

### **Meeting in offices of the NACHP**

During the May – June of 2012 Deputy Director General Ivane Vashakmadze has been consulted in relation with the planned subprojects under the RDP II, methodological approaches and legal frames regulating restoration works and tourism activities on cultural heritage sites, coordination with Georgian Orthodox Church etc.

## **13.3 CONSULTATIONS WITH LOCAL STAKEHOLDERS**

The consultants (CONSULTANT) hired by the MDF for preparing SECHSA of the Imereti RDP have organized together with MDF and conducted Public Consultation meetings in the village Ubisa of Kharagauli rayon and the cities Vani, Tskaltubo, Chiatura, Tkibuli of Imereti region on June 4,5 and 6 of 2012. Separate meeting was conducted in the city of Kutaisi for NGO representatives on 8<sup>th</sup> of June, 2012.

The meetings were attended by the representatives of the local authority, NGOs and the local population, in particular - with that part of the population, which will be affected by the project. At the

meeting, the RDP II program and approaches used for preparing ITDS and SECHSA were presented to the public.

The Environmental and Social Expert of MDF - Nino Patarashvili has introduced public with project context, importance of tourism development for Imereti region, strategic goals of the Government. The consultant – T. Kepuladze presented the general concept of the RDP II and specific components of the program. He focused on environmental, social and cultural heritage issues of the project.

The presentations were followed by the Question & Answer sessions. The questions and comments of different participating parties were replied by the Consultant and proponents of the project. The general attitude of the population towards the project was positive, though several important issues were brought up.

### **Public Consultation Meeting**

**June 4 of 2012 in village Ubisa, Kharagauli rayon, Public School Building.**

**Date and time of event:** June 4, 2012, 15:00 p.m.

The meeting was attended by 31 residents (**the signatures of the attendees are available as attachment**).

**Following representatives of local government were presented:**

Tornike Avalishvili – Gamgebeli of Kharagauli Municipality

**Municipal Fund of Georgia was presented by:**

Nino Patarashvili – Environmental and Social Specialist, MDF

**Georgian Orthodox Church:**

Father Makar, Confessor of Ubisa Monastery

**Consultant:** T. Kepuladze

<b>The Matters Discussed</b>			
<b>No</b>	<b>Question/Comment</b>	<b>Name</b>	<b>Response</b>
1	Will the interests of the local population be considered?	Besik Sakhvadze Resident of Ubisi	T. Kepuladze The project works undoubtedly encompass the interests of the local population. Negative impacts will be minimized through implementation of site-specific EMPs. The implementation of the project will favor increase

			of tourist flows and the development of private entrepreneurship providing services for tourists (small and medium businesses, like boutique hotels, trade and service centers; micro businesses – trading with souvenirs, handicrafts; new jobs created by small and medium businesses)
2	Does the project comprise the rehabilitation of road from the highway to the monastery?	Akaki Matchavariani	N. Patarashvili The project implies the rehabilitation of section from the highway to the bridge.
3	The facilitation of resting complex is important for the project. A visitor could spend a night at the complex.	Father Makar (Ubisi monastery confessor)	T. Kepuladze As we have already replied to the author of the first question, the project will favor the development of private incentives. The facilitation of hotel is not included in the project but in case of private initiatives the Government will facilitate development of infrastructure required for small hotels.
4	The project should consider the fact that wood material is transported via this road. There is no alternative route.	Father Makar	T. Kepuladze Generally anyone could use the elements of the infrastructure. If traffic becomes an impediment, additional regulations could be imposed, which is the prerogative of the local authorities.
5	Appeal It would be very good if the asphaltting of the bridge is included in the project	Trustee of the local council (Sakrebulo) Population	T. Kepuladze The appeal is clear, but the asphaltting of the bridge is not included in the project. This issue could be solved under the umbrella of other municipal projects financed by donors or State budget
6	Will local population be employed in the construction?	Ramaz Bluashvili	N. Patarashvili During the implementation of similar projects the involvement of local workforce is taken into account.



One of the specific outcome of this meeting for SECHSA is bringing attention to the competition of different business sectors for local road infrastructure and need of coordination and proper planning of tourist routes to minimize negative impacts on wood processing businesses, avoid safety risks for tourists and minimize negative visual and travel comfort impacts through applying adequate road maintenance capacities.

### **Public Consultation Meeting**

#### **June 5 of 2012 in City Vani, Building of Ethnographic Museum of Vani**

The meeting was attended by 28 residents (**the signatures of the attendees are available as attachment**).

**Date and time of event:** June 5, 2012, 11:00 a.m.

**Following representatives of local government were presented:**

Zura Gegidze – Gamgebeli of Vani Municipality

**Municipal Fund of Georgia was presented by:**

Nino Patarashvili – Environmental and Social Specialist, MDF

**Consultant:** T. Kepuladze

<b>The Matters Discussed</b>			
<b>No</b>	<b>Question/Comment</b>	<b>Name</b>	<b>Response</b>
1	We ask to consider the interest of the population, which lives in the vicinities of Nakalakari.	Tristan Kaladze	T. Kepuladze The project implementation will favor the improvement of this



		Resident of Lortkipanidze street	historical area, development of tourism, which, in its turn, will establish prerequisites for activation of private investment.
2	The museum owns 10 ha land plot, on which our houses built by our fathers and grandfathers stand. The population needs to know what to expect.	Father Andria	T. Kepuladze The project does not include any activities related to acquisition of land or assets of private or legal entities. The project only comprises the rehabilitation of the museum building and roofing and reinforcement of the already existing objects at the archeological section.
3	The territories, where our houses built by our fathers and grandfathers stand, belong to the museum. We are not entitled to do anything on the land. That is why we want to know what to expect.	Father Andria	T. Kepuladze As we have said, the mentioned project does not involve any third party interests. As regards the ownership of the territory, the above should be settled with the local authorities.
4	Will the population be connected to the water supply system?	Tamar Akhvlediani	T. Kepuladze The project does not imply directly the resolution of the water supply problem for population. The project envisages connection of the museum building to the existing water supply system. However, in case if the existing water supply system is damaged, functionality of the museum water supply system will also suffer. This will be additional incentive for the Government to facilitate rehabilitation of the local water supply system.

The outcome of this meeting for SECHSA is bringing attention to the potential conflict between the project and local population. In case if local population is suffering from the shortages of the water supply system and the project is focused only on rehabilitation of the water supply systems for tourism infrastructure, this could be perceived as unfair treatment of local population. Parallel programs ensuring improvement of water supply and other infrastructure for the affected villages should be triggered.



### **Public Consultation Meeting**

**June 6 of 2012 in the City Tkibuli, Administration (Gangeoba) of the Municipality.**

The meeting was attended by 84 residents (**the signatures of the attendees are available as attachment**).

**Date and time of event:** June 6, 2012, 11:00 a.m.

**Following representatives of local government were presented:**

Levan Dokhnadze – Governor (Gangebeli) of Tkibuli Municipality

**Municipal Fund of Georgia was presented by:**

Nino Patarashvili – Environmental and Social Specialist, MDF

**Consultant:** T. Kepuladze

<b>The Matters Discussed</b>			
<b>No</b>	<b>Question/Comment</b>	<b>Name</b>	<b>Response</b>
1	When will the project implementation commence?	Zaza Idadze	N. Patarashvili Presumably the project implementation will commence from September, 2012.

2	Will the village be able to use the project sewerage?	Zaza Idadze	T. Kepuladze The project does not imply connecting of the village to the project sewerage.
3	The problem is water supply both for the monastery and the village population. Dokhora spring supplies several districts and due to the low debit of the source the schedule of water supply is in place. The use of water from this source will leave the population without water.	Levan Dokhnadze Governor (Gamgebeli)  Irakli Apridonidze Kursebi Trustee	T. Kepuladze The presentation material shows that the source will be rehabilitated along with captation. The loss will be reduced. Proceeding from the above, Dokhora spring should facilitate the water supply of the information center, which should not cause any problems to local water users. The issue is important and we will inform the designers about the problem.
4	Will the population be connected to the water supply system?	Giorgi Kezevadze Gelati resident	T. Kepuladze The project does not include connecting of the local population to the system.
5	License quarries are located above Gelati. The abstracted stone is transported via the existing road, which passes in front of the monastery. Will the accomplishment of the project units cause problems to the entrepreneurs?	Irakli Apridonidze Kursebi Trustee	T. Kepuladze Upon the accomplishment of the project units no additional problems should be created. In our opinion, alternatives should be considered.



One of the important outcomes of this meeting for SECHSA is bringing attention to the competition of different business sectors for local road infrastructure and competition of the project and local population for the water resources. The local population should not suffer from the water supply shortages due to the water intake for the tourism facilities. Both – tourists and

local population should be supplied by water and this requires coordination of project proponents with the local municipalities.

### Public Consultation Meeting

**June 6 of 2012 in the City Chiatura, Administration (Gangeoba) of the Municipality.**

The meeting was attended by 33 residents (**the signatures of the attendees are available as attachment**).

**Date and time of event:** June 6, 2012, 15:00 p.m.

**Following representatives of local government were presented:**

Gogi Chikviladze – Governor (Gangebeli) of Chiatura Municipality

**Municipal Fund of Georgia was presented by:**

Nino Patarashvili – Environmental and Social Specialist, MDF

**Consultant** – T. Kepuladze

<b>The Matters Discussed</b>			
<b>No</b>	<b>Question/Comment</b>	<b>Name</b>	<b>Response</b>
1.	Is the patriarchy informed and what is their attitude to the project?	Tamar Kviriliani Katskhi doctor	N. Patarashvili All projects which are more or less related to churches-monasteries are agreed upon with the patriarchy.
2.	Is water supply of the village population via project water pipeline facilitated?	Zurab Kapanadze	T. Kepuladze The project comprises only the water supply of the project units.
3.	The display of information on Chiatura museum of folklore on the information boards is desirable.	Inga Matcharashvili Tchiatura center of culture	T. Kepuladze This will be considered.
4.	Does the project comprise arrangement of lift on the column? This is really unacceptable.	Shota Bregadze	T. Kepuladze The presented project does not include the component of reconstruction of Katskhi column, as it has been shown on slide #7. The rehabilitation of the column will be undertaken by the agency of protection of cultural heritage. No lifts and any other rough interventions are planned.

5.	The territories adjacent to Katskhi monastery are privately owned. Will the project have impact on them?	Shota Bregvadze	T. Kepuladze The project does not comprise any activities on private land plots.
6.	The arrangement of automobile road instead of a walking trail would have been better.	Zurab Kapanadze	T. Kepuladze The aim of the project is to maximally preserve the natural environment. In these terms the arrangement of a new automobile road is not recommended. Moreover, there is no need in an additional road.



The main outcome of the meeting for the SECHSA Consultant was attitude of local population, which take care that the activities related to monasteries and churches are agreed with the Patriarchy and no rough intervention are accepted changing traditional shape and functionality of monuments.

### **Meeting with NGOs in Kutaisi**

**Date and time of event: June 8, 2012**

**Meeting place (address):** Center of Civic Engagement, the city of Kutaisi

The meeting was attended by 8 NGO representatives (**list of participants with the signatures is available as attachment**).

**Municipal Fund of Georgia was presented by:**

Nino Patarashvili – Environmental and Social Specialist, MDF

**Consultant** – T. Kepuladze

## Question-and-Answer session

<b>Matters Discussed</b>			
<b>No</b>	<b>Question/Comment</b>	<b>Name</b>	<b>Response</b>
1.	Is the possible impact of Namakhvani HPP series on Tskaltubo mineral water ore studied?	Nodar Jikia, Kutaisi branch of Georgian Young Lawyers' Association	T. Kepuladze As per the information at our hand, no such study is accomplished.
2.	A part of the territory of the park where the wells are located is given out as private property. Does the Project envisage the given kind of relationships?	Nodar Jikia, Kutaisi branch of Georgian Young Lawyers' Association	T. Kepuladze This issue will be regulated in line with the effective legislation. Project does not envisage financing of private sector.
3.	The 6-th bath considered in the Project and adjacent territory should be allotted for the Parliamentary residence, where no other holiday-makers will be allowed. This bath, as it is known is the biggest and is capable of serving most holiday-makers. If this is the case, I think the resort will be incapable of serving so many holiday-makers.	Keti Tskhakaia "SPECTRUM"	T. Kepuladze I think this is an argument to be considered, which will be taken into account in the decision-making process.
4.	Accommodating the residence and fragmenting the park will lead to an awkward situation and besides, it will be unacceptable in the practical point of view.	Zaza Kheladze, Association "ASA"	T. Kepuladze This issue will be regulated by the detailed design. There are no park fragmentation plans currently.
5.	If the Parliamentary Residence is accommodated, what will happen to the existing road (which is in use by the population)?	Nodar Jikia, Kutaisi branch of Georgian Young Lawyers' Association	T. Kepuladze Question of accommodation of residences is not a prerogative of the Project.
6.	It is known that there is no sewage conduit on the territory of the park and the old one is to be replaced in any case. Which project will envisage such a replacement?	Nodar Jikia, Kutaisi branch of Georgian Young Lawyers' Association	T. Kepuladze. During the rehabilitation of the park, all communications, including the sewage conduit will be rehabilitated.
	Tskaltubo mineral water is for curing special diseases, and using it as a spa	Keti Tskhakaia "SPECTRUM"	International specialists on SPA and healthcare will be involved to determine the

7.	will be dangerous. Are these waters studied or are they planned to study?		proper mode of using different mineral and fresh waters for SPA needs.
8.	On the roof of the monastic cell at the Ubisa Monastery, our NGO installed a safe heating appliance “solar heating helio-system”. What will happen to the system after the project is realized?	Zaza Kheladze, Association “ASA”	T. Kepuladze This problem will be considered in the final decision-making. Everything what is done and is operable must be maintained.
9.	There are people living adjacent to Vani Museum. Will their interests be considered?	Keti Tskhakaia	T. Kepuladze The presented Project does not violate the population’s interests.
10.	A strategic plan of regional development of Imereti is developed. Will it be possible to arrange the presentation of the mentioned plan and the Project?	Nodar Jikia, Kutaisi branch of Georgian Young Lawyers’ Association	T. Kepuladze We will familiarize the Project authors with these views.

The main outcomes of the meeting for the SECHSA Consultant were;

- potential cumulative impacts of the Namakhvani HPP and Tskaltubo resort (impact of hydrological regime of the resort). The particular issue does not seem as important as the general need of consideration of cumulative impacts during the strategic planning
- Need of centralized State control over the type and quality of treatment provided by the private SPA and Healthcare entities is an issue. Use of balneological resources and mineral waters should be based on internationally accepted code of practice.

## 13.4 CONSULTATIONS WITH GEORGIAN ORTHODOX CHURCH

Environmental and CH Consultant in close cooperation with NACHP has extensive consultations with the representatives of Georgian Orthodox Church in relation with the entire program and each subproject related to rehabilitation of Christian historical monuments or any planned development and rehabilitation works in close vicinity to monasteries etc. The main point in this discussions is to avoid harm to the monuments and to be careful in planning, in order that new development is not destroying atmosphere and perception of monuments, religious and traditional sites.

### **Consulted representatives of Church were:**

20.04.2012, Tbilisi – Farther David Alaverdeli, Alaverdi Metropolitan, Head of the Architecture and Arts Department of the Georgian Patriarchy

28.04.2012, Katskhi

Chiatura and Sachkhere Metropolitan Daniel  
Father Amiran – Katskhi Monastery

Consultations with the representatives of Georgian Orthodox Church are summarized below in a written request prepared by Father Daniel, Chiatura and Sachkhere Metropolitan:

[Quotation]

“The representatives of the Patriarchate should participate in the preparation of the program in question right from the beginning. In my opinion, in addition to the Patriarchate departments, the representatives of the eparchies and churches and monasteries officially covered by the program should be engaged in the process. As for the plan to consider the issues and agreement, I think this should be organized as follows:

- The plan of the rehabilitation works at the churches and monasteries and on their adjacent territories must be worked out by the Church servants jointly with the relevant departments of the Patriarchate.
- As for the tourist infrastructure, naturally this will be worked on by the relevant branch specialists.
- The parties will let one another know about the plans of the works to be accomplished and discuss the prospects and feasibility of their realization.

On the territories adjacent to churches and monasteries in the first instance, we should try to create the environment and schedule the events for the visitors in the way, which will maximally preserve the cozy environment necessary for the Church Service. For this, the following issues should be specified for the visitors:

- The number of group members
- Permissible visit duration to the territory, and
- Strictly and partially limited areas and code of dressing and behavior.

It is similarly important for this process to be controlled and managed by the church parish under the guidance of the Church servants.”

[End of Quotation]

## 13.5 CONSULTATIONS WITH ACADEMIA

Extensive consultations with universities, academicians and environmental experts have been conducted during preparation of the SECHSA report. Consulted scientists and experts:

- Dr.A.Kandaurov (ecology, fauna, protected areas);
- M. Kimeridze (ecology, flora),
- G. Sopadze (soils and landscapes),
- M. Gaprindashvili (geology, geohazard risks),
- B. Ukleba (hydrology),
- I. Kaviladze (waste management)
- L. Akhalaia (Cultural Heritage)

Consultations on environmental issues were held with several NGOs:

- Orchis
- Campester
- Ecovision
- WEG etc.
- Information Center for Social Reforms
- ISR

These consultations were focused on description and understanding of local environmental and social conditions and analysis of potential impacts. The outcomes of these consultations are reflected in chapters 7, 8 and 9 of the SECHSA report.