

# TECHNICAL PROPOSAL FOR THE TSKALTUBO SPA RESORT DEVELOPMENT

A report submitted by Kohl & Partner



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AG32013 /01.12.2014/V08



# TABLE OF CONTENTS (TOC)

<b>1. MANAGEMENT SUMMARY .....</b>	<b>6</b>
<b>2. MARKET AND LOCATION ANALYSES .....</b>	<b>15</b>
2.1. MACRO ANALYSIS GEORGIA .....	15
2.1.1. General Information .....	16
2.1.2. Economic Outlook.....	18
2.1.3. Tourism Strategy - The World Bank Infrastructure Project .....	23
2.1.4. Tourism Information.....	28
2.1.5. Recapitulation - Conclusions.....	34
2.2. MICRO ANALYSIS TSKALTUBO REGION .....	35
2.2.1. General Information Imereti & Tskaltubo .....	35
2.2.2. Historic Resort Development of Tskaltubo .....	36
2.2.3. Retrospective review of the town planning documents .....	38
2.2.4. Historical and cultural evaluation .....	39
2.2.5. Touristic Infrastructure .....	40
2.2.6. Recapitulation - Conclusions.....	43
2.3. TOURISM ANALYSIS TSKALTUBO.....	44
2.3.1. Tourism Infrastructure.....	46
2.3.2. Tourism Products.....	47
2.3.3. Recapitulation -Conclusions.....	48
2.4. SWOT ANALYSIS TSKALTUBO .....	49
<b>3. COMPETITION ANALYSIS.....</b>	<b>56</b>
3.1. SELECTION CRITERIA OF COMPETITORS .....	56
3.2. INTERNATIONAL COMPETITORS .....	57
3.3. COMPARISON OF COMPETITORS.....	57
3.3.1. Health and medical key positioning .....	57
3.3.2. Infrastructure and additional products/services .....	58
3.3.3. Key markets of tourist origin .....	59
3.3.4. Armenia .....	60
3.3.5. Azerbaijan.....	62
3.3.6. Bulgaria .....	64
3.3.7. Crimea.....	68
3.3.8. Germany .....	70
3.3.9. Russia.....	75
3.3.10. Turkey.....	78
3.4. EUROPEAN HISTORIC THERMAL TOWNS ASSOCIATION.....	84
3.5. CONCLUSIONS.....	86
<b>4. URBAN ANALYSIS OF TSKALTUBO.....</b>	<b>87</b>
4.1. ADMINISTRATIVE BORDER OF THE TOWN .....	87
4.2. ENVIRONMENTAL ASSESSMENT .....	87
4.2.1. Overview.....	87
4.2.2. Bio-Climate – Natural Remedies of the Climate .....	90
4.2.3. Healing Water.....	99

4.2.4.	<i>Treatment indications for Tskaltubo</i>	100
4.2.5.	<i>Description of the sources and bathes</i>	105
4.2.6.	<i>Mineral Water Transportation</i>	108
4.2.7.	<i>Radon Concentration</i>	109
4.2.8.	<i>Sanitary zones</i>	109
4.2.9.	<i>Legal Framework</i>	111
4.2.10.	<i>Air Quality</i>	112
4.2.11.	<i>Conclusions</i>	126
4.2.12.	<i>Water Supply Network</i>	126
4.2.13.	<i>Sewage Network System</i>	128
4.2.14.	<i>Waste Management System</i>	130
4.2.15.	<i>Institutional Framework</i>	131
4.2.16.	<i>Legislative Framework</i>	132
4.2.17.	<i>Protected Cave Areas</i>	133
4.2.18.	<i>Legal, Regulatory and Permitting Requirements</i>	135
4.2.19.	<i>Social Demography</i>	145
4.2.20.	<i>Social sphere</i>	147
4.2.21.	<i>Engineering Network</i>	150
4.3.	<b>INVENTORY AND DESCRIPTION OF THE STATE OWNED SANATORIUMS</b>	153
4.3.1.	<i>Detailed stock principles and methodology</i>	153
4.3.2.	<i>Description of the Hotels / Sanatoriums</i>	159
4.3.3.	<i>Existing Functional Zoning</i>	193
4.3.4.	<i>Existing administrative and institutional structural analysis</i>	193
4.3.5.	<i>Current legislation framework regulation concerning spatial planning</i>	195
4.3.6.	<i>Legislative and normative procedures</i>	196
4.3.7.	<i>Conclusions</i>	198
5.	<b>TOURISM STRATEGY OF TSKALTUBO</b>	199
5.1.	<b>INTRODUCTION &amp; TRENDS</b>	199
5.1.1.	<i>Understanding medical and wellness tourism</i>	199
5.1.2.	<i>Detailed description of Medical and Wellness Tourism</i>	200
5.1.3.	<i>Wellness and Medical Tourism Market Spectrum</i>	201
5.1.4.	<i>The Wellness Tourism Economy</i>	203
5.1.5.	<i>Sustainability tourism development</i>	205
5.2.	<b>NEEDS OF MEDICAL AND WELLNESS TRAVELLERS</b>	208
5.2.1.	<i>Medical Tourism in Tskaltubo, Today and Tomorrow</i>	209
5.3.	<b>SUPERORDINATE TOURISM STRATEGY OF TSKALTUBO</b>	212
5.3.1.	<i>Vision, Mission, Core Values</i>	212
5.3.2.	<i>Description of Tskaltubo's Core Values</i>	212
5.3.3.	<i>Tskaltubo's strategic circle</i>	213
5.3.4.	<i>Strategic business field 1: Hospitality</i>	214
5.3.5.	<i>Strategic business field 2: Medical Tourism</i>	215
5.3.6.	<i>Strategic business field 3: Wellness Tourism</i>	215
5.3.7.	<i>Strategic business field 4: Additional Activities</i>	216
5.3.8.	<i>Strategic positions of success</i>	217
5.3.9.	<i>Key customer segmentation</i>	218
5.3.10.	<i>Primary geographic target markets</i>	219
5.3.11.	<i>Product-Segmentation-Matrix</i>	220

5.4.	PRODUCT DESCRIPTION .....	221
5.4.1.	<i>The world of Baths - First Product Concept Vision.....</i>	222
5.4.2.	<i>The world of Baths - First Architectural Concept Vision .....</i>	239
5.4.3.	<i>Sanatorium / Hotels.....</i>	243
5.4.4.	<i>Hotel with conference and meeting facilities .....</i>	244
5.4.5.	<i>Casino .....</i>	244
5.4.6.	<i>Education.....</i>	245
5.4.7.	<i>Tropical garden.....</i>	246
5.4.8.	<i>Water transport system.....</i>	246
5.4.9.	<i>Car free zone.....</i>	246
5.4.10.	<i>Waterpark at the entrance of the park.....</i>	247
5.4.11.	<i>Climbing Park .....</i>	247
5.4.12.	<i>Children playground.....</i>	247
5.4.13.	<i>Shopping &amp; Boutiques.....</i>	248
5.4.14.	<i>Golf.....</i>	248
5.4.15.	<i>Tennis.....</i>	249
5.4.16.	<i>Minigolf.....</i>	249
6.	<b>ZONING PLAN PROPOSAL.....</b>	<b>250</b>
6.1.	INTRODUCTION / VISION .....	250
6.2.	OVERALL CONCEPT .....	250
6.3.	SPECIFIC ZONING CHANGES AND RESTRICTIONS .....	252
6.4.	TERRITORIAL RESERVES .....	254
6.5.	DEVELOPMENT RULES FOR THE RECREATIONAL / HOTEL ZONE.....	255
6.6.	TOURISM POTENTIAL OF TSKALTUBO .....	260
6.7.	RESTRICTIONS FOR BUILDINGS WITH HISTORICAL VALUE .....	261
7.	<b>TSKALTUBO ORGANISATIONAL DEVELOPMENT CONCEPT .....</b>	<b>263</b>
7.1.	ORGANISATIONAL OVERVIEW .....	263
7.2.	DMO (DESTINATION MANAGEMENT COMPANY) .....	265
7.2.1.	<i>Ownership.....</i>	265
7.2.2.	<i>Management.....</i>	265
7.2.3.	<i>Duties of the DMO.....</i>	266
7.2.4.	<i>Legal Organisation of the DMO.....</i>	268
7.2.5.	<i>Financial Organisation of the DMO.....</i>	270
7.2.6.	<i>Implementation Steps / Activities to do .....</i>	271
8.	<b>ANNEX – PHOTOS OF THE BATHS.....</b>	<b>274</b>



The following report is a joint – venture between the following companies:

	<p><b>Kohl &amp; Partner</b> (Switzerland) Ltd. Responsible for the project-management, market analyses, concept validation and the strategy.</p>
	<p><b>Geographic</b>, GIS and RS Consulting, Tbilisi Georgia, was responsible for the urban analysis, technical assessments and the technical feasibility of the project and the maps.</p>
	<p><b>Nola 7</b>, Sofia – Bulgaria, leading company for project design, construction and building of public and commercial pools, water parks, water attractions, water effects, spa &amp; wellness.</p>

**In different sections of this report we refer to map numbers. With the report we have also delivered a set of maps about Tskaltubo. All of the maps and layers are also available as a web-application. For domain and password request please ask the JSC Partnership Fund.**

# 1. MANAGEMENT SUMMARY

Tourism is one of the most important industries in Georgia and over recent years, positive improvements have been shown. The tourism industry earns 6.5 % of the GOP and accounts for 10% of total employment, which makes it a very significant contributor to the Georgian economy.

Given its many attributes, it is a completely logical step to redevelop Tskaltubo into the medical and wellness & spa capital of Eastern Europe. Historical and cultural elements, and especially the extraordinary healthy composition of the mineral water, are the main “assets” and also opportunities for the redevelopment of Tskaltubo. The infrastructure in Tskaltubo is, compared to other places, very developed. The construction of the nearby Kutaisi airport and improved infrastructure conditions, provided through projects by the World Bank and Municipality Development Fund (MDF), has had a very positive impact for the proposed Tskaltubo project. Nevertheless, a lack of certain coordination, as well as the fact that the scale of the proposed Tskaltubo redeveloping project is probably larger than the current World Bank project has considered, means that there will be further infrastructure problems to be solved by the public authority in the future.

The urban planning, including the 3 master plans for Tskaltubo, exemplified best practice for Soviet architectural planning in that area. The creation of 3 ring roads and the protected sanitary zone (medical zone) in the park were a revolution at the time and are historical.

Tskaltubo has a historical background, architectural monuments and exclusive and unique water resources and water quality that give it a special charisma and huge development potential. Nevertheless, the services offered in the sanitary zone today are very basic (only 2 baths are working) and currently don't contribute to the development of the destination. Without development towards a modern, trendy, health and medical destination in the sanitary zone, it will not be possible to even start the hotel development.

The outsourced license for the bath facilities (for the period of 2012-2037 related with certain investment and maintenance restrictions) is, on the one hand, a large risk and, on the other hand, a positive opportunity. Nevertheless, without the professional coordinated development and master plan of the sanitary zone, the redevelopment of Tskaltubo is not possible. However, the existence of private investors is exactly what Tskaltubo needs. The State authorities and the private license holder must collaborate to create a win-win situation together.

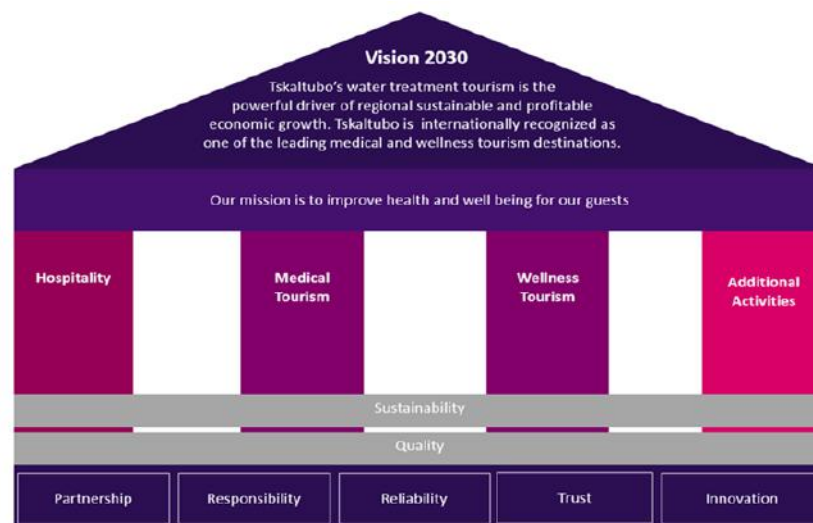
In order to achieve these goals, we have developed a vision describing the steps and actions to be implemented. The redevelopment has to be organized step by step. For the next 10-20

years, we estimate the following investment volume to drive the economy in Tskaltubo and the region:

Investment Field	End of Phase 1 (mln \$)	End of Phase 2 (mln \$)	Total (mln \$)
<b>Total Investment</b>	355 – 485	285 – 415	640 - 900
<b>Bath Facilities</b> (estimated by Nola7)	25-35	25-35	50-70
<b>Hospitality Buildings</b> (based on calculations with built up m <sup>2</sup> /volume coefficient/different segments)	180 – 210	120 -150	300 -360
<b>Tourism Infrastructure/Activities</b> (estimated by Kohl & Partner)	25 -40	15-30	40-70
<b>Private Investments</b>	100 – 150	100-150	200-300
<b>Infrastructure Community</b>	25-50	25-50	50-100

Abovementioned estimated investment volumes are believed to create 2,400 rooms in the first phase, and additional 1,100 rooms in the second phase for state owned buildings. Also we assume, that totally approximately 1,000 rooms will be supplied by other investments.

Created by Kohl & Partner based on individual calculations and estimations For further development, several sub-projects are required, which will have to be coordinated and commenced in parallel as soon as possible. The sub-projects are based on the following vision of the destination:



Created by Kohl & Partner

The vision is based on the **hospitality** variety (different accommodation concepts) around the sanitary zone, **medical tourism**, which is exclusively offered in the sanitary zone and the new **wellness tourism** zone, which will be offered in the sanitary zone as well as in the hotels. In order to attract many more tourists, the offered products have to be expanded and complemented by **additional activities** (Children's playgrounds, a Water Park, a Tropical Garden etc.). The vision is based on the existing strengths of Tskaltubo, the



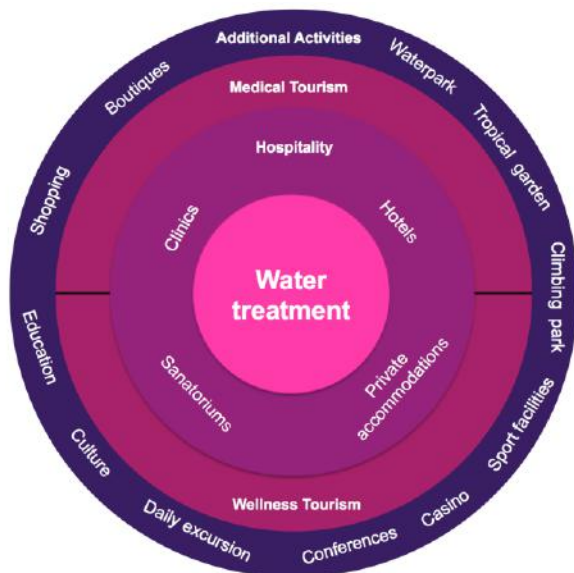
impact of Eastern and Western European competitors and the trends in medical and wellness tourism worldwide. The goal is to become a member of the European Historical Thermal Towns Association (EHTTA) in the near future.

In the concept proposal, we offer many ideas for the development and even provide some case studies on what the baths could look like. Some historical buildings will be restored, but we also propose that modern architecture be adopted for certain baths.

The sanitary zone is the main product – the unique selling proposition (USP) for Tskaltubo. Based on our zone-planning proposal, the health/medical products have to be offered in this zone, while plastic surgery etc. can also be offered in hospitals around the park. The competition analysis clearly showed that nobody is waiting for the redevelopment of Tskaltubo. The medical tourism and Spa Market is still growing, especially in Europe, but we have to expect a cutthroat competition. Therefore, the sanitary zone needs its own master plan, including contract proposals for the legal cooperation between the license holder and the hotels in the recreational zone. In order to give trust to future investors, the existing hydrogeological assessments have to be renewed urgently. Basically, we recommend splitting the sanitary zone into 3 different functional areas:

- An area for conventional methods of treatment
- A new area for alternative methods of treatment
- A general recreation area (wellness in historical buildings)

In order to show the developed Tskaltubo's strategy we formed the following product circle:



*Created by Kohl & Partner*

In the center are the unique water treatments offered in different baths. In the recreational zone, hotels, sanatoriums and clinics offer accommodation and additional services. We assume that, like in the past, the market will also develop private accommodation possibilities. The main marketing orientation is Medical Tourism and, increasingly, Wellness Tourism. In order to attract more visitors and guarantee an all year resort and opportunities for bad weather periods, we propose that investors for other, additional business fields be searched for:

<ul style="list-style-type: none"> <li>• <b>Casino</b></li> <li>• <b>Conference</b> – Meeting facilities</li> <li>• <b>Education Center/School</b> for tourism and medical staff</li> <li>• <b>Car Free Zone</b> (1<sup>st</sup> ring road)</li> <li>• <b>E-Bus, E-Bike</b> – sustainable transport system</li> <li>• <b>Waterpark</b></li> <li>• <b>Children's playgrounds</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Tropical garden</b> in the park that uses the energy of the hot water and produces its own fruit</li> <li>• <b>A water transport system</b> around the park. There would be no staff needed. Visitors can use the system whenever they want.</li> <li>• <b>Shopping and Boutiques</b></li> <li>• <b>Minigolf &amp; Tennis</b>, plus other sports activities</li> <li>• <b>Climbing Park</b></li> </ul>
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The above list is not final. Any other leisure activity that fits into the sustainable vision of the resort is welcome. The State has enough land reserves around the park to entice, with attractive conditions, local and regional entrepreneurs to start businesses in Tskaltubo.

## New Zoning Plan

The redevelopment of Tskaltubo will be based upon the previous master plan (1983), with adaptations to suit today's habits of travelling, as well as an expansion of the offered products in the sanitary zone to include modern medical and wellness treatments. The future oriented attractions in the hotels and around Tskaltubo will attract local and, increasingly, national and international clients too.

Within our contract, we have geo-referenced the entire Tskaltubo community electronically and are able to use the most modern instruments for zoning and production of any maps with different layers. Based on the historical master-zoning plan (1983), we propose to legally implement and validate the following zoning plan.

With the zoning plan, we also propose certain specific changes and adaptations. The most important proposals are:

- **New Parking** at the resort entrance, in order to realize a car-free zone for ring road 1 in the near future (phase 2 of the re-development plan). The parking would be situated at the location of today's sanatorium Tskaltubo I, which will be transformed into a public zone. Besides the parking, additional activities for families and children, such as a water park and an indoor-climbing park, can be established on this plot.
- **Shopping**, right at the entrance, has to be developed. Because all traffic (including cars, buses and railway) will stop there, it is the perfect place to create a new shopping and restaurant zone for Tskaltubo (outside the park).
- The process for future development has to be maintained so that certain zones for the creation of additional attractions such as golf, horseback riding etc. can eventually be realized. Therefore, we propose to create certain **territorial reserves**.
- The integration of **the IDP's** (internal displaced people) also needs attention. The project is a huge chance for these people, but **re-integration** programs and not only re-dislocation programs are required.
- The 1.96-hectare **military zone**, currently in use as a driving school for military vehicles, should be changed into a residential-recreational zone.
- For the right development of the **recreational zone and the sanitary zone**, we propose rules that will ensure the sustainable development of the resort. These rules /restrictions have to be further developed legally in order to really become valid. We propose:



- Buildings with a historical background based on our recommendation (which can be found in the detailed technical inventory of each plot) cannot be changed, which means that the façade and historical architecture in the building has to be restored.
- We propose certain restrictions on the possible built-up areas. The overall picture, with lots of green areas, should remain. Nevertheless, certain plots will have the right to increase the built-up area. In total, the State owned hotels would have a built-up area of 220,500 m<sup>2</sup> and supply approximately 5,100 beds.
- In order to find investors, we propose that as few as possible legal restrictions are implemented. At the same time, in order to develop the resort in a sustainable way, we propose that particular restrictions for certain plots are required, for example, in regards to the location of the 5 star hotel with casino, the convention center, the cottage accommodation and the leisure and shopping areas etc.
- We propose that ring road 1 be created, car free, in the 2<sup>nd</sup> development phase (after 6-10 years).

The activities of the two development stages are:

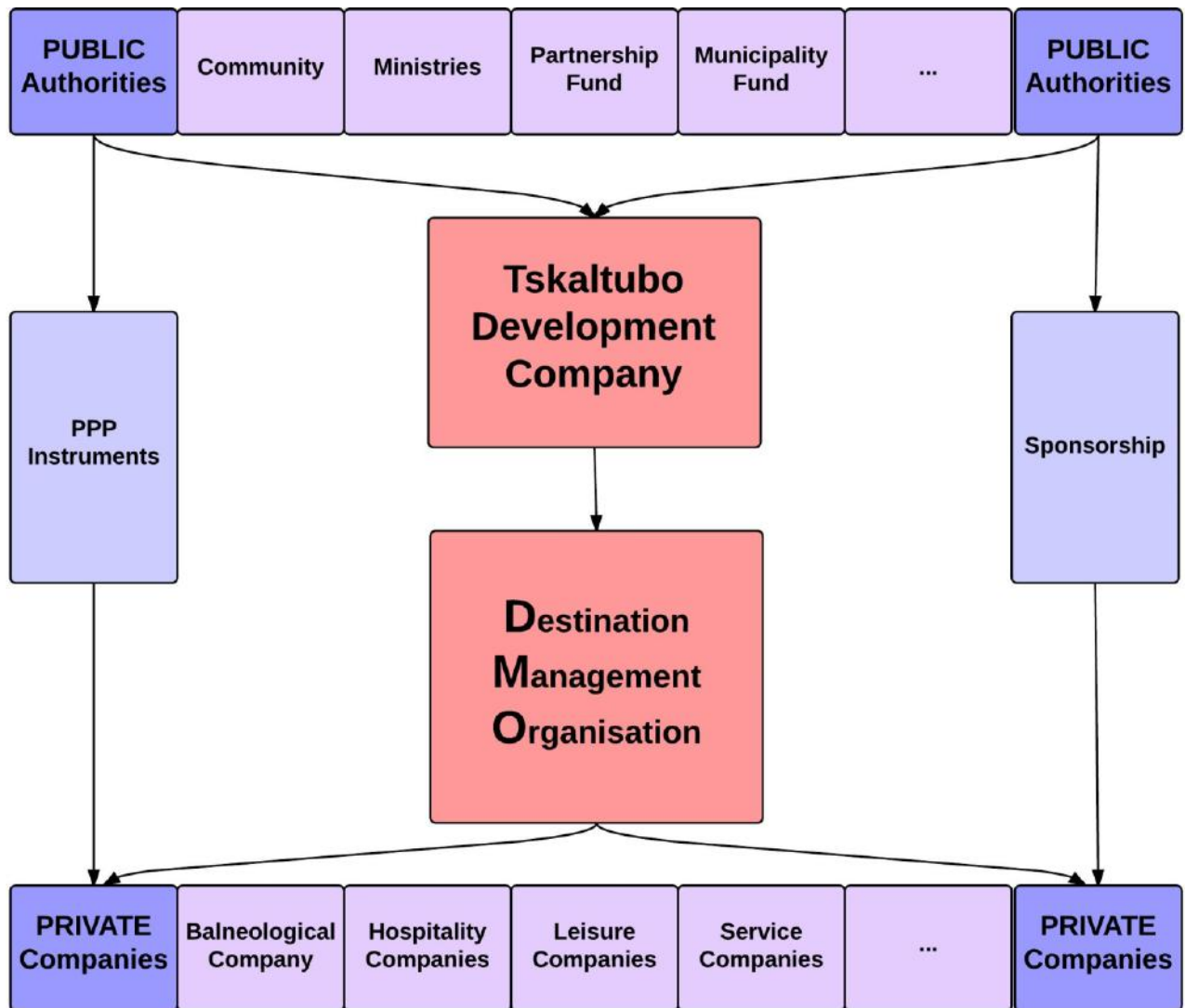
1 <sup>st</sup> Development Phase (3-6 years)	2 <sup>nd</sup> Development Phase (6-10 years)
<ul style="list-style-type: none"> <li>• Total 9 hotels with a built up area of 130,000 m<sup>2</sup> (58% of Total), mainly investor focus on local and neighbour countries (Eastern Europe)</li> <li>• One 5 star hotel with Casino</li> <li>• One conference hotel (location defined)</li> <li>• Investors for additional leisure activities as mentioned above</li> <li>• Create a parking and shopping area</li> <li>• Development of 3-4 baths in 3 different functional areas</li> <li>• Legalize the new zoning plan</li> <li>• Form a State owned DMO (Destination Management Organisation)</li> </ul>	<ul style="list-style-type: none"> <li>• Additional 6 hotels with a built up area of 110,000 m<sup>2</sup> (42% of Total), mainly investor focus on Western European Wellness and Medical Spa orientated brands</li> <li>• One or two additional 5 star hotels. Additional activities as golf (reserved area) etc.</li> <li>• Expand shopping / restaurant area</li> <li>• Expand the baths to 9 baths, as in previous times</li> <li>• Privatisation of the DMO</li> </ul>

## Organizational Development Concept

The coordination of the proposed development concept for Tskaltubo has to be coordinated on the political and the marketing site. In cooperation with the authorities, we propose the formation of a **Tskaltubo Development Company**, owned by the State (or State and Partnership Fund), which will coordinate all public authority responsibilities and activities, including the privatisation of the buildings and all related financial aspects. The responsible persons in this company will have the necessary power and network to make decisions and coordinate between all the involved, mainly government related, companies. The main activities would be:

- Represent the State's Interest
- Coordinate IDP solutions
- Convert military zone into a public zone
- Legalize Zoning plan
- Registration of the State owned buildings
- New cooperation with the current license holder
- Formation of a DMO (Destination Management Company) and future coordination between the State's interests in the DMO.

Towards the tourism market, we propose to form a **Destination Management Organisation**, created by the State, to be later transformed into a company owned and managed by the different stakeholders. The fact that the organisation can start from zero will help to ensure a fast development. In our report, we describe the decisions that need to be made. The split in 2 companies (Tskaltubo Development Company and DMO) only makes sense when the responsible persons and their professional skills in the boards of the companies are different. In our report we recommend the profile of the people in charge. This would lead us to the following structure:



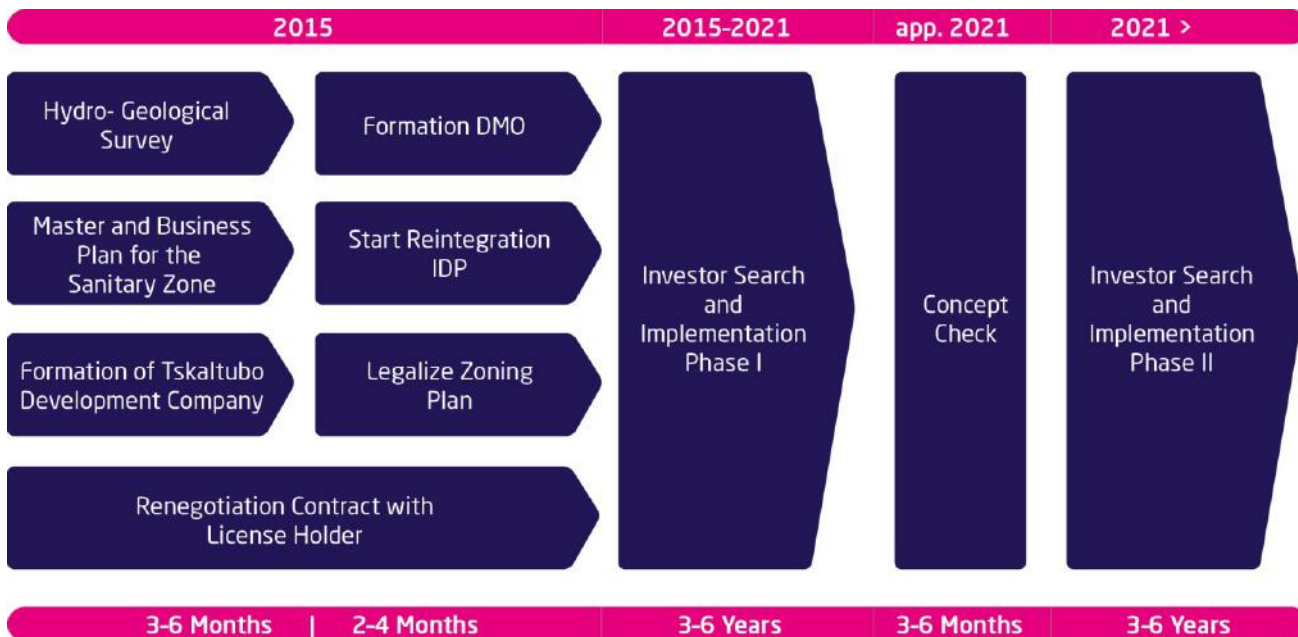
*Created by Kohl & Partner*

The implementation of the legal and financial structure is one of the most important issues in order to achieve the goals. Therefore we make the following main proposals:

- We recommend a privatisation system, which is attractive for companies investing in an early stage, but which also includes a pay back to the State during the implementation period. In our investment assessment to the State we propose such a solution and also give some alternative options.
- The companies have to contribute to the system (DMO) with a certain percentage of their turnover. We assume that this should be 1% at the beginning and should include all existing and future businesses in Tskaltubo (similar to a tourism tax).

- The State (“Tskaltubo Development Company”) should be active in finding instruments to help the interested investors (also local ones) to realize their ideas. In our investment assessment to the State, we recommended instruments offered by the EBRD, Partnership Fund and others.

Recapitulated, the following sub-projects have to be initiated:



*Created by Kohl & Partner*

Before negotiating with potential investors, the different activities mentioned and clarifications have to be done. The investors will only be willing and able to invest their money in their business ideas around the park when they can the trust in the realisation of the unique and modern products in the sanitary zone

We are sure, that with the coordinated realisation of all these steps, Tskaltubo will become the Medical and Wellness SPA Capital of Eastern Europe.

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## 2. MARKET AND LOCATION ANALYSES

### 2.1. Macro Analysis Georgia

Georgia is a country that is strategically located at the crossroads of Europe and Asia, in South Caucasus. It has a unique and ancient cultural heritage and is renowned for its traditions of hospitality. It is one of the fastest growing markets in the region and offers secure and profitable investment opportunities to investors.



Area	69,700 sq. km
Population	4.5 million
Life expectancy	74.5 years
Official language	Georgian
Literacy	100%
Currency	Lari (GEL)
GDP: 2013*	US\$ 16.1 billion
GDP -Real Growth Rate 2013*	3.2%
GDP -Per Capita 2013*	US\$ 3,596.6
Inflation rate 2013 (Average annual; e-o-p)	-0.5%; 2.4%
Public External debt to GDP 2013	27%

Topics	DDB Rank
Starting a Business	8
Dealing with Construction Permits	2
Getting Electricity	54
Registering Property	1
Getting Credit	3
Protecting Investors	16
Paying Taxes	29
Trading Across Borders	43
Enforcing Contracts	33
Resolving Insolvency	88

Source: Doing Business Rankings, 2014

During the last few decades, this former Soviet country has undergone a number of important changes, resulting in significant political and economical improvements. Reputable international institutions have noted Georgia's performance in a number of rankings. Georgia's unparalleled performance in improving its business environment is recognized by the World Bank Group's Ease of Doing Business rankings, where it holds the 8<sup>th</sup> position worldwide.

### 2.1.1. General Information

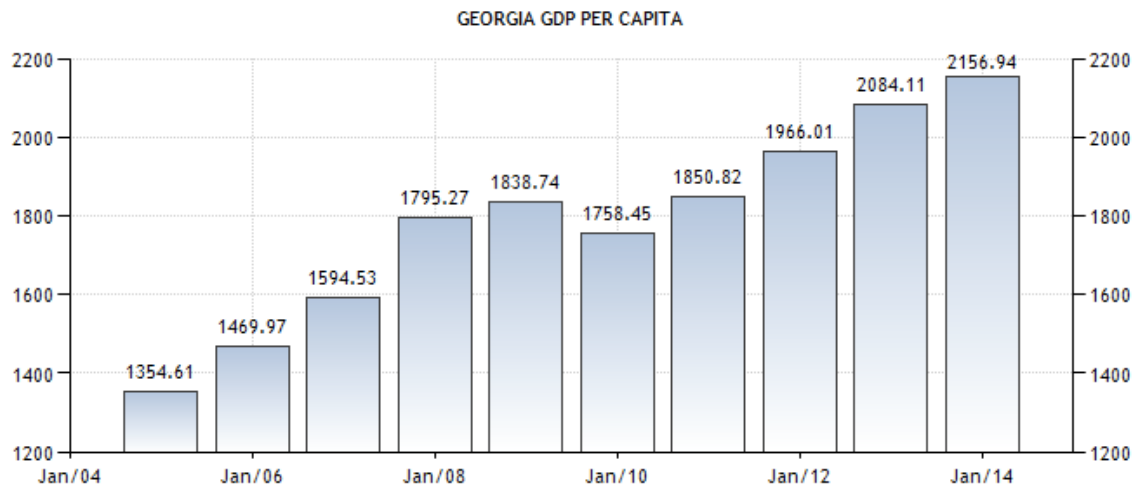
Georgia incurred severe damage after the collapse of the Soviet Union and the civil strife of the 1990s. However, the country has been experiencing rapid improvements since the year 2000. It has achieved robust GDP growth and has effectively reduced inflation rates.

Georgia has achieved one of the most effective economic growth records in recent years among the former Soviet countries. During the last decade, the country has implemented a great number of reforms, in almost every field, including the economy. The main goal of the economic reforms was to achieve economic liberalization and secure sustainability in growth, while developing the private sector. As a result, the improved business environment has led to increased foreign direct investments and stable growth. The average annual GDP has constantly increased in the last 5 years.



Source: Tradingeconomics.com / World Bank Group





Source: Tradingeconomics.com / World Bank Group

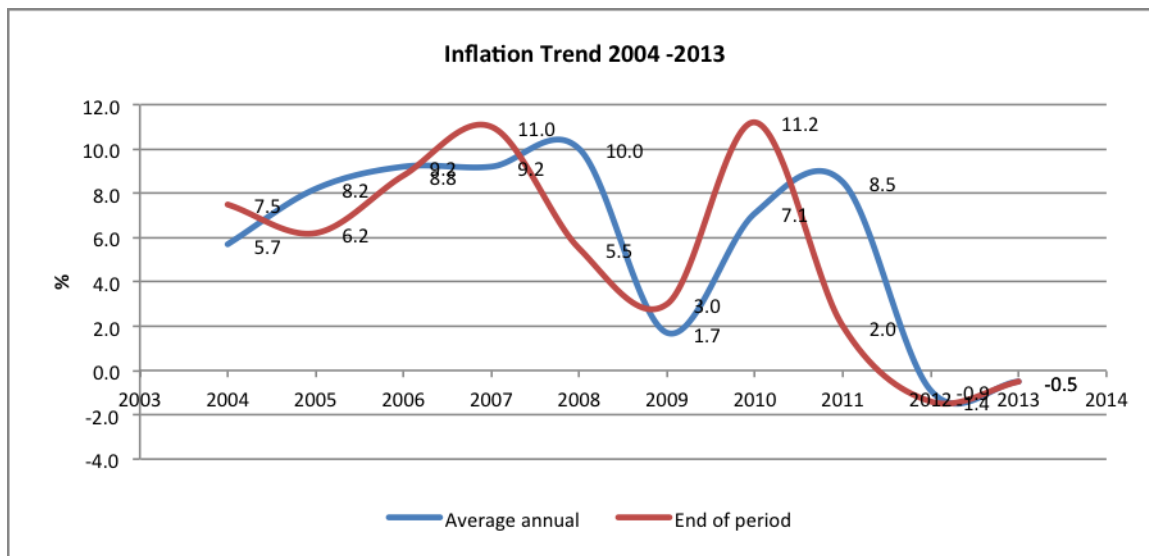
Some of the key competitive factors that Georgia boasts are:

- **Strategic geographic location** – Georgia is a bridge connecting several important markets in Europe and Central Asia.
- **Leading reforms** – Georgia is #8 in the world according to the World Bank's Ease of Doing Business ranking 2014.
- **Effective anti-corruption policy** – The BEEPS survey identifies Georgia as the country in transition with the largest reduction in corruption from the period of 2002-05.
- **Free Economy** – According to the Heritage Foundation's **Index of Economic Freedom** for 2014, Georgia is ranked 22<sup>nd</sup> out of 161 countries in the world. From a "repressed" economy almost two decades ago, Georgia has gradually advanced to this high level.
- **Trade** – Georgia has low tariffs, streamlined border clearance procedures and preferential trade regimes with major partners, including the EU and the U.S., as well as free trade with Turkey and the CIS countries. Georgia has been a member of the **WTO** since 2000 and has no quantitative restrictions on trade.
- **Flat and low taxes** – It has a personal income tax of (20%), corporate income tax of (15%), and value added tax of (18%).
- **Double taxation treaties** are in force between Georgia and 26 countries.
- **Dividend tax** rate of only 5%.
- **DCFTA** Association Agreement with the EU

### 2.1.2. Economic Outlook

Georgia's economy has been rapidly improving over the past few years and is well positioned to maintain its growth. A liberal tax regime and an efficient regulatory framework support the business environment.

Inflation rates are steadily being curtailed in Georgia due to effective policies implemented to control them.



Source: National Statistics Office of Georgia

The labor market in Georgia is characterized as investor friendly. The workforce is skilled and educated. With a 99.8% Adult Literacy Rate, Georgia holds one of the leading positions in the world. The total workforce comprises of 1.9 million of the population, 30.8% of which hold a university degree. Unemployment has been one of the major social challenges during the past decade, however, according to the official data, it is decreasing steadily.



Source: Tradingeconomics.com / World Bank Group

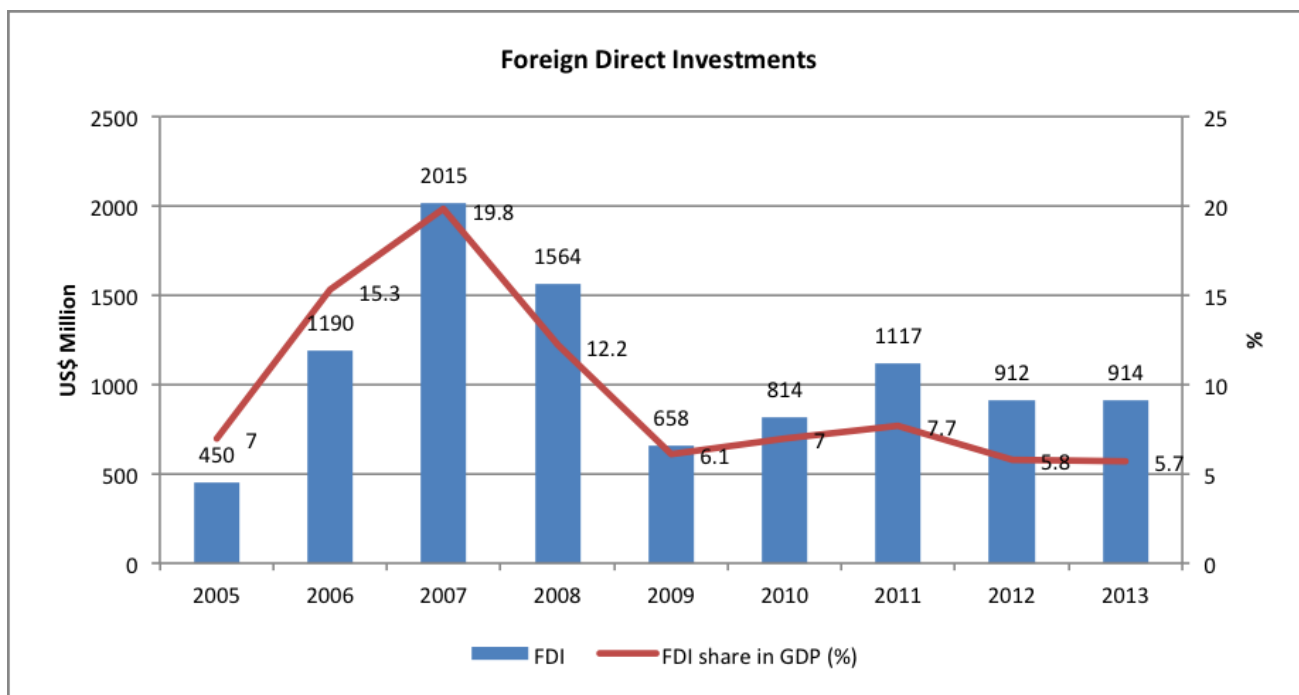
Georgia actively encourages foreign trade and introduces policies for facilitating it. Some of the most important competitive factors are: the fast and effective border clearance procedures, the bilateral treaties on investment protection and its promotion in 32 countries, as well as double taxation treaties with 46 countries. In addition, competitive trade regimes make it easier to trade with Georgia:

- Free Trade Regime – with CIS countries and Turkey (since 2008).
- Most Favored Nation Regime (MFN) – with World Trade Organization (WTO) member countries.
- Preferential Regime (GSP) – with USA, Canada, Japan, Switzerland, Norway.
- Preferential Regime (GSP+) – with EU (7200 items) since 2005.

The Key Foreign Trade figures for 2013 are:

- A Total Trade Turnover of – 10,784 mln. USD (5.5% Growth).
- An Export of – 2,909 mln. USD (22.4% growth).
- An Import of – 7,874 mln. USD (0.4% growth).
- A Balance of – 4,965 mln. USD (9.1% decline).

Georgia's investor-friendly and secure business environment has been attracting a considerable amount of investments in recent years. Following a slight drop in 2012, due to elections, foreign direct investments in Georgia have increased again.



Source: National Statistics Office of Georgia

The crisis in Ukraine may have an impact on the development of the country. Certain investors may be more careful; other fields may even profit from the situation. The tourism in Batumi increased in 2014 because Batumi became the closest summer destination after the changes in Crimea. The potential threat the crisis poses has resulted in many forecasts being reduced. Some current citations follow:

- The reduction in budget spending, and the low private investment due to the political uncertainty, has slowed down growth to an estimated 3.2% in 2013, while the current account deficit has narrowed substantially to about 6% of the gross domestic product (GDP).

Source: Asian Development Bank, May 2014

- Growth is expected to accelerate to 5.5% in 2014 and 6.0% in 2015, reflecting in higher public investment and improved investor sentiment. The anticipated improvements in the external environment, coupled with the rising consumer confidence, should also support growth. The reduced political uncertainty will help to revitalize the banking sector and credit activity, aiding the growth.

Source: Asian Development Bank, May 2014

- Improving the competitiveness of the country, attracting investments and creating a credible macroeconomic environment were named as the tools to promote economic growth. A very positive impact is that Russia had reopened its market for Georgian wine, mineral water and fruit this year after imposing bans in 2006.

Source: IMF – International Monetary Fund, June 2014

- The European Bank for Reconstruction and Development (EBRD) says that the crisis in Ukraine is having a negative impact not only on the Ukrainian and Russian economies, but also on most of Eastern Europe and the Caucasus. An EBRD report issued in May 14 stated that the geopolitical situation had made foreign investment in the region appear riskier, had caused a reduction in the demand for exports and would possibly lead to less favorable tourism revenues.

Source: EBRD, July 2014

We also refer to a detailed report about the Georgian Economic Outlook, established by the Economic Policy Research Center (EPRC).

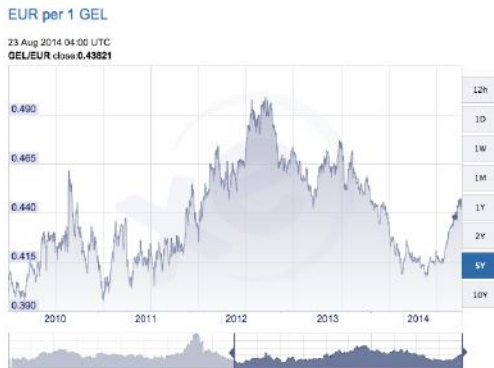


On 27 June 2014, Georgia signed a DCFTA (Deep and Comprehensive Free Trade Area) Association Agreement with the EU. This view reflects the opportunity EU market access represents for Georgian exporters, given the size of EU economies relative to Georgia's own. Also it provides an opportunity through the increase in FDI that the agreement is likely to generate, supported by improvements in Georgia's economic governance and institutional capacity in recent years. A full Visa liberation with the EU is expected in 2015.



Source: Tradingeconomics.com / World Bank Group

The official interest rate of the Georgian National bank is the 7-day refinancing rate. The data on Georgia's Interest Rate for recent years, provided here, reflects prices on the market, depending on the risk rating, of 7-12%.



Source: Tradingeconomics.com / World Bank Group



The exchange rate of Lari (GEL) has been stable in the last five years, especially with the US \$, and has currently decreased against the Euro (Free Trade Agreement). Overall, the exchange rate risk has been very low in the past 5 years.



### 2.1.3. Tourism Strategy - The World Bank Infrastructure Project

Georgia has a clearly defined vision towards the development of its regions. The Regional Development Strategy, which was approved in 2010, aimed to improve the socio-economic environment and the living standards of the entire country. The Regional development strategies have already been implemented, with the help of the first World Bank project, in the Kakheti Region.

The Government investments in the Imereti region were also oriented towards the relocation of the Parliament and Public Administration to Kutaisi.

The Government recognizes the need to improve the amenities and the urban services in the Imereti/Tskaltubo region in order to support the tourism sector. The goal is to attract private investment, promote public-private partnerships, revitalize local business activity, define a fully-fledged regional tourism circuit and foster two leisure travel clusters (health/nature and cultural heritage). The tourism strategy (established in 2012) proposes to develop the Imereti region (with Kutaisi, Tskaltubo and Vani) as a high-quality, year-round health/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 sustainable/geo-tourism, implementing 4 comprehensive urban renewals in Tskaltubo, the rehabilitation and extension of the Vani Museum and the construction of tourism amenities at the neighbouring historical sites. This will complement the tourism development vision of other regions, such as in Kakheti (wine tourism, culture heritage and adventure) and Adjara (sea sports, nature and recreation).



*Tskaltubo Central Park Reconstruction. Source World Bank*

The Government is launching an agile transformation strategy for the tourism development of the region, with the support of the World Bank and the Municipal Development Fund of Georgia (MDF). The design of the project proposes a mix of institutional development, infrastructure, and targeted interventions.

The Project will aim to promote the local economy in the region by carrying out an integrated approach to developing tourism, focusing on infrastructure, urban renewal, cultural heritage restoration, developing skills and making the environment attractive for private sector investments.

The project is important in the general context of Georgia's regional development and spatial planning vision.

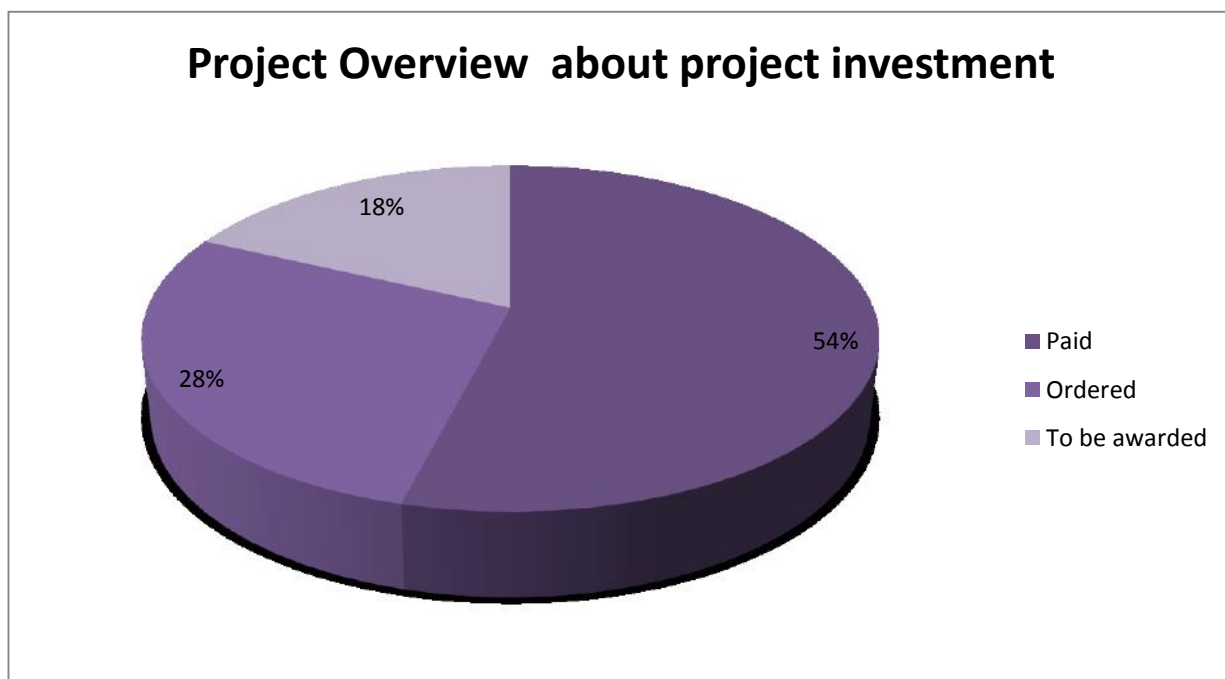
The Project consists of two components:

1. Infrastructure investments in the **urban regeneration of Tskaltubo and the tourism circuit development.**
2. **Institutional development (Protection of Historical Heritage Sites and Museum).**

The total Investment is US\$ 33.5 Million, financed 80% by the World Bank and 20% through the State-owned MDF (Municipality Development Fund).

The MDF, under the supervision of the contracted consultant Eptisa from Spain, is responsible for implementing the project.

The project will be finished in 2015. In August 2014, the project's financial situation was presented as follows:



*Source: Presentation Eptisa on workshop, Tskaltubo, August 2014*

**Urban Regeneration of Tskaltubo:** An integrated approach is proposed for the urban renewal of the city of Tskaltubo. This includes:

- Restoration of existing buildings and small size pedestrian bridges in the central park of Tskaltubo.
- Construction of a destination management office and Tourism related small size infrastructure in the central park, lake “Tsivi” and in Tskaltubo town.
- Rehabilitation of water supply and sewerage system in Tskaltubo town.
- Rehabilitation of the ring road 1 (around the park and lake “Tsivi”) and storm water drain system around the park.
- Rehabilitation of roads, foot paths and storm water drain system in Tskaltubo town.
- Arrangement of the irrigation system and landscaping the central park, as well as lake “Tsivi”.
- Rehabilitation of lake “Tsivi” and water channels in Tskaltubo town.
- Rehabilitation of outdoor lighting in the first circle road, central park and lake “Tsivi”.

**The Institutional development** (Protection of Historical Heritage Sites & Museum) foresees the following activities:

- Rehabilitation and expansion of **Vani Archaeological Museum**.
- Integrated revitalization of the cultural heritage sites in **Gelati Monastery, Katskhi, Ubisa Monastery and Motsameta Monastery**.

Within the restoration concept, the following infrastructure will be developed:

- Improvement of the urban landscaping and the public parking.
- Construction of information kiosks and public toilets.
- Restoration and refurbishing of the exterior and interior of the Vani Museum.
- Improvement of access roads.
- Preservation of selected cultural heritage sites.

The proposed activities will definitely help to improve the attractiveness of Tskaltubo and the entire region.

The following pictures (*Source Eptisa*) show the work at the different places:



Rehabilitation of streets and storm water drain system





Restored fountain, tourism infrastructure and toilet at lake “Tsivi”



Flower Pixel, construction work for the coffee shop at lake “Tsivi”



Rehabilitation of the canal system, Installation of street lighting, park cleaning

In the detailed description, we find the following project information:

Enhancing the institutional capacity of the Georgia National Tourism Administration (GNTA), the Agency for Cultural Heritage Preservation of Georgia (ACHP), the National Museum, the Project Implementing Entity, and other local and regional entities to carry out the following activities:

**Establishment of a Tskaltubo destination management and development office:** This will create the institutional framework to ensure the proper operation and maintenance of all

the assets that will be constructed/rehabilitated in Tskaltubo, and to conduct marketing and promotion of the activities done in the Imereti region. This will include:

- Institutional and legal advice to define the best arrangements for the proposed Tskaltubo destination management and development office.
- Construction of an office building in Tskaltubo.
- Training, equipment and software, so the new office can pursue its mandate effectively.

**Sustainable Development Tourism development and promotion:** This will promote the Imereti region as a new sustainable tourism destination. It will support the creation of an online marketing and promotion website, which will increase awareness of the region's tourism assets in the local and international markets. It will also design a geo-tourism map that can be sold at the visitor centers. In addition, it will support various activities designed to encourage cooperation between all tourism stakeholders.

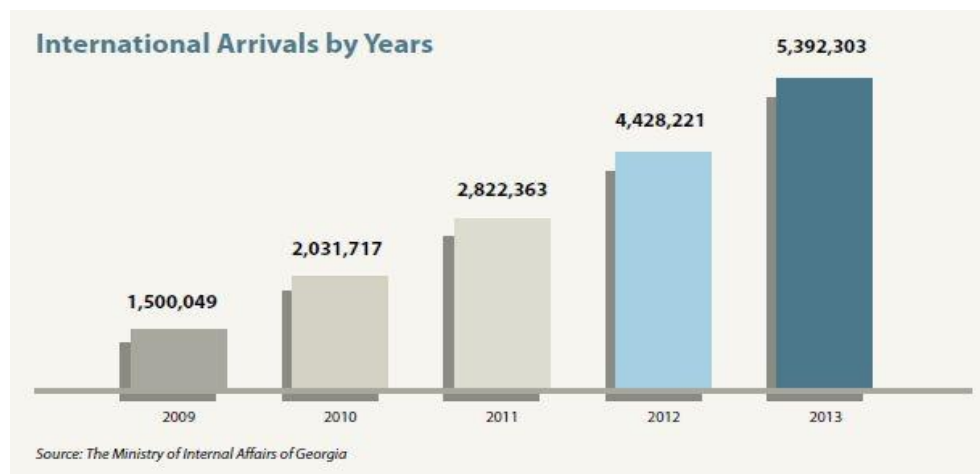
**Preparation of visitor management plans for the sustainability of the Project's cultural heritage sites:** This will include the preparation of visitor management plans for the project's cultural heritage sites (Gelati Monastery, Vani Museum and the surrounding archaeological sites, Ubisa Church, Katskhi Church, Katskhi Column Monastery, and Motsameta Monastery). The employees will be provided with on-the job training.

**Skilled workforce development and capacity building:** This will provide demand-driven capacity building training activities to three groups in order to establish a targeted, integrated workforce development program in the tourism-related businesses in the Imereti region. The three groups are: hotel staff, tour operator/guides, and officials in the GNTA, ACHP, National Museum and MDF. This will promote tourism-related business and activities. All of these efforts will help the local communities, with equal focus on women, and will also contribute to economic development and, most importantly, the residents will benefit from it.

**Performance monitoring and evaluation:** This will improve the understanding of the GNTA staff, as well as the Tskaltubo destination management/development office staff, with respect to tourism and ways to monitor the activities' effectiveness over the next four years. It will also monitor the Project's results indicators annually. By measuring tourist arrivals/number of visitors, spending, opinions, occupancy rates, increases in tourism-related investments, and gender aspects, the Government will make more effective adjustments and resource allocations for infrastructure, marketing, human development and policy reforms.

#### 2.1.4. Tourism Information

Tourism is one of the most rapidly growing sectors in Georgia, offering visitors a wide range of attractions. There are a large variety of investment opportunities in tourism in Georgia, including prospects related to the sea, mountains and skiing, mineral waters and health resorts, cultural attractions and many others. Georgia attracts a large number of international visitors. According to the Georgian National Statistics Office, the number of foreign tourists has grown almost 10 times during the last decade from 559,753 visitors in 2005 to 5,392,303 in 2013.



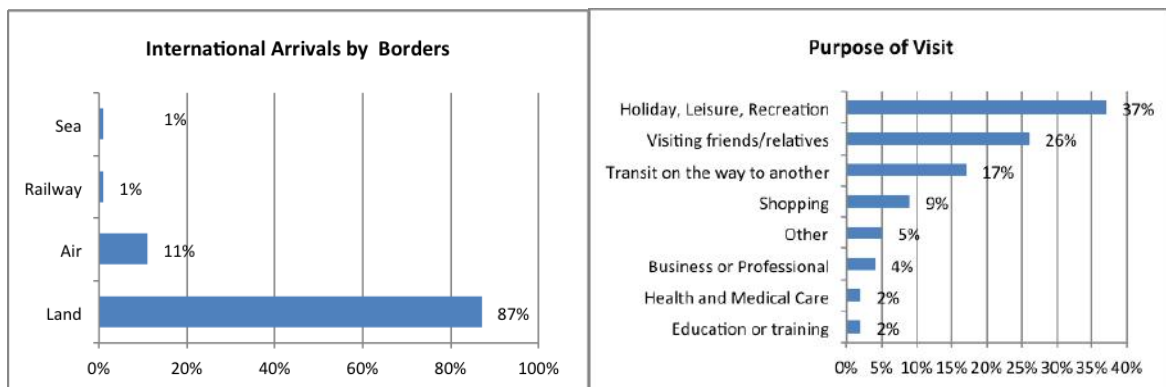
International Arrivals Top 15 Countries			
Country	2012	2013	Change
Turkey	1,533,236	1,597,438	4%
Armenia	921,929	1,291,838	40%
Azerbaijan	931,933	1,075,857	15%
Russia	513,930	767,396	49%
Ukraine	76,610	126,797	66%
Iran	89,697	85,598	-5%
Iraq	6,947	41,239	494%
Israel	30,851	39,922	29%
Poland	20,563	36,946	80%
Germany	26,448	30,815	17%
USA	28,513	26,713	-6%
Greece	19,777	22,024	11%
Kazakhstan	15,115	21,148	40%
United Kingdom	14,805	16,672	13%
France	12,004	14,239	19%

Georgia is positioned internationally as an attractive tourism destination. “Rough Guides” ranked Georgia 5th among the top 10 countries to visit in 2014. As a result, the competitiveness of Georgian tourism in the world market has increased by seven positions,



ranking it as the 66th among the 140 nations in the Travel & Tourism Competitiveness index in 2013 (Score: 4.10), compared to 73<sup>rd</sup> position in 2011. Forecasts are highly optimistic for the tourism sector. It is expected that growth will be maintained and the number of arrivals to Georgia will increase substantially in the following years.

The Government has an important role in the development of the tourism sector. Through the efforts of the National Tourism Agency, Georgia strongly encourages improvements in tourism infrastructure, providing training to the representatives of the tourism and hospitality sector and contributing to the increasing awareness of the country with various international media activities. Most tourists arrive by land (car) and the purposes of their visits are mainly for leisure reasons. Depending on the country of residence, the average length of stay is between 2-8 days.

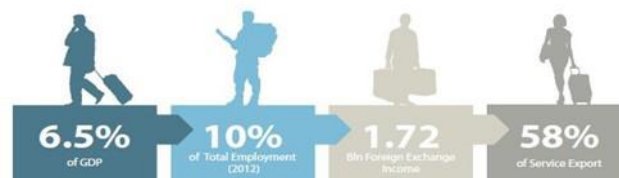


Source: Georgian National Tourism Administration (2012)

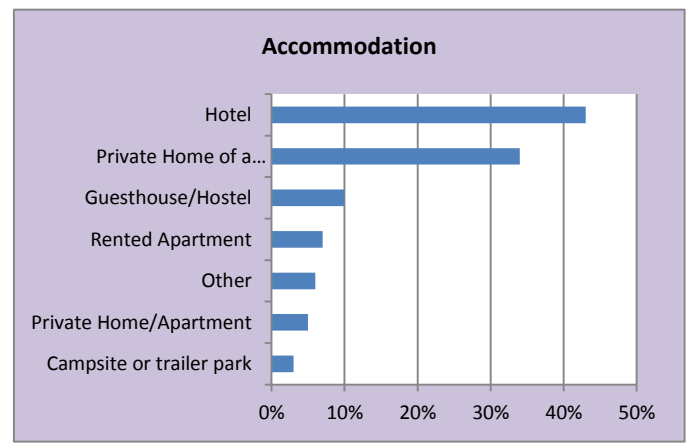
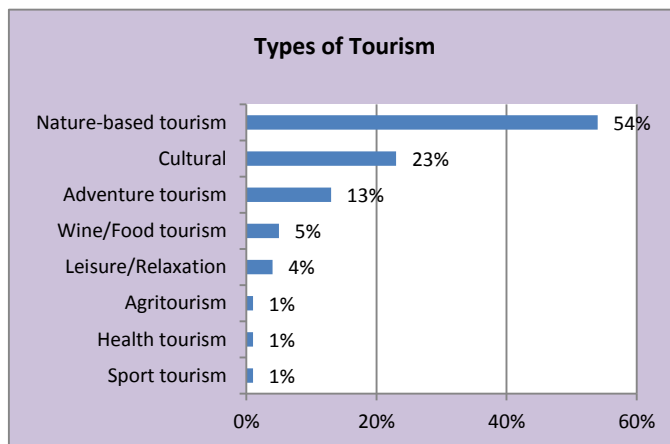
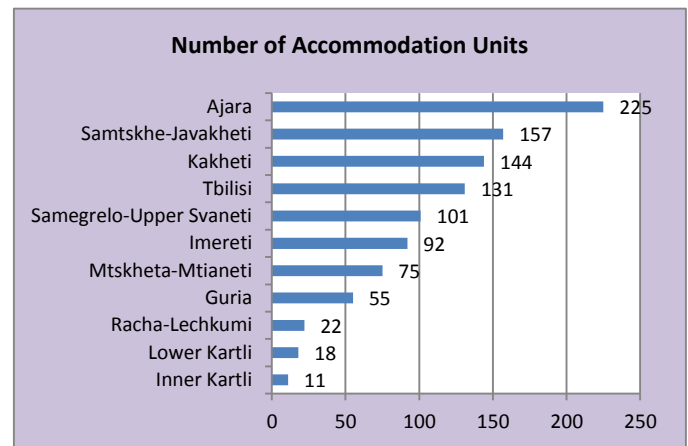
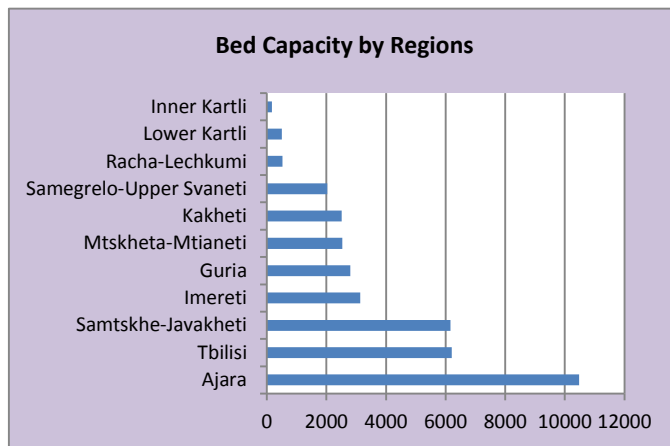
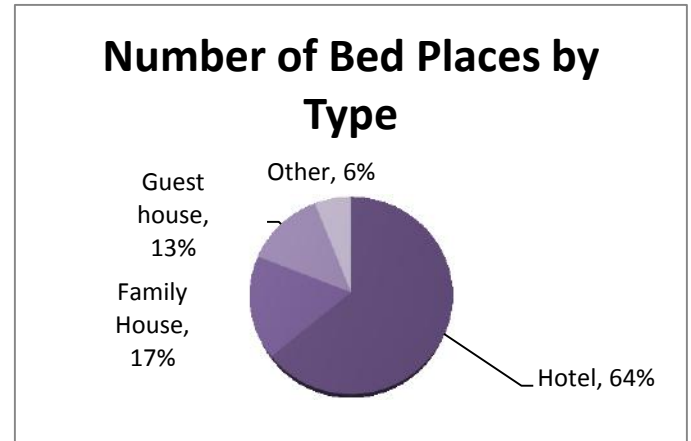
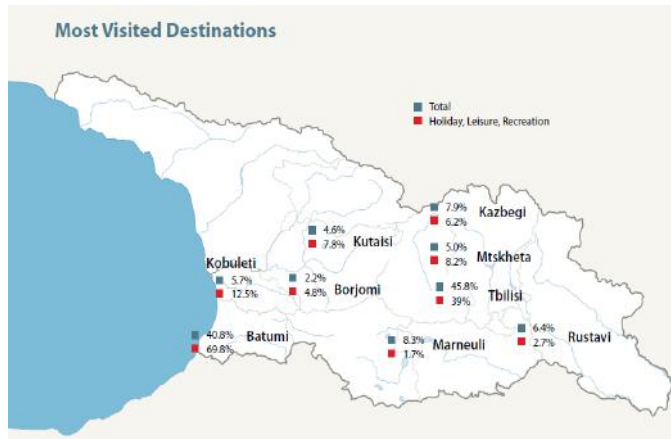
Average Length of Stay by Country of Residence (2012)	
Country of Residence	Average Overnights
Russia	8
Azerbaijan	4
Armenia	4
Turkey	2

Source: Georgian National Tourism Administration

**The Tourism industry has made a significant contribution to the Georgian economy**



Source: UAP LCC (2013)



Source: GNTA

## Tourism Strategy

The America-Georgia Business Council and SW Associates published Georgia's last tourism strategy, for the period 2008-2015, in 2008. They defined the current and potential types of Tourism in Georgia as follows:

<b>Existing markets for further development</b>			
<b>Tourism type</b>	<b>Destination hubs</b>	<b>High Season</b>	<b>Perspective Locations</b>
Cultural tourism, including food and wine	Kakheti (Telavi, Signagi and Kvareli), Svaneti, Tusheti, Mtskheta	Spring-Fall	Vardzia, Uplistsikhe, David Gareji, Khada Gorge, Zugdidi, Kutaisi
Ecotourism, including mountain travel, skiing and adventure travel	Gudauri, Bakuriani, Kazbegi, Mestia, Kakheti	Spring-Fall	Bakhmaro, Goderdzi Pass, Mt. Ushba, Lagodekhi, Vashlovani, Mtirala and Kolcheti national park
Sea Tourism	Black Sea coast (Batumi, Kobuleti, Kvariati, Gonio, Mtsvane Kontskhi, Ureki)	July - September	Anaklia
Business Travel, including MICE	Tbilisi, Batumi, Kobuleti, Bazaleti complex	Year-round	Kutaisi, Telavi
Visits to Friends and Relatives	Throughout the country	Year-round	Throughout the country
Casino / Gaming	Tbilisi, Batumi	Year-round	Borjomi, Tskaltubo, Anaklia

<b>Under-developed market segments</b>			
<b>Tourism type</b>	<b>Destination hubs</b>	<b>High Season</b>	<b>Perspective Locations</b>
Special events, including fairs, sports and music	Tbilisi, Batumi, Signagi, Telavi	Spring-Fall	Chargali, Kakheti, Maltakva, Anaklia, Kutaisi, Rustavi, Gori
Spa and Wellness	Tbilisi, Sairme, Nunisi, Tskaltubo		Tskaltubo, Akhtala, Borjomi, Likani, Tbilisi, Utsera, Surami, Bakhmaro, Beshumi

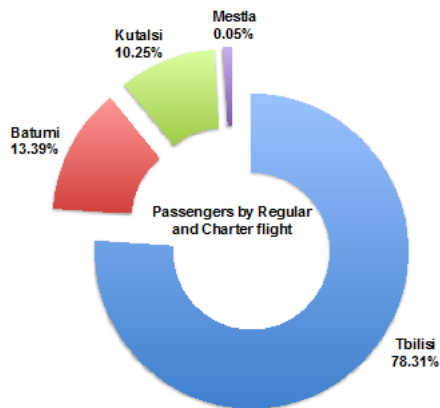
Source: *Tourism Development and Investment Plan and Strategy – Task 7 Report made by the America-Georgia Business Council and SW Associates, 2008*

The potential of Tskaltubo was already mentioned, and, looking back, Georgia has achieved remarkable success in the development of certain areas.

For future development, Georgia will need a new Tourism strategy. The strategy is especially needed to help to coordinate product development and sales processes, which are still on a low level. The establishment of a new Tourism strategy was started in autumn 2014 by the World Bank. The coordinated and controlled assistance of small tourism enterprises could also contribute to a more rapid development of the Industry.

## Transport links

The tourism potential of Georgia is boosted by its transport connections. There are 3 international airports operating in Georgia and these are connected with high quality highways and railroads to neighbouring countries.



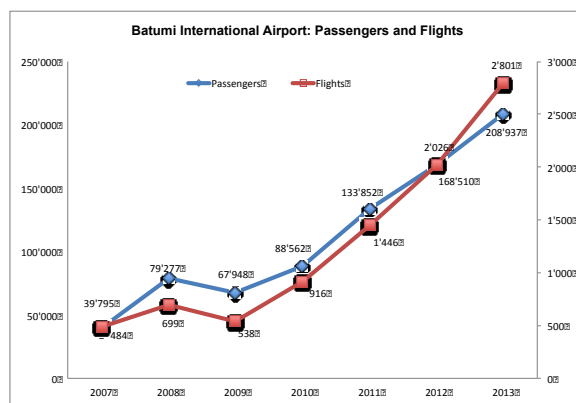
Source: United Airports of Georgia

The International airports are located in the capital cities of Tbilisi, Batumi and Kutaisi. Twenty-four local and international airlines offer regular flights from Georgia to various destinations, including Eastern/Central/Western Europe and the Middle East.

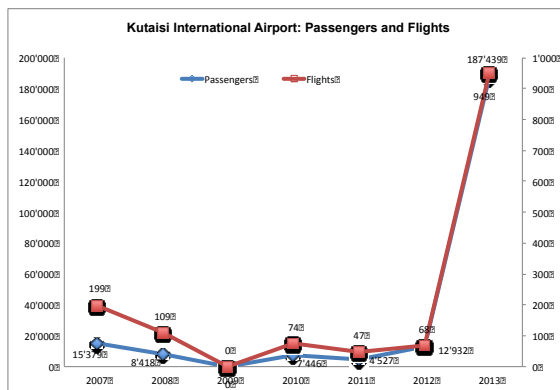
The Georgian aviation industry is increasing significantly, with new airlines entering the market and an increase in flight frequencies. During recent years, both the number of flights and passengers has been stably increasing in all three airports in Georgia.



In 2013, 1.44 million passengers flew in and out of **Tbilisi** to and from a wide variety of destinations. Baku, Azerbaijan is the busiest route, with 115,500 passengers (8% of total O&D traffic), followed closely by Istanbul, Turkey, with 106,700 passengers (7%) and Kiev, Ukraine with 102,300 passengers (7%).



**Batumi** airport currently serves 9 destinations through 5 different airlines. The air traffic occurs mainly in the summer season.



The **Kutaisi** Int. Airport was built from the remains of the old Soviet military airport in 2011-2012. The new 4,000 m2 terminal building and traffic control was established by top European companies and represents a symbol of the huge step modern Georgia has taken towards Europe. The new airport was opened in 2012.

Sources: Created by Kohl & Partner)

The Kutaisi airport is the first low cost oriented airport in the whole region. After opening the new airport in 2012, there has been a growing interest from LCCs as well as regular airlines, because of low airport fares, an attractive incentive scheme and the new infrastructure. Wizz Air was the first low cost airline to start operations in Kutaisi. Wizz opened entirely new markets for Georgia, serving 173,000 passengers in 2013 and doubling its capacity for 2014. Currently Kutaisi airport serves 5 Airlines and offers flights to 12 destinations.

The airport management company is very positive about the outlook of their managed airports. This is because of the following reasons:

- The Georgia EU agreement, which will also bring a full integration process into the European Aviation Area;
- Visa liberalization with the EU, expected in 2015;
- The Amended Air Code and harmonization of Georgian legislation with the EU standards;
- Georgian ANSP has become a member of EUROCONTROL 1.12.2012;
- Liberalization of the Visa regime with Russia;
- The construction and rehabilitation of all 4 active airports since 2005 and the development of modern airport infrastructure;
- The development of the first low cost airline, not just in Georgia, but the entire region.

*Source: Interview with airport management*

#### 2.1.5. Recapitulation - Conclusions

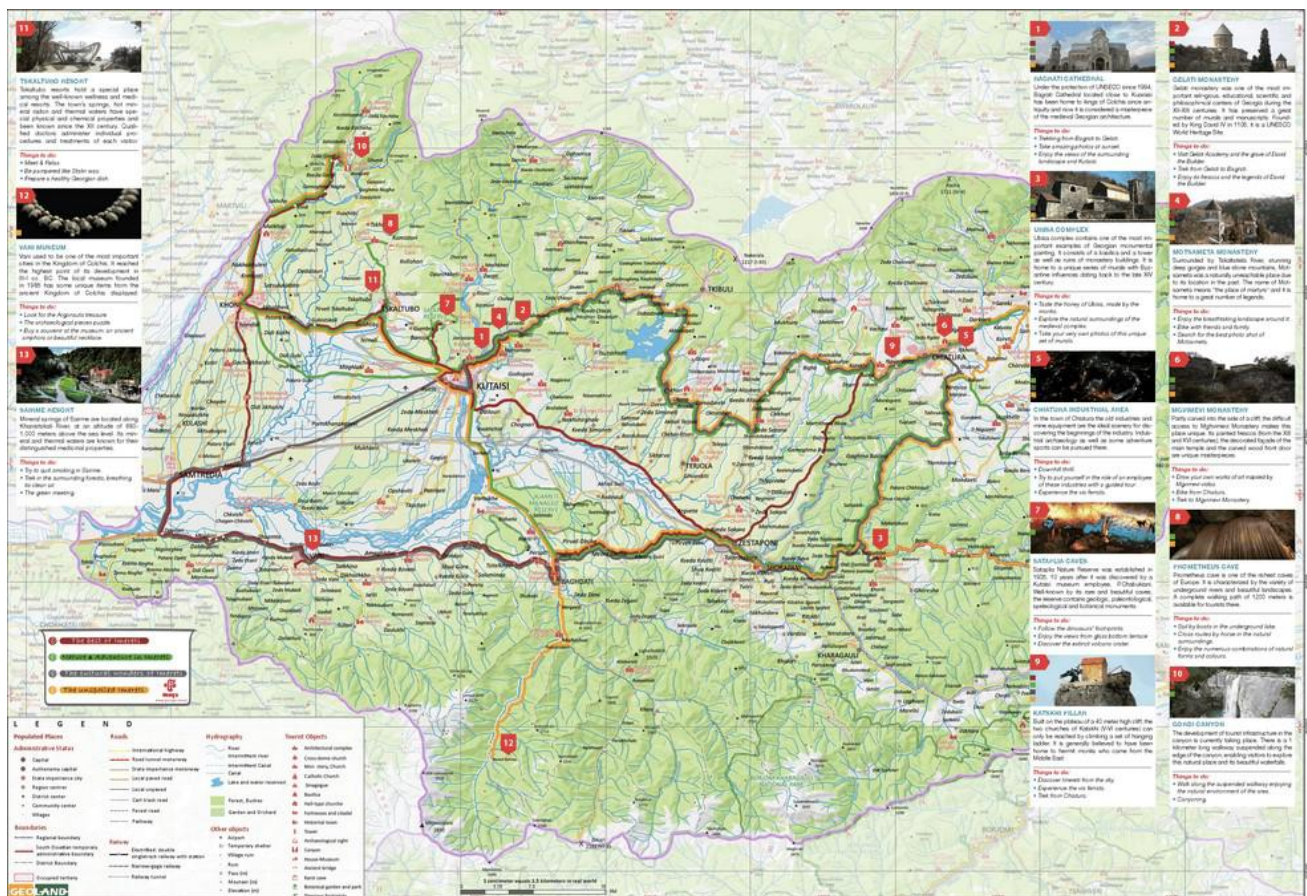
Conclusions
<p>Summarizing the economic and, especially, the tourism situation in Georgia:</p> <ul style="list-style-type: none"> <li>• Georgia's economy and business environment's performance has been recognized worldwide and has brought about remarkable results in various business rankings.</li> <li>• Besides its strategic geographic location, Georgia's main "business assets" are its effective anti-corruption policy, free economy and flat and low taxes.</li> <li>• The signed DCFTA Association Agreement with the EU, as well as the reopened markets for wine, mineral water and fruit with Russia, will have a positive impact on Georgia's export industry.</li> <li>• Tourism is one of the most important industries in the country and the efforts of recent years have shown positive results.</li> <li>• The new Kutaisi Airport is increasing its flights and passengers. The airport is a very important requirement for the development of the region.</li> <li>• The main tourism markets are neighboring countries and the best connected countries with international airports. Turkey, Armenia, Azerbaijan and Russia still make up 72% of visitors.</li> </ul>



## 2.2. Micro Analysis Tskaltubo Region

### 2.2.1. General Information Imereti & Tskaltubo

**Imereti** region, with its administrative center Kutaisi, is a very beautiful part of Georgia. Imereti is located in the Kolkheti lowlands between the southern Caucasus and the Adjara-Imereti ranges. Its history dates back to ancient times. It spreads across 66,000 square kilometers, has a population of 800,000 people and offers many cultural attractions.

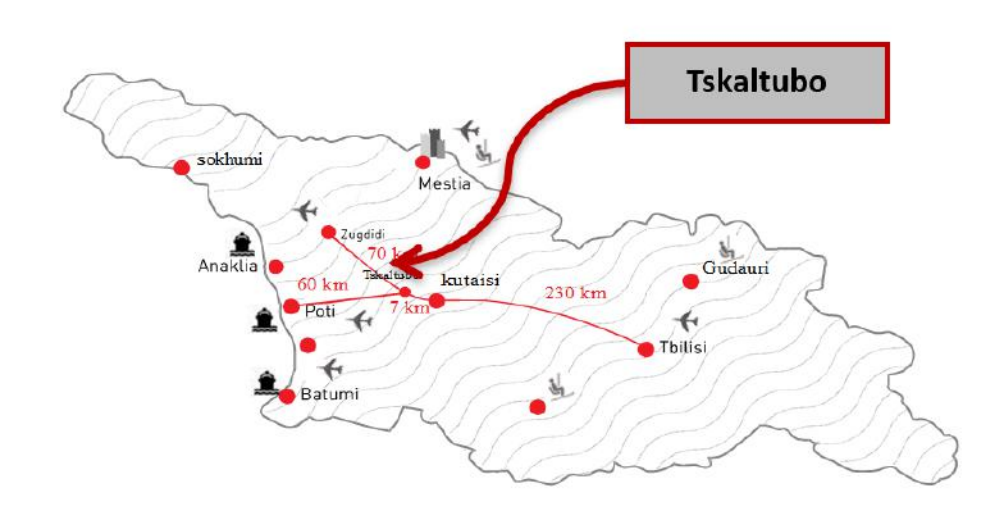


Source: Imereti Region

Tskaltubo is only 10 km away from Kutaisi and has a population today of around 17,000 people.

The unique characteristics of the Tskaltubo resorts are a result of natural and climatic factors. The resort is situated close to the Black Sea, along the river of Gubistskali (the right tributary of the Rioni River) in a subtropical humid zone, where it is protected from the cold winds, making it a very favorable location. (Map 1 and 2).





### 2.2.2. Historic Resort Development of Tskaltubo

Tskaltubo is just one of numerous resorts in Georgia. Nevertheless, it is one of the three best balneological resorts, along with Abastumani and Borjomi. However, it has taken quite some time for Tskaltubo to gain its status as a top-quality resort destination. The toponymy of the name “Tskaltubo” has never been fully explained. One version suggests that the name is connected to the extraction of healing water from the earth. Another version links it to the “water pumping” process. Local folklore attributes the high temperature of the water to the unrequited love of a young boy whose heart is beating at the bottom of these springs.

According to historical sources, Tskaltubo has been known since the 7<sup>th</sup> and 9<sup>th</sup> centuries. It became popular as a health resort in the 12<sup>th</sup> and 13<sup>th</sup> centuries. Despite this, Tskaltubo was not mentioned in any of the written sources from the 14<sup>th</sup> century. On August 14, 1772, the academic I.A. Guldenstendt visited Tskaltubo and this can be considered as the date when Tskaltubo started to develop as a health resort. In Europe, Tskaltubo was first referenced as a resort in “Berlin’s Humanitarian Society Articles” in 1782. In 1787, the Russian scientist and academic P.S. Palas processed and published I.A. Guldenshtedt’s travel diary, in which Tskaltubo was especially mentioned, and it became known in Germany.

These documents were translated from German into Russian in 1809, leading to a rise in Tskaltubo’s mineral waters’ popularity. In 1815, a well-known naturalist, Martin-Heinrich Claprot from Berlin, analyzed the mineral waters of Tskaltubo and their physiotherapeutic qualities in a German publication. In 1897, some information about Tskaltubo mineral waters and their positive impact on human health was published in a Georgian professor’s encyclopedic edition.

It is supposed that the first bathhouses in Tskaltubo opened in 1870. The history describes these first bathhouses as being unsanitary and lacking in medical controls. After strong rain, the baths got flooded, significantly disturbing the healing process. Flooding occurred over many years and was one of the main problems for Tskaltubo.

During the period that Georgia was a democratic republic (1918-1921), many sectors and territories were nationalized, including the resorts and their infrastructure. In this period the city and its urbanization started to develop close to the sanitary zone. In 1925, Architect Kalashnikov oversaw the construction of the first sanatoriums, resorts and in-patient facilities. In 1927, the hydro-mineral research center for Tskaltubo water was established.

During the Second World War, the Tskaltubo sanatoriums were used as hospitals. The year 1955 was a breakthrough year for Tskaltubo's development: hydro-technical and hydro-melioration works were conducted in the balneology zone. The river of Tskaltubo was regulated with special reservoirs built for that purpose ("Tsivi Lake"); the water flow was divided in two and was directed to a concrete canal around the park. Tskaltubo's development was determined by the expectation that it would be turned into a resort, which resulted in the construction of the ideal functional and planning conditions for various treatments. Tskaltubo became a very important resort for the USSR.

The development continued and at the end of the 1980s, the resort was the top tourist destination in the Soviet Union and served a huge market of the population of 300 million. Although 22 sanatoriums, with a total bed supply of 5,800, operated there, situated in a circle around the sanitary zone, all of the accommodation was always overbooked and it was difficult to find available rooms there. Even Joseph Stalin used to visit Tskaltubo to enjoy spa treatments. The resort had a daily direct railway connection to Moscow.

In 1991, when Georgia regained independence, the development of the resort was suspended, and today the resort is hardly functioning at all: only two bathhouses (out of nine existing) and some hotels are available. Patients find accommodation mainly in the private sector. The historical sanatoriums/hotels are partially occupied by IDP's (Internally Displaced Persons) and the expensive greening has degraded the park.

In recent years, the government, with help of the World Bank, has already started to develop the infrastructure of the town, as well as some tourism attractions in the region.

### 2.2.3. Retrospective review of the town planning documents

In 1931, the government of the Georgian Soviet Republic issued a decree defining the development of the resorts of Abastumani, Borjomi and Tskaltubo. The elaboration of new town planning documents concluded that it was necessary to build sanatoriums and bathhouses in an organized and centralized way. The first town development plan of Tskaltubo was prepared in 1933 by A. Zubin, A. Smirnov and A. Artiukhov. The plan was not in accordance with the town's development needs and therefore, the plan was not approved. A group of architects from Tbilisi, led by the architect N. Severov, initiated several development schemes for Tskaltubo and one of them was approved in 1941, as a basis for the future, successful development of Tskaltubo.



*Plan of the sanitary zone 1983  
Source: Tskaltubo Spa Book, 1983*

The first Tskaltubo master plan was prepared in 1950-1951 and approved in 1953 (by the Architects I. Zaalishvili and V. Kedia). The project covered a period up to 1965. The population of the town by then was supposed to reach a total of 20,000 people, while the number of beds in the sanatoriums was expected to increase up to 10,000. The master plan was based on a circular scheme (radial – circular). The sanatoriums, balneology, the housing, recreation and other zones were defined, along a large park zone, inside the circle. The Northern part of the park was intended to be used for balneology functions, while the Southern part was for recreational activities. There were more than 150 different species of decorative, evergreen and hardwood trees planted in this period.

After the 1950s, Tskaltubo became the Soviet government's show-window for how to work with people's health. This fact is confirmed by the names given to the sanatoriums, which were built using budgetary funds of the Republic and other USSR Republics: "Megobroba" (1937-1940, Architect S. Lentovski), "Tbilisi" (1951, Architects V. Oltarjevski and B.B. Sobolovski), "Meshakhte" (1951, Architects M.Meleg and G.Khimshiashvili), "Metalurgi" (1957, Architects V.Kedia and N. Soloviova), "Imereti" (1961, Architects A. Alex-Meskhishvili and L. Janelidze), and "Geologi" (1976, Architects V.Kedia and K. Kuparashvili).

During this period, the town of Tskaltubo implemented a plan for the diversification of its urban object. One reason for this was to improve the employment of the local population, and also to ensure the supply of food and services to the patients. They built factories for the

production of meat, milk, tea and fruit juice, several industrial enterprises for clothes and other household goods, and factories for chemicals, crystal natural stones and construction materials.

By 1957, Tskaltubo offered to guests: 7 bathhouses, 2 full board hotels, 2 polyclinics and 1 hotel. The physiotherapy scientific and research institute became a branch of the resort. In 1987, Tskaltubo offered 9 bathhouses, 19 sanatoriums, some hotels and, officially, 5,502 beds.

In the 1980s, it became evident that Tskaltubo's master plan needed updating. "The Master plan of the town-resort of Tskaltubo" was prepared in 1983. This master plan was a cooperative work by the design bureau of Tbilisi State Academy of Arts, led by Architect I. Zaalishvili. The design documentation was based on two main aspects:

- The anticipation of a growing resort and a capacity of 12,000 beds by the year 2005.
- The need to fill in a functional and planning structure for the town-resort as a result of its growing borders (Map 6, 7, 8 and 9).

The sanitary zone and park were again the center of attention in the master plan. Concentric grid streets were planned around the park. The first central circle/grid road around the park was for the visitors (tourists) in the resort; the second main town circle/grid was for the transportation of cargo and transport traffic in general. The third circle circle/grid was planned to partially secure the second circle/grid. This planning scheme defined Tskaltubo's future functional and spatial structure for the next 30 years, and its impact continues even today.

#### 2.2.4. Historical and cultural evaluation

Tskaltubo has all of the natural and infrastructural capacities needed to become an international resort location. Tskaltubo is located in the region of Georgia, which is rich in the cultural heritage of different periods of time and epochs, and has unique places, ethnographic and handicraft artifacts and natural complexes.

The grand Bagrati Cathedral (XII-XIV centuries) is located in Kutaisi, which is very close to Tskaltubo. Guests can also visit the Gelati Grand Architectural Complex with its churches and fortress, as well as King David's grave (considered to be the greatest and most successful Georgian ruler in history, 1089-1125), who was the builder of the Academy's building (from the XI-XII century), Grand Motsameta Church near Gelati (from the X-XI century) and other architectural and archeological sites.

Kutaisi itself is an interesting sightseeing city, with its views of the River Rioni, and iconic buildings, including public and dwelling buildings of the 19<sup>th</sup> century. The Sataplia mountain-forest reserve, with its speleological caves and traces of dinosaurs, is another sight worth visiting.

The famous Kumistavi cave is located near Tskaltubo as well. The cave really is a must-see for every visitor to the region. Families in particular find it an excellent attraction for all generations. The Imereti region is rich in traditional architectural constructions, of the so-called “Oda” type, with their traditionally shaped and structured yards and household land-plots. The tradition of hosting guests and being friendly to visitors is still practiced in this region. The recipes of traditional cuisine and rich folk heritage are broadly spread throughout the region and are being passed down to the next generation.

The Tskaltubo resort was mostly built during the Soviet period. The development of the resort gradually and consequently followed the master plans. Those plans took into account the principles of zoning and taking care of the cultural heritage, mainly the baths. Tskaltubo is a clear example of the urban planning of its own area, while its future, modern development has to be based upon the previously established master plan principles, which should be depended on and developed in the future.

At the same time, Tskaltubo’s sanatorium/hotels and recreation houses clearly represent the Soviet architectural avant-garde constructivism. Some later elements of Stalin’s neo-classic empire style are also represented. The main signatures of the Soviet architectural style are embedded in these complexes: the architecture by its content should be socialist, and national in its design. Following on from this view, out of the 16 plots we have inspected, on 12 plots we have identified buildings with architectural value from the past and worth to be kept in the way they were built, with only restoration-rehabilitation works to be conducted in these instances.

All the above certainly proves and confirms that Tskaltubo itself, along with its historical and cultural surroundings, is extremely valuable and essential in terms of its urban and architectural ensemble. All of this in addition to the extraordinary healing quality of the thermal water!

#### 2.2.5. Touristic Infrastructure

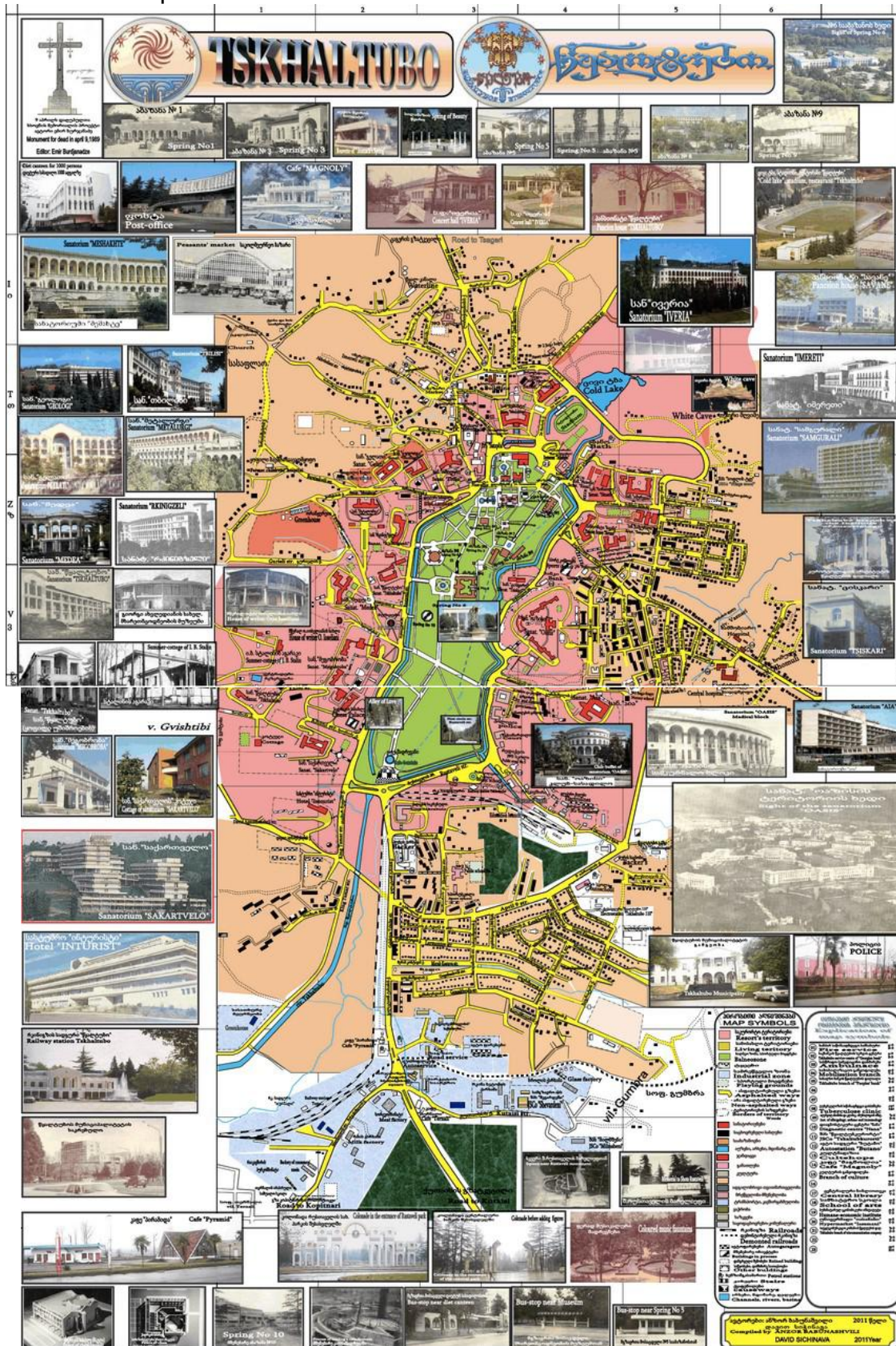
Tskaltubo, in its best times, had a developed and technically profound resort structure and tourism infrastructure. It is worth mentioning that the resort used to host up 10,000 guests daily and many additional “unorganized” guests rented rooms in the private sector.

Today, the situation has changed. The old sanatoriums and hotels have degraded and depreciated significantly. Most of them are occupied by IDPs. Most of the bathhouses are either not operating or need rehabilitation. There are several hotels that are still functioning in Tskaltubo, including family hotels, however, the number of visitors are few and varies. The medical service is episodic and unorganized. The tourist services in Tskaltubo are practically dysfunctional. The currently increasing numbers of tourists in Tskaltubo are coming from the group business, driven by Kutaisi airport, and not really in relation to the mineral water. Only one hotel is offering a good quality of product and the groups come to Tskaltubo because of the lack of service in Kutaisi (in relation to the price).

Recently, the government, with the help of the World Bank, has started to develop the infrastructure of the city, the region and especially the tourism infrastructure around Tskaltubo. The Kutaisi airport was only the start of this. Today the region around Tskaltubo offers many attractions for all age groups.



## Tskaltubo Map



## 2.2.6. Recapitulation - Conclusions

### Conclusions

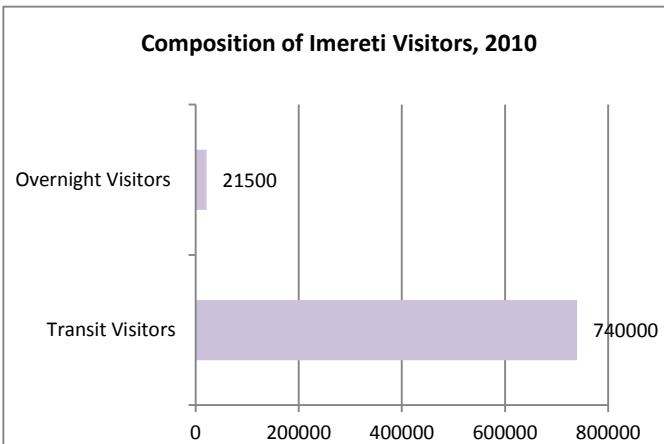
Summarizing the economic and tourism situation in Tskaltubo:

- Certainly, Tskaltubo has a historical background, architectural monuments and exclusive and unique water resources and water quality that give it a special charisma and huge development potential.
- Nevertheless, the services offered in the sanitary zone today (only 2 baths are working) are very basic and currently don't contribute to the development of the destination.
- Without development for a modern, trendy, health destination, it will not be possible to even start the hotel development.
- The urban planning and the 3 master plans were best practice for Soviet architectural planning. The creation of 3 ring roads and the protected sanitary zone in the park were a revolution at the time. While in the last few years some mistakes were made, with some political will, the realization of an adapted and more modern master plan can still be achieved.
- With the help of the State, the World Bank and MDF, the infrastructure of Tskaltubo, and in particularly the Tourism infrastructure, will be renewed very soon.
- We have identified a certain lack of coordination. All construction and redevelopment of the Tourism infrastructure was made without the Tskaltubo Vision. There is a risk that our proposed vision and zoning plan will not include some construction that has recently been implemented or built.
- Based on the information gathered, the project also foresees some organizational and marketing activities. For us, such kinds of activities can only be done when Tskaltubo knows what to offer and knows the next steps of its development. Therefore some more "homework" has to be done in order to achieve the necessary trust of potential investors.
- Identifying some funds in the World Bank/MDF project could provide a chance to coordinate and financially support our results and proposals with the further organization and creation of a DMO (Destination Management Organization).



## 2.3. Tourism Analysis Tskaltubo

Tskaltubo is located in the Imereti region, in the central part of Georgia, on the main link connecting the eastern and western part of the country. During the Soviet Union period, certain tourist destinations were popular in Imereti, nationwide and internationally. Currently, the tourism demand in Imereti is mainly composed of transit travelers, few of whom stay overnight.



Source: Georgian National Tourism Administration

Imereti has powerful physical and cultural assets for attracting tourists. The condition of the general infrastructure is acceptable and allows travelers to reach Kutaisi by driving for just a couple of hours. As in Georgia in general, the number of tourists visiting Imereti is growing steadily.

The source market of Imereti region's visitors is mainly comprised of local residents and international tourists coming from neighboring countries. Through the development of Kutaisi airport, more and more international groups are travelling to Kutaisi and start their tours in Georgia.

Unfortunately, there are no actual figures/statistics about the Imereti region or Tskaltubo available. Nevertheless, Tskaltubo today is not really a Health or Medical Destination. Through recommendations from generation to generation, medical tourism still exists there. This tourism is due to the offered product but also due to the current demand being on a low level internationally. The natural resources are used in 2 baths and do not really create real tourism and economic added value.

The hotels in Tskaltubo today are mainly occupied by overnight guests part of travel groups who come to Tskaltubo because the prices are more competitive than in Kutaisi. Usually, they reason for their visits are not for health issues. Therefore, further development of the sanitary zone is needed.

A license for the sanitary zone has been given to an investor, who currently runs 2 baths and fulfills the investment conditions based on the license agreement. The license agreement is valid for a period of 25 years (starting 2012). The current license owner does not really have a concept of how to develop the resort in order to make it a nationally and internationally well-

known tourism destination again. Never the less the open baths keep the tradition and also the brand name alive. The detailed proposal how to start cooperation with the license holder is part of a separate document.

### 2.3.1. Tourism Infrastructure

Imereti is well connected to the other regions in the country. The main east-west highway passes through it. The estimated duration for driving times to Tskaltubo, are as follows:

<ul style="list-style-type: none"> <li>• Tbilisi 02 h 55 min</li> <li>• Batumi 02 h 05 min</li> <li>• Kutaisi 15 min</li> </ul>	<ul style="list-style-type: none"> <li>• Baku 09h 50 min</li> <li>• Yerevan 06h 30 min</li> <li>• Trabzon 05h 40 mi</li> </ul>
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Through the new low-cost airport, many additional connections have been made and this has increased the number of visitors to the region.

Accommodation facilities in the Imereti region

ACCOMMODATION IN THE IMERETI REGION							
	Municipality	Number of Hotels	Above 3*	Local 3*	Below 3*	Number of Guesthouses	Other Accommodation
1	Kutaisi	18	0	7	11	3	15
2	Zestafoni	1	0	0	1	0	1
3	Tskaltubo	10	2	3	5	0	1
4	Bagdati	3	0	2	1	0	2
5	Samtredia	1	0	0	1	0	0
6	Tkibuli	1	0	0	1	0	9
7	Sachkhere	1	0	0	1	0	0
8	Chiatura	1	0	0	1	0	1
9	Khoni	1	0	0	1	0	0
10	Terjola	0	0	0	0	0	1
11	Vani	0	0	0	0	0	1
12	Kharagauli	0	0	0	0	0	1
	<b>Total</b>	<b>37</b>	<b>2</b>	<b>12</b>	<b>23</b>	<b>3</b>	<b>32</b>

Source: K&P Desk researches, June 2014

There are about 69 different types of accommodation units in the Imereti region, including hotels, guesthouses and family houses. There are no international branded hotels in the region and, besides the Tskaltubo Spa Resort, all of them are classified below 4 stars.

## Accommodation facilities in Tskaltubo

Accommodation in Tskaltubo varies from small family hotels to large, well-equipped modern hotels. Some of these have been established or renovated recently. There are currently 12 hotels operating in Tskaltubo and their total room supply is 300-400 rooms and approximately 800-1,000 beds.

	QUANTITY OF ROOMS				PRICE INCL. BREAKFAST (USD)			
	Single	Double	Triple	Lux	Single	Double	Triple	Lux
Prometheus	-	23	-	6		56		90
Tskaltubo Spa Resort *	2	103	3	1	81	100		180
Hotel Argo		26		5	28	56		56
Sanatorium "Tskaltubo Resort"		24			31	62		-
Hotel Sanatorium "Imereti"	-	12	-	1		56		68
Hotel Sanatorium "Orion"	3	10	2	2	37	56	85	88
Hotel Nikala	2	9	2	1	23	34	42	56
Hotel "Migel"		7			-	17		
Hotel "Tskaltubo Plaza" opened 2014) *		67		9	55	85		155
Hotel Thernal		10		4				
Total rooms	7	291	7	29				
Total room supply	334							

Source: Information community and Research

(\*) 4 star hotels

The Tskaltubo Spa Resort and the Tskaltubo Plaza are the only hotel that fulfils good standards and could be incorporated into our vision. All of the other hotels will have to improve their infrastructure resources, as well as staff education.

### 2.3.2. Tourism Products

The Imereti region offers a number of significant historical, cultural and natural attractions, which enrich visitors' experiences and make their trips even more memorable.

The kenatural tourist attractions of the region include the famous Kart cave of Sataplia, and the cave of Prometheus, with its eye-catching stalactites and stalagmites.

Imereti is also the home of significant natural and cultural heritage sites. The Bagrati cathedral and the Gelati monastery are listed as UNESCO Word Heritage Sites. The ancient town of



Vani, with its museum features, is a unique archaeological area associated with the myth of the Golden Fleece. The Katskhi monastery column, the Katskhi church, the Motsameta monastery and the Ubisa church also feature unique monuments with impressive architectural and geographic landscapes.

The wellness/spa destinations in Tskaltubo and Sairme, which boast natural thermal waters with unique therapeutic qualities, are also notable key attractions in Imereti. The protected area of the Borjomi-Kharagauli national park, which is one of the largest national reserves in Europe, is also adjacent to Imereti.



*Bagrati Cathedral*



*Katskhi Column*

### 2.3.3. Recapitulation -Conclusions

#### Conclusions

Summarizing the Tourism Industry in Tskaltubo:

- Tskaltubo's Tourism industry is still on a low level and needs adaption.
- Kutaisi airport brings more guests, especially international visitors, to the region. Normally they do not come to Imereti; they just use Imereti as place of departure for their sightseeing.
- With the right products, we are sure that it would be possible to keep guests in the region longer or to even attract them with Tskaltubo as the reason for their travel.

## 2.4. Swot Analysis Tskaltubo

The following SWOT is made from the point of view that Tskaltubo will once again become a first regional, and later, international, well known Spa Destination. Therefore, in this analysis, we explain both the reasons for our considerations and list the main risks to Tskaltubo not becoming a Spa–Wellness Destination.

Strength	Explanation
<b>History</b>	
Strong historical background of medical and wellness tourism	Tskaltubo consists of a strong historical background as a medical and wellness tourism destination during the Soviet Union era.
Still a popular brand in Georgia and former Soviet Union countries	
Unique spatial and planning structure of the resort-town and profound architectural samples from 1950s-1970s	Tskaltubo should use the existing historical background to develop the region. This cultural heritage will be a strategic advantage for the region.
<b>Mineral water</b>	
Unique balneology and resources	The extraordinary “healthy composition” of the mineral water is a strong benefit for Tskaltubo for medical and wellness treatments.
Unique composition of curative and warm mineral water	
<b>Medical professionalism</b>	
Well experienced medical staff over generations	Tskaltubo is recognised as a medical treatment region within Georgia and already has medical professionals, whose skills are mainly based on the old Russian treatment rituals.
<b>Other professionalism</b>	
Due to the high unemployment rate in Tskaltubo and the region, the hiring of staff should not be a problem.	The initial construction period will increase the demand of staff. In the later stages, staff for all kinds of tourism services will be required.
<b>Climate</b>	
Mild subtropical climate	Tskaltubo’s subtropical climate has a good influence on patients’ physical feelings (except during the summer months July and August).
Eco-friendly environment with subtropical parks	

Urban development	
Existing and effective urban planning including preservation of unique historical architecture.	The state of Georgia is already investing in urban development and aims to preserve cultural inheritance.
Existence of engineering infrastructure rehabilitation programs and projects	
Hotel infrastructure	
Existence of historical hotels	The existing history and the historical buildings will be an attraction for all kinds of tourists.
Transport system	
Opportunity for an excellence connection to the main transport links airport (30km), east-west highway and railroad.	Tskaltubo has excellent opportunities to make connections nationally and internationally.  Kutaisi airport, the existing railways and the strategic position along the east-west Highway allows the best connections with little effort.
The proximity to Kutaisi, the second largest city in the country.	
Local residents	
Tourist-friendly attitude of the local population	Tskaltubo’s residents are aware of the economic importance of a well-developed tourism destination and are used to tourists.
Official authorities	
Active government support	Official authorities view the tourism development of Tskaltubo as necessary and as a positive impact for regional economic growth.

<b>Weakness</b>	<b>Explanation</b>
<b>Hospitality</b>	
Lack of quality accommodations and absence of international hotel brands	To attract more national and international tourists, some hotels with good service, quality and infrastructure will help to sell the destination within target markets.
Low service quality standards	
Food and beverage industry, cafes, restaurants	

	<p>Good service quality is important for customer relationships.</p> <p>A nice variety of cafés, restaurants and bars gives added value to the destination and would attract more tourists.</p>
<b>Drinking water quality</b>	
Unsatisfactory quality of drinkable water	Tskaltubo, as a medical and wellness destination, must supply perfect potable water, for its image and credibility as a medical and wellness destination. With the current World Bank /MDF project the situation should change.
<b>Urban infrastructure</b>	
<p>Poor management of the green areas</p> <p>Absence of effective sewage treatment</p> <p>Absence of public toilets</p>	Tskaltubo, as a medical and wellness destination, must consist of perfect urban infrastructure for its image and credibility as a destination. With the current World Bank /MDF project the situation should change.
<b>Tourist information</b>	
Weak information system for tourists and poor English skills.	To attract international tourists, perfect English communication and skills are indispensable.
<b>Additional tourism attractions</b>	
Undeveloped recreational infrastructure and absence of leisure facilities.	In order to attract other client groups, additional tourism attractions are necessary.
<b>Medical professionalism</b>	
<p>Qualified medical personnel for international tourists, especially for Western Europe countries.</p> <p>Therefore additions training and education as well as the development of new products are very important.</p>	To attract international (Western European) clients, Tskaltubo has to prove high standard qualifications for medical and wellness treatments.
<b>Bath houses</b>	
The main attractions of Tskaltubo are in bad condition or ruined.	For the thriving development of Tskaltubo, the perfect design and

There is a non-development concept for the nine existing baths.  The license has been given to a third party company	"orchestration" of the 9 baths are the keys to success.  Without the will and the professionalism of the license holder, the redevelopment of Tskaltubo remains as a vision only.
<b>Development</b>	
Lack of a valid master plan	A master plan will ensure the right sustainable development of the city.
<b>Private investment</b>	
Lack of private investments	Private investors have to be found for different investments. A well-balanced mix of different investors and companies will make the destination more attractive, create a healthy competition and develop the economic growth of Tskaltubo.
<b>IDP Internal displaced people</b>	
IDP's are living in the cultural monuments	Around 2,500 IDPs are living in the sanatorium's buildings.

Opportunities	Explanation
<b>Tourism development</b>	
In addition to the main USP's, which are the healing qualities of the water offered through treatments in the baths, the unique history of Tskaltubo can be extended easily with a wide range of tourism types, health/wellness, MICE (meetings, incentives, conferences, and exhibitions), gambling, recreational areas, bicycle tracks and so on.	The development area is large enough for developing the tourism destination with additional activities.
<b>Target groups</b>	
Attraction of different types of customers, not only medical and wellness guests, but also families, daily visitors and individuals seeking treatment procedures.	If Tskaltubo develops additional activities, it will have the potential to attract different types of customers.

<b>Region of Tskaltubo (Imereti)</b>	
Existence and current restoration of historical and cultural attractions.	Tourists are looking for cultural monuments, regional attractions and authenticity.
<b>Medical treatment</b>	
Existence of successful historical treatments	Historical treatments, in combination with modern medical treatments, can expand the target group of clients.
<b>IDP Internal displaced people</b>	
Existing unemployed IDP's are potential working/service power.	Tskaltubo's tourism development could be handled with the support of unemployed IDP's and the state's integration and education program.
<b>Sustainability energy system</b>	
Opportunity to use renewable sources of energy (sun, wind etc.)	Sustainability is an up-coming trend, especially for tourists from developed countries.
<b>Food &amp; Beverage local products</b>	
Natural agricultural products and the high quality of local cuisine	Tourists search for local products and authenticity.

Threats	Explanation
<b>The product mineral water, bath, drinking water quality</b>	
The product mineral water, bath infrastructure and drinking water quality is not fulfilling the expectations of national (neighbourhood countries) tourists.	If the offered products and treatments do not increase in quality and professionalism, there is no chance for the development of Tskaltubo.
<b>Climate</b>	
Climate during July and August	The high temperatures and the humidity during July and August might have a negative influence on visitors coming to



	Tskaltubo. This risk could be avoided by offering the right infrastructure.
<b>Urban development</b>	
Uncoordinated urban development	Uncoordinated urban development will make it impossible to develop Tskaltubo in a sustainable way.
<b>Local residents</b>	
Negative impact	Negative impact on local residents by the tourism development can negatively influence the whole process.
<b>IDP Internal displaced people</b>	
Situation of IDP's	The integration of the IDP's in Tskaltubo is not successful.
<b>Investors</b>	
Inability to find the right investors	The offered developed opportunities are not attractive enough for investors.
<b>Political risks</b>	
Political situation (risks)	Georgia getting involved in internal or external political difficulties.

## Conclusions

Summarizing the SWOT:

- Historical and cultural elements, and especially the extraordinary healthy composition of the mineral water, are the main “assets” and also opportunities for the redevelopment of Tskaltubo.
- The outsourced license for the bath facilities is on the one hand a large risk and on the other hand a positive potential. Without professional and coordinated development and master planning of the sanitary zone, the redevelopment of Tskaltubo is not possible. On the other hand, the existence of private investors is exactly what Tskaltubo needs. The State and the private license holder have to create a win–win situation together.
- The infrastructure of Tskaltubo is, compared to other places in Georgia, very developed. The nearby Kutaisi airport and also the World Bank and MDF projects have increased the infrastructure condition in a very positive way. The development of the resort will still need strongly coordinated additional infrastructure projects.

## 3. COMPETITION ANALYSIS

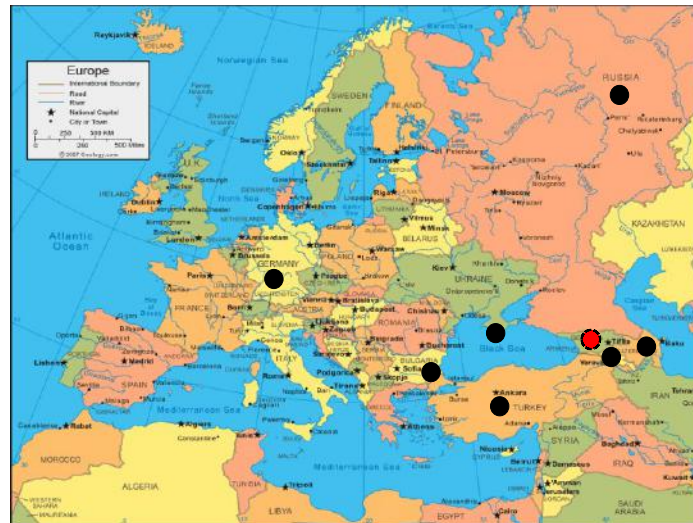
### 3.1. Selection criteria of competitors

Spa and wellness tourism is a fast growing, global business that is highly competitive. In terms of water composition, Tskaltubo does not have any direct competitors either locally or regionally. Tskaltubo's main value proposition is comprised of the following three main components:

- Curative waters
- Natural attractions
- Cultural/heritage sights.

The other balneological resorts in Georgia, like Sairme and Borjomi, can also boast attractive natural and historical heritage monuments. However, they do not have similar water, thus, based on our research and interviews with experts, we do not identify them as direct competitors to Tskaltubo. While Borjomi's treatment profile is mainly for digestive tract diseases and drinking water, Tskaltubo's waters are rich with a rare substance, radon, which makes it a unique destination for treating a wide range of musculoskeletal diseases.

The international competitors also do not have waters containing radon, however, some of them do offer treatment procedures for similar diseases that Tskaltubo also treats. Because of the similarity in the tourism products offered by them, we also think that several resorts in neighbouring countries should be taken into consideration as competitors too. We also researched if there are any new resort plans or other redevelopments of former resorts existing and couldn't find any projects. Most existing destinations (also smaller ones) are trying to grow. Based on our analysis of the competitors, we will be able to define Tskaltubo's strategy for the redevelopment of the resort.



### 3.2. International competitors

According to our research and analysis, Tskaltubo has several regional rivals on the market. These are, in alphabetical order:

<ul style="list-style-type: none"> <li>Armenia</li> </ul>	<ul style="list-style-type: none"> <li>Azerbaijan</li> </ul>
<ul style="list-style-type: none"> <li>Bulgaria</li> </ul>	<ul style="list-style-type: none"> <li>Crimea peninsula</li> </ul>
<ul style="list-style-type: none"> <li>Germany</li> </ul>	<ul style="list-style-type: none"> <li>Russia</li> </ul>
<ul style="list-style-type: none"> <li>Turkey</li> </ul>	

Selection criteria for competitors:

- Regions in western and Eastern Europe that are recognised for medical and health tourism.
- Regions that have a historical medical and health tourism background.
- Regions that consist of thermal water sources.
- Regions with tourism incoming markets that are interesting for Tskaltubo.

### 3.3. Comparison of competitors

### 3.3.1. Health and medical key positioning

Tskaltubo has the opportunity to start at the beginning. Today's offered products (see micro analysis of Tskaltubo) can never compete with any of the compared competitors. Nevertheless, the place has a great potential and has to be redeveloped in an organised and

coordinated way; otherwise there is no chance in this competitive market. In the following table we see today's offer of products compared with other resorts and countries. It is clear that the number of offered products has nothing to do with the offered quality. As the baths are developed, Tskaltubo must expand the products offered and can compete perfect in the international market.

Health and medical key positioning																																
	Gastrointestinal	Liver and pancreas	Musculoskeletal system	Gynecological	Digestiv	Diabetes	Peripheral nervous system	Central nervous system	Dermatologic	Urologic	Kidney	Gallblader	Obesity	Respiratory (Lung)	Joint motor	Endocrinal	Ophthalmologic	Cardiovascular	Otolaryngologist	Anti-Stress Therapy	Psychosomatic	Psychotherapie	Internal medicine	Rheumatology	Preventive medicine	Orthopaedic surgery	Dental	Rhehabilitation and pre-season trainings for	Physiotherapie	Plastic Surgery	TOTAL	
Tskaltubo																															10	
Armenia																															8	
Azerbaijan																															6	
Bulgaria																															9	
Crimea																															10	
Germany																															8	
Russia																															13	
Turkey																															13	

### 3.3.2. Infrastructure and additional products/services

In terms of the additional products and services offered to the clients, Tskaltubo has the opportunity to develop in all fields and to become the 2nd largest Medical and Wellness SPA destination in Europe!

	# Clinics	# Clinic beds	# Thermal facilities	# Hotels	# Hotel beds	# Sport facilities	# Mind and body products	# Congress facilities	# Congress center	# Casino	# Cultural heritage products	# Cultural activities	# Eco and adventure products	Parks & recreational zones
<b>Potential Georgia - Tskaltubo(6)</b>	>1	>1000	Y	>25	>8000	Y	Y	Y	Y	Y	Y	Y	Y	Y
<b>Armenia - Jermuk</b>	2	182	Y	7	210	Y	Y	No	No	No	Y	Y	small	Y
<b>Azerbaijan - Naftalan</b>	6		Y	12	700	Y	Y	No	No	No	Y	Y	small	Y
<b>Bulgaria - Hisarya</b>			Y	30	1150	Y	Y	No	No	No	Y	Y	small	Y
<b>Bulgaria - Velingrad</b>	2		Y	54	2500	Y	Y	No	No	No	Y	Y	small	Y
<b>Crimea - Saki (1)</b>	3	1400	Y	3	50	Y	Y	No	No	No	Y	Y	Y	Y
<b>Crimea - Yevpatoriya (2)</b>	9	4500	Y	40	2000	Y	Y	Y	No	No	Y	Y	Y	Y
<b>German-Baden-Baden</b>	8	1600	Y	126	8000	Y	Y	Y	Y	Y	Y	Y	Y	Y
<b>Germany-Friedrichsbad</b>	18	17200	Y	35	2000	Y	Y	Y	Y	No	Y	Y	Y	Y
<b>Germany-Bad Kissingen</b>	23	4500	Y	30	2000	Y	Y	Y	Y	Y	Y	Y	Y	Y
<b>Russia - Krasnodar Region (3)</b>	250		Y	443	5000	Y	Y	Y	Y	?	Y	Y	Y	Y
<b>Russia - Stavropol Krai</b>	106		Y	39	4100	Y	Y	Y	Y	?	Y	Y	Y	Y

**Note 1:**

Crimea: about 700 health facilities on the peninsula

**Note 2:**

Children sanatoriums

**Note 3:**

Sochi, Anapa Gelendzhik, Goryachiy, Klyuch, Tuaps, Yeysk, Novorossiysk, Temryuk

**Note 4:**

Strategic tourism health and thermal development of Turkey

**Note 5:**

Strategic tourism health and thermal development of Turkey

**Note 6:**

Breakdown clinic/hotel for Tskaltubo is estimated

### 3.3.3. Key markets of tourist origin

Tourist origin							
Key regions of origin							
	Local	Neighbouring countries	Western european countries	Eastern european countries	Middle east	Arabian countries	North America
<b>Georgia - Tskaltubo</b>	X	X					
<b>Armenia - Jermuk</b>	X	X			X		
<b>Azerbaijan - Naftalan</b>	X	X			X		
<b>Bulgaria - Hisarya</b>	X	X	(x)	X			
<b>Bulgaria - Velingrad</b>	X	X	(x)	X			
<b>Crimea - Saki</b>	X	X		X			
<b>Crimea - Yevpatoriya</b>	X	X		X			
<b>German-Baden-Baden</b>	X	X	X				X
<b>Germany-Friedrichsbad</b>	X	X	X				X
<b>Germany-Bad Kissingen</b>	X	X	X				X
<b>Russia - Krasnodar</b>	X	X		X			
<b>Russia - Stavropol Krai</b>	X	X		X			
<b>Turkey - Aegean</b>	X	X	X		(x)	X	X
<b>Turkey - Marmara</b>	X	X	X		(x)	X	X

We can see that only Turkey and Germany have products, which they distribute on the international market with the help of their National Tourism Association.



### 3.3.4. Armenia

#### **Tourism executive summary of Armenia**

In 2012, both value and volume growth in inbound tourism in Armenia strengthened due to increasing popularity amongst tourists from EU member and Middle Eastern countries, as well as from Russia. Even stronger growth was prevented by volatile economic situations in bordering Iran and Turkey that caused the number of Iranian and Turkish tourists to decrease.

#### **Armenia hosts more holidaymakers and business tourists**

The number of trips made by international and domestic business tourists and inbound holidaymakers grew rapidly in 2012 compared to the decline in those made by domestic leisure tourists paying regular visits to their friends and relatives in Armenia. The trend will be consolidated due to arrivals from EU member and other Schengen area countries, who starting from 2013, do not need visas to enter Armenia.

#### **Hotel industry prepares for a construction boom**

In 2012, the decline in domestic leisure tourism and the decreased number of tourists from neighbouring countries resulted in weakening demand for travel accommodation in Armenia. Despite this, heavy investment has been planned in the hotels industry to meet anticipated high demand for hotel accommodation by both inbound and domestic holidaymakers and business tourists.

#### **Transportation costs to reach Armenia remain high**

Although the majority of tourists travel to and from Armenia by air, prices of air tickets remain high due to exclusive rights given to national air carriers by the country's government. Travel by land is expected to improve significantly as the construction of the north-south road was launched in 2012, aimed at connecting Armenia's southern border with Iran to its northern border with Georgia.

#### **Adventure tourism gains popularity**

In line with the most popular travel and tourism to historical, cultural, religious and natural sights, adventure tours have been gaining popularity with inbound tourists, especially since the National Geographic Traveller magazine named Armenia as one of the world's three leading countries for adventure tourism. In addition to climbing, Armenia attracts inbound tourists through its hiking, trekking, skiing, mountain biking and cycling opportunities that are widely available across the country.

## Health tourism in Jermuk - Armenia

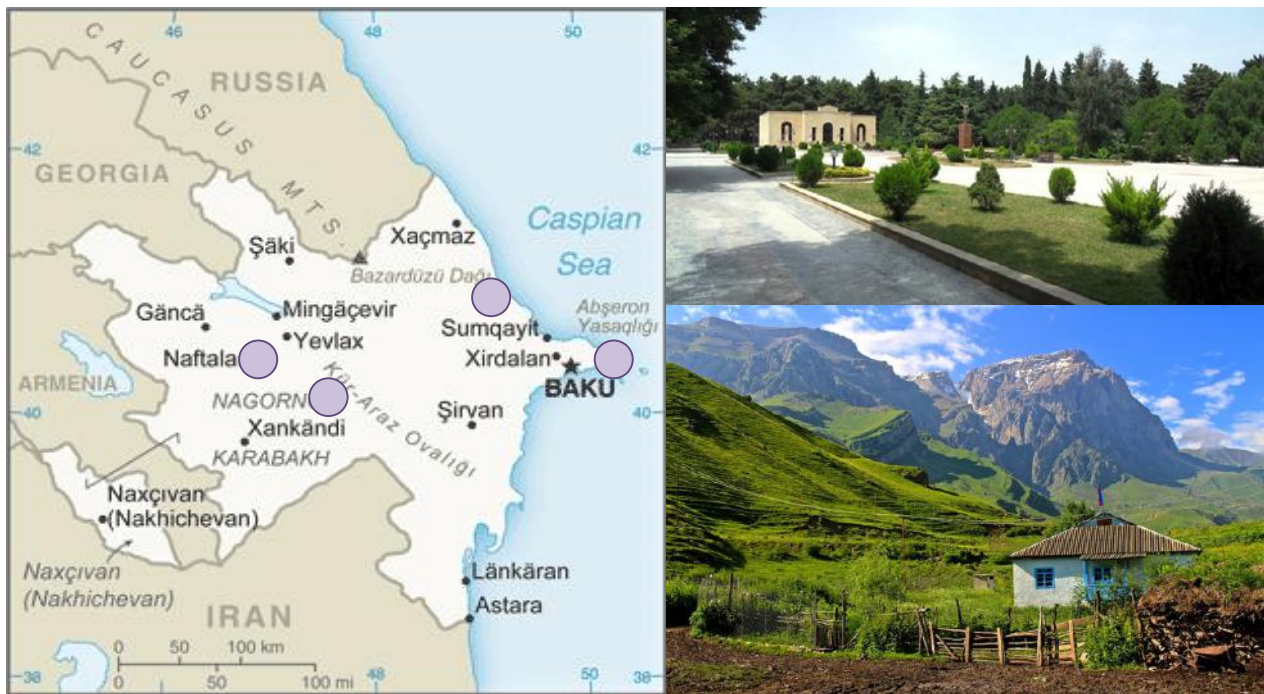
Jermuk is located in Armenia. It is interesting that today's major visitors to Tskaltubo are Armenians. Jermuk located in a mountainous region (2,080m AMSL) 137 km from the capital city of Yerevan. Its main curative resources are mineral hot waters and the climate. Jermuk water treatments are effectively used for the following medical indications:

- Diseases of gastro - intestinal tract
- Diseases of the liver and pancreas
- Diseases of the musculoskeletal system
- Gynaecological diseases
- Metabolic diseases - alimentary obesity, diabetes
- Peripheral nervous system diseases

There are 5 main sanatoriums operating in Jermuk.

The average price for a standard double room ranges from 82 to 104 USD depending on the peak season. The total bed supply is about 850 beds.

### 3.3.5. Azerbaijan



#### Tourism executive summary of Azerbaijan

Azerbaijan is enjoying increased numbers of inbound arrivals. The growth of arrivals to Azerbaijan strengthened in 2011, even in comparison to the strong growth witnessed the previous year. Georgia and Russia were the two largest inbound arrivals' source markets, mainly due to neighbouring locations and a high level of business between countries that were formerly Soviet territory, as well as the absence of a requirement for an entry visa for citizens of CIS nations. The highest growth in tourism flows inbound was recorded in inbound arrivals from European countries.

#### Further expansion towards high-end travel accommodation

Travel accommodation in Azerbaijan continued to expand in terms of high-end targeted hotels. Five new five-star hotels were opened in Baku during in 2011 in response to constantly growing demand generated by increased numbers of incoming tourists visiting the city for business purposes. Oil and gas industries remained the key suppliers of business travellers looking for high-quality international accommodation options. While high-end travel accommodation experienced further development, there was a lack of mid-end and low-end targeted travel accommodation options. Most of the hotels are situated in the capital of the country with very few options for overnight stays being present in the regions. Due to low competition, hotel owners set high prices that often do not meet the quality of service

expected for the price. The country lacks two- and three- stars hotels that would offer good value-for-money for mid-end overseas tourists wanting to explore Azerbaijan.

### **Tourism to be the key focus area for future development**

The government of Azerbaijan set tourism as one of the main priority directions of the non-state sector. At the end of the review period, a new state programme was drafted by the Ministry of Culture and Tourism to promote new regulations, tourism education, and improve customer service. Azerbaijan's government sees tourism as a serious source of income in the longer term.

### **Health tourism in Azerbaijan**



Qashalti Sanatorium, Naftalan, Azerbaijan

Azerbaijan is rich in natural curative resources of petroleum origin. These resources are scattered across the country in the following places: Absheron, Bilgeh, Galaalti, Garangush, Chinar, Isitu, and Naftalan. However, according to treatment qualities and tourism infrastructure, only Naftalan is truly a competitor for Tskaltubo.

Thanks to its unique composition of petroleum mud, the Naftalan resort is intended for the treatment of these main medical conditions:

- Diseases of musculoskeletal system
- Dermatologic diseases
- Gynaecologic diseases
- Urologic diseases
- Diseases of central and peripheral nervous system

Currently there are 4 sanatoriums operating in Naftalan. The price for a standard DBL room is about 125 USD. The total bed supply is about 1,000 beds.

### 3.3.6. Bulgaria



#### **Tourism executive summary of Bulgaria**

There is a trend of a decreasing travel accommodation prices, which contributed to positive growth. According to research conducted by booking search engine Trivago, average daily rates offered by hotels and other travel accommodation establishments in Bulgaria decreased in 2013 and the country continued to be the cheapest destination in Europe for the second consecutive year. As a result, demand and occupancy rates increased in 2013 and the number of both inbound and domestic tourists increased in comparison with 2012. Hotels in summer resorts on the Black Sea coast mainly initiated the price decrease in 2013 in an attempt to attract larger groups of holiday-makers.

#### **Neighbouring countries remain the main source markets for inbound tourists**

An increased number of visitors from neighbouring Romania and Greece contributed the most towards the strong growth rate of tourism flows inbound in Bulgaria in 2013, with arrivals from each country surpassing a million trips for the first time in the review period. In addition, the combined number of trips made from all five of Bulgaria's neighbouring countries passed three million in 2013. Tourists from the neighbouring countries benefit from the close proximity of Bulgarian resorts and low transportation costs of reaching their holiday destinations. Visitors from Serbia and Macedonia, however, remain few because of the lower standard of living in those two countries.



## **2013 sees many infrastructure projects to benefit transportation**

There were many infrastructure projects in Bulgaria, which were completed or were in the process of completion during 2013. Intensive construction of roads, crowned by the finalisation of the Trakia motorway in 2013, is favourable to the development of land transportation. In terms of air travel, both Sofia and Varna airports have undergone renovations and expansion. In an attempt to revive railways, the Bulgarian government has undertaken a series of railway modernisation projects, focusing on the railways connecting Sofia with the Danube Bridge near Vidin, which is part of a larger pan-European transport corridor, and a new high-speed line connecting Bulgaria and Turkey.

## **Trends**

The visitors from neighbouring Romania and Greece contributed the most towards the strong growth of inbound trips to Bulgaria in 2013. Although traditionally strong source markets for Bulgarian tourism, Russia and Ukraine, did not perform well, as the number of inbound trips from those countries decreased significantly in 2013, other prospective source markets, such as Germany and the UK, witnessed strong growth in the number of trips made and contributed to the overall good results.

## **Prospects**

Bulgarian inbound tourism is expected to continue growing steadily over the forecast period and the total number of inbound trips to the country is expected to be heading towards 9 million in 2018. Improved infrastructure within Bulgarian resorts, an increase in inbound flights from across Europe and growing popularity of the country as a party destination are all factors that will contribute towards this growth.

## **Health tourism in Bulgaria**

The Republic of Bulgaria has 48 mountain resorts, 15 marine resorts, and 38 balneological resorts. The most famous balneological, climatic and mud curative Black Sea resorts are the resort complexes of Albena, Golden Sands, St. Konstantin and Helena, Sunny Day, Sunny Beach, Riviera, Balchik, Tuzlata, Varna Mud Curative Baths (Varnenski Kalolechebni Bani), Pomorie, Primorsko, Kiten, Sozopol and Ahtopol, among others.

The most famous resorts located in the country's foothills and mountains are Hisar, Velingrad (the spa capital of the Balkan Peninsula), Sandanski, Bankya, Kyustendil, Narechen, Pavel Banya, Kostenets, Varshets, Burgaski Mineralni Bani, Momin Prohod, Slivenski Mineralni Bani, Slivenski Mineralni Bani, Starozagorski Mineralni Bani, Haskovski Mineralni Bani, Sapareva Banya, Banya, Pamporovo, Borovets, Teteven, Tryavna, Apriltsi, Kotel, Elena, Govedarts and Dryanovo, among others.



### **Health tourism in Hisarya**

Hisarya is located on the South flanks of Sredna Gora, surrounded by picturesque parks and gardens. The resort area includes 22 springs located in a small region. They have various physical and chemical characteristics and hold a temperature between 41 and 52 °C. This is unique not only in Bulgaria, but also in the entire world.

The water is low in mineralization, containing hydrocarbonate, sulphate, and sodium. It also has a high alkaline reaction and a low solidity; it is bright, colorless, and tasty.

The mineral waters, which the town of Hisarya is famous for, are used for the treatment of:

- Kidney and urologic diseases
- Gallbladder diseases
- Gastrointestinal diseases
- Musculoskeletal diseases.
- Obesity

Their healing effects can be achieved by drinking the water as well as through aqua procedures for the prevention and rehabilitation of diseases in combination with physiotherapy and diets.

Hisarya provides many accommodation opportunities, from small family guesthouses to luxurious 4-star hotels. The majority of the hotels have modern spa and balneological centres offering a great variety of rehabilitation and treatment procedures.

The resort provides various forms of entertainment and good opportunities for sport including: indoor and outdoor mineral water swimming pools, tennis, volleyball, basketball, cycling, horse riding, motocross, paintball, etc., as well as hunting and fishing.

Hisarya Region has great traditions in grape and wine-production as well. The tastings of local wines are both part of the local hospitality and a tourist attraction. Several wineries in Hisarya Region offer wine tasting.

### **Health tourism in Velingrad, Bulgaria**

Velingrad is located 120 km away from the capital Sofia and 85 km away from the cultural center, the city of Plovdiv. It is the largest Bulgarian balneotherapeutic resort.

In terms of abundance and diversity of mineral water, Velingrad is in the top position in Bulgaria. About 80 springs issue here: their volume and composition provide a number of treatment options in terms of abundance and diversity of mineral water.

This mountain town boasts 3 recreational compounds and sanatoriums, 20 hotels with about 1,480 beds, and more than 300 private lodgings represent the tourism, balneotherapy, and 4 resort industries. The abundant mineral water, the mild climate, and the beautiful natural environment attract more than 200,000 visitors to Velingrad every year. The mineral water temperature varies from 28 to 86°C. The water has a weak mineralization and it issues from a deep origin. It is also crystal clear and bright, and is used for treatment and prevention of various diseases.

The resort offers specialized treatment of:

- Lung
- Joint motor
- Nervous
- Gynaecological (including sterility)
- Kidney
- Liver
- Gastrointestinal diseases.

### 3.3.7. Crimea



#### Health tourism in Crimea

Crimea is a peninsula located on the northern coast of the Black Sea. It offers a lot of opportunities to visitors for active recreation and wellness. It boasts nice seashores, mountainous landscapes and rich mineral resources for health and wellness procedures. However, due to the current political instabilities in this region, its future is obscure. Top tourist destinations in Crimea include Yevpatoriya and Saki.

#### Health tourism in Yevpatoriya

Yevpatoriya is a resort on the west part of the peninsula. Its key competitive factors are: climate, saltwater, mineral waters, mud, and aquatic plants. According to the medical profile of the resort it offers the treatment of the following diseases:

- Diseases of the musculoskeletal system
- Nervous system
- Gynaecological diseases
- Endocrinal diseases
- Ophthalmologic diseases

## Health tourism in Saki

Saki is the second most renowned spa resort in the Crimea. Its key attractions are: mineral waters, brine, lake mud, and a humid sea climate. These mineral resources are used for the following medical conditions:

- Diseases of the musculoskeletal system
- Cardiovascular system
- Central and peripheral nervous system
- Gynaecological diseases
- Urinary system
- Otolaryngologist diseases
- Diseases of the digestive system
- A number of their comorbidities

### 3.3.8. Germany



#### **Tourism executive summary of Germany**

There has been on-going growth within travel and tourism in Germany.

All in all, given unfavourable circumstances like the European debt crisis as well as recession and weak economic development in many other countries important for the German national economy, economic development in Germany and within travel and tourism was excellent in the last few years, with small to considerable growth being recorded in most areas.

#### **Good opportunities for further growth over forecast period**

Overall, and in light of current favourable development, according to most industry experts, further growth is quite likely within travel and tourism in Germany since the country has considerable strengths (e.g. good value-for-money travel and tourism products and services and a first-rate historical and cultural heritage) as well as opportunities (e.g. sales increasing from a relatively low level, further investment in tourism infrastructure already scheduled).

## Health tourism in Baden-Baden, Germany

Baden-Baden is a spa town in the German state of Baden-Württemberg in south-western Germany (district capital is the city of Karlsruhe). It is located in the northern foothills of the Black Forest, on the banks of the Oos River, in close proximity to France and Switzerland.

Baden-Baden offers many options for sports enthusiasts; golf and tennis are both very popular in the area. Horse races take place each May, August and October at nearby Iffezheim. The countryside is ideal for hiking and mountain climbing. In the winter Baden-Baden is a skiing destination.

The springs of Baden-Baden have been known for more than 2,000 years, and their composition resembles that of the Roman baths of the 3rd century. The water at the baths of "Caracalla-Therme" spa is rich in sodium chloride, and comes from artesian wells 1,800 metres (5,900 ft.) under the Florentine Mountain.

The city is part of the community of historical thermal baths in Europe (EHHTA). This organization is a non-profit-organization, which consists of 26 members based in eleven European countries such as: France (Vichy), Great Britain (Bath), Italy (Montecatini), Czech Republic (Karlsbad), Hungary (Budapest), France (Evian), Turkey (Bursa) and Germany (Wiesbaden).

- Baden-Baden is a famous international health resort town in Germany, 180 kilometres South of Frankfurt.
- In the 19th century Baden-Baden was the intellectual centre of Europe attracting politicians, industrialists, artists and other patients seeking treatment.
- Besides the mineral water and the medical treatments, Baden-Baden has diversified their offers during the past few years.
- Spa and wellness, thermal aqua parks, as well as outpatient cures, were developed as further product pillars.
- Additionally, Baden-Baden has a picturesque old town including a world famous casino.
- The city has also positioned itself as a gourmet and culture hotspot in the region.

<i>Accommodation facilities</i>	<i>Number of facilities</i>
5-star hotels	2
4-star hotels	15
3-star hotels	22
Kuranstalten (sanatoria)	3
Others	84
Total	126



Beside the three “Kuranstalten” (sanatoria), Baden-Baden has 39 hotels officially rated as 5-, 4- or 3-stars in accordance with the national German standards.

The highest percentage of accommodation facilities can be found in the 3-star segment.

**The key pillars of the positioning of Baden-Baden are “Health”, “Culture” and “Culinary”**

### **1. Pillar: Medical Treatments & Spa**

- 8 clinics – the majority of which also offer beds (on average around 200 beds per clinic)
- 2 thermal aqua parks (“Caracalla Therme” and “Friedrichsbad”)
- Sea salt grotto
- Prevention and Check-Up
- Rehabilitation
- Anti-Stress Therapies
- Anti-Aging Therapies
- Fitness and Activities
- Day Spa
- Reflexology Foot Massage
- Fango/Natural Fango
- Thalasso-Thermal Therapy
- Beauty Treatments
- Health and Wellness Institutes

### **2. Pillar: Culture & Events**

- 7 event locations (theatres, congress house, casino, etc.)
- 9 museums (city museum, Faberge museum, etc.)
- Several temporary art exhibitions

### **3. Pillar: Sport activities**

- Golf (8 golf courses in the region)
- Tennis
- Horse riding
- Hiking
- Nordic walking
- Ballooning
- Biking and mountain biking
- Skiing and cross-country skiing
- Sledging
- Snow boot hiking

- Paragliding
- Bowling
- High rope course

#### **4. Pillar: Attractions**

Cultural attractions (e.g. art and culture mile, drinking gallery), casino, 5 churches, 2 castles, 9 different parks and gardens, Roman bath ruins, horse racing track, etc.

#### **Caracalla Spa**

The Caracalla Spa, in the heart of the Baden-Baden, offers wellness and relaxation on a luxurious scale. Guests may relax between marble columns and immerse themselves in tempting turquoise blue pools. 12 natural springs rise from depths of around 6,500 feet and provide an unforgettable bathing experience in this 4,000 square foot glass temple. A romantic hot and cold rock grotto, bubbling whirlpools, waterfalls, counter-current pools and massaging water jets will guarantee a unique feeling of well-being.

#### **Health tourism in Bad-Kissingen, Bavaria - Germany**

History of Bad Kissingen:

- The first proof of evidence of its salt spring dates back to the year 823 AD.
- In the 16th century, the first guests came to Bad Kissingen for curing sicknesses.
- In 1744, the first sanatorium/clinic was built.
- During the 19th and in the beginning of the 20th century, many aristocrats stayed in Bad Kissingen.
- In the second half of the 20th century, the infrastructure has been expanding continuously.
- Besides spa and wellness buildings, also other tourism infrastructure facilities like museums or cultural and congress centers have been built.
- The old and traditional casino, I in Baden-Baden, is one of the highlights of the city.

**The key pillars of positioning of Bad Kissingen are “Health”, “Culture” and “MICE”**

#### **1. Pillar: Medical Treatments & Spa**

- 23 clinics – the majority of which also offer beds.
- Therapy centre “Kurbadhaus”, Salt grotto, Salina.
- 3 aqua parks (one outdoor, two indoor), Chinese Liangtse Spa Center.

## **2. Pillar: Culture & Events**

4 annual festivals (e.g. Kissinger Summer, Kissinger Magic Winter) and 18 annual events (e.g. rose ball, October gala, etc.).

2 museums & several temporary art exhibitions.

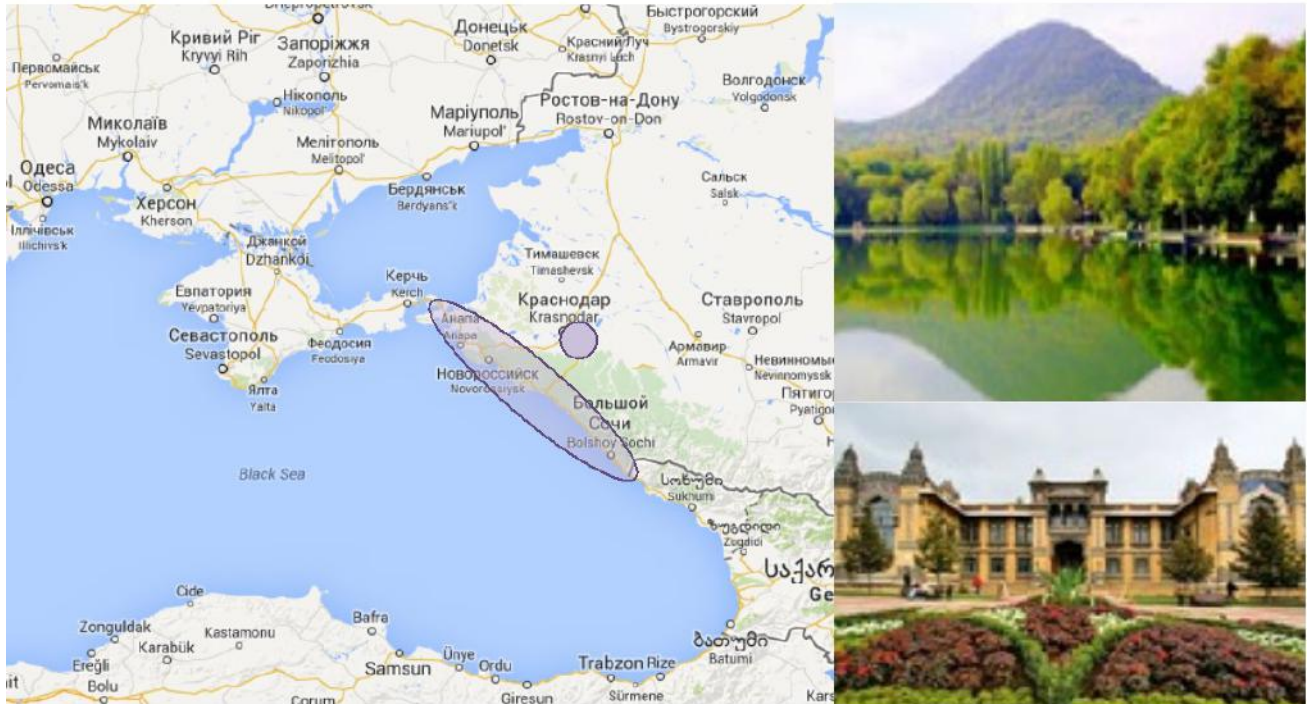
## **3. Pillar: Sport activities**

Fishing, golf, mini golf, Nordic walking, ice stadium, hunting, climbing, hiking, horse riding, tennis, squash, canoeing and dancing.

## **4. Pillar: Attractions**

Several castles/towers, deer park, boat trips, tourist stagecoach, mini train, moor biotope, theme routes and casino, etc.

### 3.3.9. Russia



#### Tourism executive summary of Russia

According to recent trends, arrivals grow faster than departures in Russia.

Although outbound tourism remained much larger in terms of number of trips, inbound tourism posted stronger growth. This was driven by several factors, including the Domestic and Inbound Tourism Development federal programme, growing online tourism and upcoming sports events.

#### Health tourism in Krasnodar Krai - Russia

Krasnodar Krai is a federal entity of Russia, located on the black seaside. It is one of the top tourist destinations in the whole country. Among its important natural resources are: a mixed sea and mountain climate, warm winters, the seashore, and mineral waters. The main curative qualities of the mineral waters of this region are:

- Diseases of the cardiovascular system
- Diseases of the musculoskeletal system
- Diseases of the central nervous system
- Diseases of the peripheral nervous system

- Skin diseases
- Gynaecological diseases
- Urologic diseases
- Diseases of the digestive system
- Endocrine diseases
- Respiratory diseases
- Dental diseases
- Occupational diseases
- Rehabilitation and pre-season training for athletes

There are 7 key resorts located in the Krasnodar region. These are: Adler, Anapa, Gelendjik, Goryachy Klyuch, Lazarevskoe, Sochi and Tuapse. However, not all of them have modern tourism infrastructure.

The total Bed Supply of this region is 5,154 beds in the main sanatoriums. The average price for a standard double room ranges from 45 USD to 81 USD depending on the season.

### **Health tourism in Stavropol Krai - Russia**

Another competitor resort is the “Caucasian mineral waters”. It is a group of resorts located in Stavropol Krai, southern Russia. It is renowned for its distinctive landscape, mineral waters and curative mud. These groups of resorts have a history that dates back more than a century. Currently a number of upper class, midscale and budget sanatoriums are operating in Stavropol Krai.

There are four main resorts in this region. Their mineral resources are used for a number of treatment procedures.

Resort	Indications for treatments
Kislovodsk	<ul style="list-style-type: none"> <li>• Diseases of the cardiovascular system</li> <li>• Nervous System Disorders</li> <li>• Respiratory diseases and their comorbidities</li> </ul>
Yessentuki	<ul style="list-style-type: none"> <li>• Diseases of the digestive system</li> <li>• Endocrinal diseases</li> <li>• Gynaecological diseases and their comorbidities</li> </ul>
Zheleznovodsk	<ul style="list-style-type: none"> <li>• Diseases of the digestive system</li> <li>• Urologic Diseases</li> <li>• Metabolic disorders and their comorbidities</li> </ul>
Pyatigorsk	<ul style="list-style-type: none"> <li>• Diseases of the musculoskeletal system</li> <li>• Gynaecological diseases</li> <li>• Urologic Diseases</li> <li>• Skin diseases</li> <li>• Nervous System Disorders</li> <li>• Diseases of the digestive system</li> <li>• Otolaryngology diseases</li> <li>• Peripheral vascular diseases and their comorbidities</li> </ul>

The total bed supply in Stavropol Krai is 4,029 beds and the average price for a double standard room ranges from 133 USD to 170 USD, depending on the season.



### 3.3.10. Turkey



#### **Tourism executive summary of Turkey**

Travel and tourism in Turkey registered above-average value growth in 2013.

In 2013, travel and tourism in Turkey saw higher current value growth compared with the review period average. This was due to improved economic conditions in the country, promotions on packaged holidays and competitive prices for flights. In spite of the political tension in the Middle East and the continuing economic recession in some European countries, the number of arrivals also registered growth.

#### **Trends**

In the last two years of the review period, the Turkish government introduced incentives in order to fuel growth in health and wellness tourism in Turkey. These included the issuing of licences to a higher number of natural spas in the country, which attracted a high number of local and foreign tourists, and the introduction of legislation from 2012 onwards, which had a positive impact on the market. In addition, the number of hotel/resort spa outlets increased by 17% in 2013, with the opening of spa hotels booming due to increasing demand from both local and foreign tourists.

#### **Prospects**

Over the forecast period health and wellness tourism is expected to register a growth of 3% at the constant 2013 price. The increased government incentives in terms of government legislation, issuing of licences to a higher number of health and wellness outlets and advertising activities abroad by private Turkish health institutions and the Turkish government to attract foreign tourists for health and wellness tourism will all stimulate growth.

## **Health tourism in Turkey**

Most of the popular of thermal spas in Turkey are in the Aegean and Marmara regions, such as Marmaris, Pamukkale, Istanbul, Bursa, Izmir, Davutlar, Dalyan, The Balcova Springs, and Cesme.

### **Ankara - Kizilcahamam**

It is located 86 km from Ankara at 975 meters above sea level. The water (37-47 °C) contains sodium, calcium magnesium, bicarbonate and chlorine. It is good for drinking and bathing, benefiting the treatment of rheumatism, neuralgia, gynaecologic and digestive disorders.

### **Afyon - Hudayi**

This is a small treatment center 66 km from Afyon, 7 km southwest of Sandikli. The water (75-80 °C, radioactive) contains sulphur, hydro carbonate, sodium, calcium, carbon-dioxide, bromide and fluoride, and are good for drinking and bathing, and benefiting rheumatic, skin, gynaecologic, and digestive complaints.

### **Afyon - Orucoglu**

Orucoglu Thermal Center, next to a modern 428-bed complex, is 14 km from Afyon. The temperature of the spring water is 49 °C and it is rich in carbon dioxide, sodium bicarbonate, sodium chloride, bromide and fluoride. The water has beneficial effects on arthritis, sciatica, disc hernia, neuritis, neuralgia, lumbago, osteoarthritis, and is also beneficial after orthopaedic surgery and various other surgical treatments, such as post-operative therapy. Patients with skin ailments like psoriasis, eating problems, stomach, intestine and gall bladder, kidney, urinary tract and gynaecologic disorders, and muscle and nerve fatigue also benefit from these waters. The composition is good for balancing the iron ratio, and has rehabilitation value in the treatment of hemiplegia.

### **Afyon - Gazligol**

It is 22 km from Afyon on the road to Eskisehir. The water (40-71 °C) benefits rheumatism, cardio vascular problems, digestive and intestinal complaints, kidney diseases, urinary tract, liver problems, metabolism disorders, orthopaedic and skin problems.

### **Afyon - Omer and Gecek**

Located 15 km to Afyon on the road to Kutahya, the water (51-98 °C) has benefits to cure rheumatism, skin disease, cardio vascular problems, intestinal and gall bladder complaints, liver, joints and arthritis, eating problems, neuralgia and gynaecologic disorders.

### **Balikesir - Gonen**

Situated to the north of Balikesir, it has a treatment center with 381 beds. The thermal waters (52 °C) contain sulphur, chloride, sodium, hydro carbonate and carbon dioxide. Suitable for both drinking and bathing cures, the waters are beneficial for dermatologic, liver, rheumatic, urinary and nervous complaints.

### **Bingol - Kos**

The Kos hot springs are located 20 km from Bingol on the Karlioiva road. The facilities include a hotel, several motels and guesthouses, outdoor and indoor pools, restaurants, tea gardens, and a parking lot. Both locals and foreigners come here for healthy relaxation with peace in mind.

### **Bolu - Karacasu**

It is located 4 km south of Bolu on the Ankara - Istanbul highway, with a 250 bed capacity center. The water (44 °C) contains calcium, magnesium, sulphur, bicarbonate, and benefits the cures of rheumatism, neuralgia, sciatica and gynaecologic, liver and kidney diseases.

### **Bursa - Cekirge**

Most of the thermal springs, in both modern and historical settings, are in the Cekirge district of Bursa. The waters (47-78 °C) contain bicarbonate, sulphur, sodium, calcium and magnesium. It is suitable for drinking and bathing cures, and is beneficial for rheumatic, gynaecologic and dermatologic diseases, post-operational problems and for the metabolism. A wide range of accommodations in tourist to deluxe-class hotels are available, as is medical supervision.

### **Bursa - Oylat**

Approximately 27 km south of Bursa in Inegol district, the water is very warm; the steam bath is heated to 40 °C and the spring waters to 10 °C. The water contains sulphur, bicarbonate, calcium, hydrogen ions and iron. With diuretic properties, the drinking and bath cures have a relaxing and sedative effect. There are a couple of hotels and motels near the centre.

### **Canakkale - Kestanbol**

Located 15 km into Ezine district south of Canakkale, 2 km from the Sea of Marmara, the waters of the various springs range between 21 °C and 67 °C, containing chloride, sodium, iron carbon- dioxide and calcium. Beneficial bath cures, mud-bath cures, steam and geyser cures are available at the thermal springs.

### **Denizli - Pamukkale and Karahayit**

Located 20 km north of Denizli with over 500 bed total capacity hotels and motels, the thermal waters (42-56 °C, radioactive) contain hydro carbonate, sulphur, calcium, carbon dioxide and iron, and are suitable for drinking and bathing helping heart and circulatory complaints as well as digestive, gall bladder, rheumatic and kidney diseases. Pamukkale is also a popular tourist destination in the Aegean region.

### **Eskisehir - Hamamyolu**

Most of the thermal springs are near Hamamyolu Street in the centre of Eskisehir. The waters (38-45 °C) contain bicarbonate, sodium, and calcium and are suitable for both drinking and bathing cures of rheumatism, neuralgia, post-operational problems, digestive problems, kidney stones and gynaecologic complaints, and for the metabolism.

### **Eskisehir - Sakar**

These springs are located 33 km north of Eskisehir, near the town of Saricakaya. The water (35 °C) contains sodium, magnesium and bicarbonate, benefiting skin problems, complaints of sciatica, rheumatism and kidney stones.

### **Izmir - Balcova**

It is located 10 km west of Izmir in Balcova district with a 400 bed capacity and the largest indoor thermal pool in Turkey. A treatment center built nearby is very popular amongst Scandinavian tourists especially. The water (62 °C) is suitable for drinking and bathing, benefiting sciatica, rheumatic diseases, gynecologic, orthopaedic and nervous disorders, plus intestinal and urinary problems.

### **Izmir - Cesme**

It is located at the bay of Ilica and Sifne, 7 km east of Cesme (75 km west of Izmir), and has accommodation in every category and class with a total of 2,000 beds. The waters (42-55 °C) contain chloride, sodium, magnesium, fluoride, and are suitable for drinking and bathing cures, benefiting dermatologic, gynaecologic and urinary complaints as well as metabolic disorders.

### **Konya - Ilgin**

Situated 88 km northwest of Konya, with basic accommodations available. The water (42 °C, radioactive) contains hydro carbonate, calcium, sodium and carbon dioxide, and are beneficial for rheumatic, dermatologic, gynaecologic, urinary, circulatory and heart diseases, and also for glandular and digestive complaints.

### **Kutahya - Harlek (Ilicakoy)**

Located 27 km from Kutahya. The water (25-43 °C) contains bicarbonate, sulphur, calcium and magnesium. The drinking and bath waters are beneficial for sufferers of rheumatism, hepatitis, bladder, skin and metabolic disorders.

### **Mugla - Sultaniye**

Located in Koycegiz district of Mugla, at Sultaniye village. The water (32-42 °C) contains chloride, sodium, hydrogen sulfide and bromide. Both the drinking and the bath waters have a relaxing and beneficial effect on sufferers of rheumatism, skin and blood disorders, heart ailments, bronchitis, nervous complaints, kidney and urinary complaints, metabolic disorders, and for elderly patients and convalescents.

### **Sivas - Balikli (Yilanli) Cermik**

This interesting and unique spa is situated 17 km northeast of Kangal in the province of Sivas. The water (36 °C) contains bicarbonate, calcium and magnesium. The uniqueness of the baths comes from the fact that there are many small fish (2-10 cm long) in the water that play an important part in the cure of psoriasis. The waters are also beneficial for rheumatism, skin diseases, arterial sclerosis and gynaecologic complaints. There are motels, restaurants and camping facilities as well as shops for provisions.

### **Yalova**

These thermal springs are situated 11 km southwest of Yalova with a capacity of about 800 beds between hotels and guesthouses. The waters (57-60 °C) contain sulphur, sodium and calcium, and are suitable for drinking and bathing cures beneficial for rheumatic, gynaecologic, urinary and nervous complaints and controlling cholesterol and lipid levels.

### **Extract of tourism strategy of Turkey 2023**

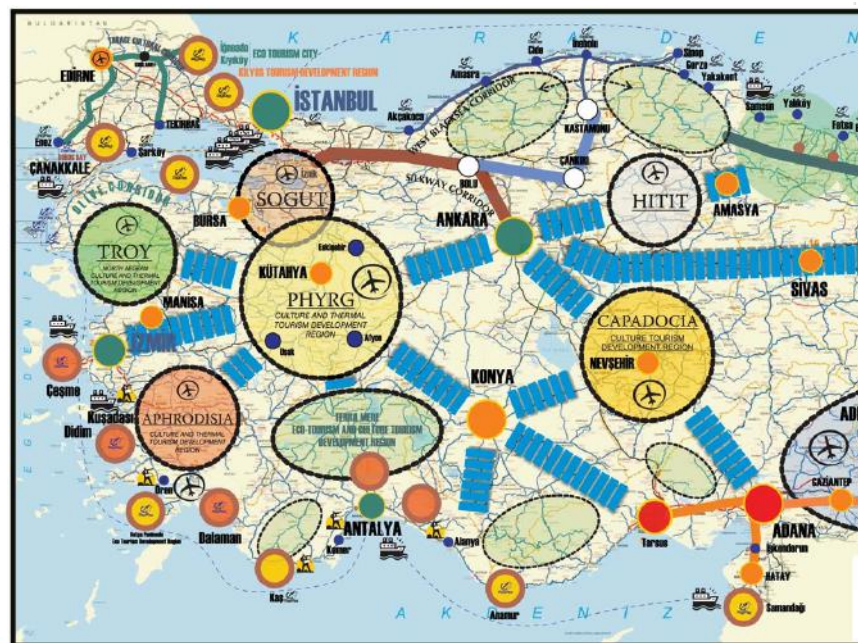
*(Source: Tourism strategy of Turkey 2023)*

Each of the ancient Troy, Aphrodisian and Phrygian Settlements will be evolved into a regional destination with thermal facilities and cultural themes, which will by capacity be integrated to other alternative tourism types to incorporate cultural and natural heritage of surrounding areas.

- Studies will be furthered in carefully planned stages for the best evaluations of all residents to account for the regions with geothermal springs.
- Construction work carried out within the scopes of original and revised construction plans concerning the thermal tourism centres hitherto announced by the Ministry of Culture and Tourism shall be completed.



- Efforts shall be pursued to make our country the top-ranking destination on the European continent for thermal tourism interests.  
Studies shall be conducted for establishment of local governments union and distribution companies at pilot areas identified for the purpose of effectively distribution geothermal spring waters.
- Forthwith upon completion of studies aimed at designated and physical planning of areas that may potentially be declared as Cultural and Tourism Conservation and Development Areas and/or Tourism centres with focus on the quantity and variety of geothermal springs, the areas so designated will shortly be allocated for the exclusive use of investors for tourism purposes.



Source: Turkish Ministry of Tourism and Culture



### 3.4. European Historic Thermal Towns Association

Some of the competitors, mainly the Central European baths, have been part of the European Historical Spa Town Association (EHTTA), an international non-profit association, since 2009. From our competitor analysis, we found that only some Turkish baths are members of the organisation.

The activities that the Association proposes to put into effect in order to achieve its aims are as follows:

- To reinforce the cooperation of spa towns and spas and exchange experiences and good practices between the administrations and/or cultural and socio-economic operators of spa towns.
- To promote the network at European level, in close collaboration with European institutions and with the support of European programs, to put into effect European projects, and set up an European spa route.
- To encourage, promote, complete and develop research, analyses, studies and statistics in the spa sector, first of all concerning the history and artistic and cultural heritage, and legislative and statutory aspects that concern this heritage. To enhance and safeguard the architectural and artistic spa heritage, and integrate the heritage within the development policies.

The Association is set up by its founder members. The founder members are spa towns, and have the right and duty to take part in establishing objectives and in running and developing the European Historic Thermal Town Association

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A "spa town" is considered to be any local authority, regardless of size or number of inhabitants, which has been acknowledged since its foundation in the definition of spa town, having historically deployed activities linked to water cures with its effects on the development of the town, its architecture, tourism and cultural and socio-economic initiatives. The water cures in question are linked to the exploitation of spa and mineral waters.

The main principles for a town to be accepted as a member of the association are as follows:

- The spa town has to have spa water exploitation (bottled water is not a criterion) and therefore be an operant spa and/or wellness center with an historical tradition.
- The spa town has to have an architectural thermal heritage dating to at least the XIX century, including one or more buildings (related to spa culture) classified as Historical Monuments.
- The spa town has to have a tradition of entertainment/cultural activities: theatre, casino, concerts, etc. The spa town has to offer a top quality hotel system and a significant number of rooms, adapted to the town thermal prerogative.

Current members are:

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• Le Mont-Dore (France)	• Baden Baden (Germany)
• Royat Chamalieres (France)	• Wiesbaden (Germany)
• Châtel-Guyon (France)	• Fiuggi (Italy)
• La Bourboule (France)	• Montecatini Terme (Italy)
• Bagnoles-de-l'Orne (France)	• Karlovi Var Region (Czech Republic)
• Luchon (France)	• Techirghio (Romania)
• Cauterets (France)	• Budapest (Hungary)
• Enghien – les Bains (France)	• Daruvar (Croatia)
• Evian (France)	• Bursa (Turkey)

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The organisation was founded and is managed from France. Besides networking, there are marketing activities, mainly focussing on the American and Asian market. The first project was the creation of a European Route of Thermal Heritage.

Tskaltubo should become member in a certain stage of development!

### 3.5. Conclusions

#### Conclusions

- The water quality and the natural environment of Tskaltubo are very special and definitely have **the potential** to become an international Spa destination.
- The water quality and the capacity of the existing sources of water in Tskaltubo have to be officially proven. Any investor would want to make sure that the **sources** of the “USP of Tskaltubo” have a **long-term existence**. Therefore the establishment of **a hydro geological survey** is necessary.
- Tskaltubo is an important part of Soviet history. The development and the planning of the resort are unique. The historical documentations and the potential for story telling about famous people are enormous. Together with the historical attractions nearby, (restored by the World Bank and MDF) the destination can offer a wide range of cultural tourism.
- Turkey will remain the main competitor for a developed Tskaltubo in the first stage. The power of the State, which shows the importance of the Ministry for Tourism, and the strong airline with connections in many Georgian neighbour countries, will be a challenge. Nevertheless, the right positioning and a clear focus on target client-groups, as well as the quality aspect, will be important for the destination.
- To really become an international Spa destination, an expansion of the offered services/products for visitors to Tskaltubo is needed. In order to not only attract older or even sick people, the offered spa products, but also the complementary things to do, have to focus on younger, urban and international markets. The destination needs additional attractions for these new target client groups.

In the short term (in 3-5 years), we mainly see the neighbouring countries and the old Soviet countries as having the potential to bring visitors. During the course of our research we discovered how well known the healing qualities of the Tskaltubo water still is. Lots of people are still coming to Tskaltubo every day, even though the offered product is of a low standard. Tskaltubo is still a brand that is known by the older generation. Tskaltubo needs to take the chance and opportunity to use this popularity and the historical advantages in these countries.

- In the middle term (in 5-8 years), the destination should also start to attract European and other foreign markets. The history of Tskaltubo will be interesting for any foreign visitors and the accessibility via Kutaisi airport guarantees short travel time.
- In the short term (in 3-5 years), Tskaltubo should become a member of EHHTA (European Historical Thermal Town Association).

## 4. URBAN ANALYSIS OF TSKALTUBO

### 4.1. Administrative Border of the Town

The town of Tskaltubo does not have administrative borders. The existing administrative and territorial division demarks administrative borders for the Tskaltubo municipality. Within these borders, Tskaltubo municipality covers 707km<sup>2</sup>. Tskaltubo municipality has a Northern border with Ambrolauri, Tkibuli and Terjola in the West, Bagdadi, Vani in the South and Samtredia and Khoni municipalities in the West (see map 3 and 4).

The second largest city of Georgia, Kutaisi, is located 9 kilometers to the South-East of the Tskaltubo resort, with a total population of 250,000 people.

The actual administrative border of Tskaltubo is considered to be the border that is demarked by the Public Registry of Georgia. The Public Registry has registered all of the land plots within the mentioned borders as land-plots of the Tskaltubo settlement; the same classification applies during elections (division by districts and zones) and taxation purposes.

The border of the Public Registry is the only solid ground to conduct spatial arrangements, town planning, environmental and other planning and documentary works. According to these borders, the total area of the Tskaltubo resort is 10.5 km<sup>2</sup> (see map 5).

### 4.2. Environmental Assessment

#### 4.2.1. Overview

##### **Geology**

According to the geotechnical zoning, the survey area is within the boundaries of the Transcaucasia intermountain plain western molassic submersion zone (the Rioni intermundane trough). The area of Tskaltubo is mostly formed by Cretaceous limestone, so the strong karstic phenomena are clearly obvious: its height is 6 meters and the width reaches several hundred meters. There are many dry and wet caves and the interior of some of them, particularly the Prometheus Cave (also known as the Tskaltubo Cave), are decorated with stalactites and stalagmites of a fabulous beauty.

## **Main Soils and Landscapes**

Along the river Rioni area the soils are characterized by diversity: in the mountainous area the average thin strata of humus-calcareous soils and the thin strata of the forest brown soils cover vast areas of the territory.

The territory of this district consists of humid subtropical plains, foothills and humid mountain-forest landscape types, out of which the following main landscape types are distinguished:

- Plain-hilly foothills with Kolkheti vegetation, humus-calcareous zheltozem soils and subtropical- forest brown soils;
- Hilly foothills with Kolkheti vegetation, and humus-calcareous soils.

## **Hydrogeology**

The ground waters play an immense role in the formation of the engineering-geological conditions of the survey area. There are several aqueous horizons and complexes that are distinguished here.

According to the hydro geological zoning of the territory of Georgia, this territory falls within the boundaries of the Georgian block of the artesian basin region Tskaltubo cavernous, fissure, fissure-karst and karst water artesian basin district. The major hydro geological feature of the artesian basin region of the Georgian block is the existence of numerous relatively small sized artesian basins.

The Tskaltubo artesian basin comprises the major part of the Kvemo Imereti Plain and Samguruli mountain ridge. The main artesian horizons of lower cretaceous limestone, upper cretaceous Paleogene limestone and Quaternary sand-pebble are distinctly present in this basin and in the neighboring districts as well.

The lower cretaceous limestone contains fissure and fissure-karst pressure groundwater. The radioactivity of the groundwater of the artesian basins is 5-7 Mach and is characterized with high debits - 200-220 l/sec. Tskaltubo is well known for its radon-containing thermal waters of high medical properties, which were discharged as powerful sources from the Lower Cretaceous limestone outcrops in the valley of the river Tskaltubostskali. Radon waters subsequently were received from the wells of different depths. The Tskaltubo healing thermal water supply was approved in 1970 in the high performance category of 19,000 m<sup>3</sup>/day.

## Hydrology

The main river in the municipality is the river Rioni with its two tributaries: Tskaltubostskali and Gubistskali. The Tavshava Lake, as well as the artificial lake “Tsivi”, are also part of the municipality.

The right tributary of the Rioni River, Gubistskali, runs through the territory of Tskaltubo. It is formed by the confluence of the rivers Semi and Kumi at the village of Dedalauri. The length of the river Gubistskali is 36 km; it joins the river Rioni at Samtredia.

The Tskaltubo Stskali River runs through Tskaltubo. This river originates from the karstic lakes (caves) at the resort area and it is nourished by rain and groundwater. There is an artificial lake called “Tsivi Tba” located at the source of the river, from which the river Tskaltubostskali actually originates, placed in the double concrete channel. The length of the river Tskaltubostskali is 23 km. It falls into the river Gubistskali at the left side of the village Maghlaki by the crossing of the river Gubistskali and Kutaisi-Khoni highway. The watershed mount Gorda is located between the rivers Gubistskali and Tskhenistskali.

The river Gubistskali – is the right tributary of the river Rioni, located in the Imereti lowlands. It is formed by the confluence of the rivers Kumi and Semi, which run along the village of Dedalauri. It joins the river Rioni from the right hand side along the village of Akhalsopeli. The length of the river is 36 km and the basin area is 442 km<sup>2</sup>. The river is mainly filled by rain water, as the underground supply is very small. The river is characterized by numerous floods caused by rain water throughout the year. The river water is fit for drinking only in the upper parts of the river, in the basin of the river Semi, at the sections of the villages Tskhunkuri and Chuneshi. The river is used for irrigation. No dangerous hydrological events have been observed in the river.

The water supply of Tskaltubo is provided from the water bodies surrounding it. In addition to the Rioni River, there are many other rivers: the rivers of Gubistskali, Semi, Kumi, Tskaltubostskali, Oghaskura and the cavern waters of the Tskaltubo limestone massif.

The Gumati HPP reservoir is located in the Tskaltubo Municipality, 6 km to the North of the city of Kutaisi, located in the narrow valley in the middle of the stream of the river Rioni. The reservoir, which is comprised of a 30 m high steel concrete dam, regulates the river Rioni yielding Gumati HPP (I and II). The dam consists of mid spillway and two bank deaf parts, with a total length of 216 m. The maximum design depth of the reservoir at the dam is 24 m. The reservoir has a narrow, long (up to 10 km) oval shape. Its width varies between 60-550 m. The volume of the reservoir at the normal level reduction is a total of 39.0 million m<sup>3</sup>, with useful volume of 13.0 million m<sup>3</sup>, and a surface area of 2.4 km<sup>2</sup>. The reservoir lies in the direction of the meridian. The terrain is mostly of erosion origin, which is caused by the action of the river Rioni and its small tributaries. Accumulative forms are present by the terraces of the river Rioni and drawing cones of its tributaries. In many cases, the old and the new landslides are located side by side. The reservoir was put into operation in 1956 and is used



for energy purposes. It is a daily regulation reservoir. If necessary, a one-week regulation can be made as well.

### **Fauna and Flora**

Broadleaf and evergreen plants (as sparse plantations) are cultivated in the cultural environment of the town. There are shrubs growing in the town suburb adjacent area. The plants in the town's surrounding district area are of a Colchis type. Instead of the formerly prevailing forest, currently the major part of this area is used for crops, fruit and vegetable gardens and vineyards. The forests generally remain in the northern parts of the area. The forest forming species are: hornbeam, oak, hawthorn, some beech can be found, liem and elm are also present and chestnut is rare. Underwood is represented by evergreen willow and laurel cherry, while deciduous is represented by azalea and medlar. In the plain areas, the forests are mostly comprised of hewn down and only small canopies of oak-hornbeam and oriental hornbeam can be found. Willow and alder prevail on the riverbanks, the forests are covered in liana and the woodless and uncultivated areas in this district are mostly occupied by meadows, which are used for mowing and pastures.

The fauna is very diverse in this district: the forests and bosage are inhabited by wolves, fox, Caucasian martens, badgers and jackals. There is an abundance of hare, field mice, bush voles, least weasels. Mink are rarely found here. The birds that are present in this area are: raven, magpie, starling, woodpecker, quail, duck, hoopoe, golden oriole, cuckoo, turtledove, hawk and pheasant. The following fish are found in the rivers: BarbustauricusEscherichi, Caucasian herring, Cottusgobio, wels catfish, colchis Chondrostoma. Sometimes sturgeon enters this district and there are also lots of vermigrades here.

#### **4.2.2. Bio-Climate – Natural Remedies of the Climate**

### **Description of Climatic Features in the Resort Area**

The climate in Tskaltubo is basically subtropical with mid-latitude climate zone peculiarities. Essential factors for the development of the subtropical climate are: the geographic location, the proximity to the Black Sea, the mountainous landscapes and the rich vegetation. Due to the combination of these climate-generating natural factors, Tskaltubo has a mild, humid-subtropical, but very favorable climate.

Influenced by the Black Sea, during summer the daytime air temperature decreases at night, however in winter, on the contrary, the temperature increases at night. Therefore, the annual air temperature amplitude fluctuations are very negligible.

The winter in Tskaltubo is mild, moderately humid and quite cloudy. The snow cover is unstable.

The spring is moderately humid, the first half is moderately cool, the second half is moderately warm, cloudy, windy and there is a little precipitation.

The summer is hot, humid and cloudless.

The first half of autumn is warm; the second half is moderately warm. Frequent short showers contribute to keeping the air clean.

There are up to 70 cloudy days per year. The annual sunshine is quite long, and reaches an average of 2,000 hours.

### **Evaluation of the Thermal Conditions**

Due to the described combination of the natural factors and the air temperature, the thermal regime in Tskaltubo is quite high throughout the year, especially in the summer. The average annual temperature is 14.6°. The average temperature in the coldest month (January) is 5.3°; in the warmest month (August) it is 23.8°.

### **Weather**

Humidity varies in accordance with the air temperature. When the air temperature increases, the absolute humidity increases and vice versa. Absolute humidity decreases in winter and increases in summer; it is higher in the late afternoon, and lower at nighttime and in the morning. The relative humidity data is similar: in the winter months it is lower than in summer months. This is due to the significant influence of the vegetation cover and the sea in the summer. The frequency of the upper-layered winds in winter is connected to the decrease in the relative humidity.

During the cold periods, the number of days with very low and very high humidity increases, but the daily humidity fluctuation amplitude is higher in the summer.

The great variability of dry and wet weather negatively affects the human body, as well as the vegetation.

Tskaltubo is a plain, lowland resort and the atmospheric pressure is not very different from the coastal atmospheric pressure. The lowest average monthly pressure rates are in July and the highest are in November. The annual (8-10 mm) and daily (2-3 mm) rates of atmospheric pressure vary slightly. Only during the intrusion of the air masses does the daily atmospheric frontal pressure intensity increase up to 3-10 mm.

East (26%) and West (36%) winds dominate in Tskaltubo. The nights are often wind free. The East winds are common during the cold period and the West winds are more common in the warm period.

Foggy days are rare in Tskaltubo. The average number of foggy days is 6 days per year, with 14 days being the maximum recorded number of foggy days. The frequency of the precipitation in Tskaltubo is due to the proximity of the Black Sea and the mountainous landscape. The average annual total precipitation is 1,818 mm. The amount of precipitation during the cold period is relatively small, though generally there are more and longer rainy days in the warm period.

The following are the parameters of the 6<sup>th</sup> weather classification for Tskaltubo:

Less frosty weather (-5-0°) usually occurs at night from the second half of November until the beginning of April, and in the daytime during January and February, for a total of 22 nights and 3 days. The monthly average is 12 days per year.

Cold weather with positive air temperature up to +8° occurs at night from September to May and in the daytime from November-April. There is cold weather for 124 nights and 40 days, with a monthly average of 80 days per year.

Cool weather, with temperature ranging from +8° up to 16°, occurs in all of the months, and is especially frequent in the spring and autumn. During the daytime, there is no cool weather in the summer. There are 135 cool weather nights and 90 cool weather days per year. The monthly average is 111 days per year.

Warm weather, with air temperature ranging from 16° to 28°, occurs from May to October at night and throughout the year in the daytime. There are 84 warm nights per year. Sometimes from July-August the equivalent-effective temperature is very high and not very comfortable, especially in the afternoon. The high water vapor content of the air, in addition to the heat, makes these weather conditions quite humid. Sometimes the air is humid at night as well.

Extremely warm weather, with temperatures reaching from 28-32°, rarely occurs at night, and is only present in July-August. During the daytime, extremely warm weather occurs in April-May and September-October. Most of the very warm days occur in July-August and there is a total of 10-12 such nights per month, occurring once or twice a month, with an average of 50 days per year. The monthly average is 26 days a year. The equivalent temperature in the daytime is significantly higher and can be uncomfortable. The exposure to the sun is dangerous on such days. The temperature is accompanied with high humidity, so the heat sensation grows and the air makes people feel stuffy.

Hot weather, when the air temperature is above 32°, does not occur in Tskaltubo at night. In the daytime such air temperatures occur in April-October, and more often in July-August (5-6 days per month). According to the midday temperature, on average 23 such days occur,

with an average daily rate of 10 days per year. This kind of temperature is very uncomfortable for visitors and patients.

The climate in Tskaltubo is also accompanied by adverse moments, which should be taken into consideration when planning the treatment and the buildings. These include: very hot, humid days in the summer; strong east layered winds; rapid change in the climate caused by air masses invading from the west; prolonged heavy rains; and heavy snow up to 50-100 cm.

Due to the influence of terrain mountainous slopes, the vegetation and the microclimate in Tskaltubo varies within a wide range. The slopes directed towards the East are under the adverse effect of the undesirable East winds, while, the West breezes have almost no influence. The sea breezes effect the West-facing slopes in the warm periods of the year. The breezes from the sea bring precipitation, which in turn enhances not only the mountain slopes, but also the erosion processes of the West-facing buildings. During bright sunny days, the solar ray's impact on the walls of buildings and therefore the access of the air through the windows of the buildings is more intense during the cold period of the year. The thermal conditions on the East-facing slopes are higher in comparison with the South- and West-facing slopes.

The building's internal temperature depends not only on the external air temperature regime, but also on the solar rays and warmth accessed through the windows and the other openings. The sun rays do not access the rooms facing the North and the temperature there is always low. The warm temperature heats the East-facing buildings until noon and the South and West-facing buildings in the late afternoon. The solar rays bring more warmth and light into the building, so they should not be prevented to enter in the winter. In summer, especially in July-August, when there is strong heat and there are humid days, it is necessary to protect the buildings from the sunrays.

The planting of green areas is designed to improve the climate, to reduce the high air temperature and the high humidity, and to promote the breezes blowing from the sea and at the same time to block the East layered winds from accessing the resort area. Vegetation should be planted at the resort parks in a way that will allow lighting, ventilation, and provision of radiant energy or protection from it if needed all year round. In certain areas the planting of broadleaf trees is necessary in order to provide protection from the direct and scattered solar rays. The broadleaf plants prevent the sunlight accessing the ground. The air circulation will be intensified due to differences in heating of different areas (soil, water reservoirs).

## Climate Assessment

There used to be a meteorological station in Tskaltubo and also in Kutaisi. The Kutaisi station is still operational. The Tskaltubo station was closed in 1987. There used to be tight correlation of the data between the mentioned stations, which was evident only between long-term temperatures ( $R > 0.9$ ). The correlation between the other elements is within the limits of 0.4-0.7. Therefore, the Municipality meteorological elements used were represented through a 50-year (1936-87 years) observation done by the Tskaltubo meteorological station. For the future development of the resort, the rehabilitation of the previously existing Tskaltubo meteorological station should be taken into consideration.

The location of the Municipality – the slight elevation of the area, the proximity to the sea, and the frequency of the humid air mass movement from the west during the whole season – determines the humid subtropical climate in the area, characterized by high humidity and temperature features. There is an inversion of the atmospheric precipitations along the valley of the river Rioni. There is developed breeze circulation and pronounced background effect. The mountain-valley winds are dominant in the foothills; their frequency is greater in the warm period in comparison with the cold period. Their direction coincides with the direction of the breezes and this increases their climatic importance. All of this contributes to the abundance of the atmospheric precipitation. The internal yearly distribution of precipitations is mainly the same throughout the year, but there has been some relative dryness observed in the spring and a definite increase of dryness in the winter period.

In Tskaltubo, there is snow from November till April. Persistent snowy weather can be seen in January-February, however, it does not snow every year. The snow cover can reach a height from 10-15 cm. This is very rare; however there may be such snowy winters. In this case, the height of snow cover can be above one meter (1910-11, 49-50, 63-64, 75-76). The climate profile is low humidity subtropical climate, with a positive balanced temperature, without sustainable snow covers.

The long-term data on Tskaltubo's key meteorological elements are given in the following table:

## Meteorological elements- average monthly and annual data

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Year
Taverage.	5.9	6.1	8.7	13.8	17.9	21.0	22.9	23.6	20.3	15.4	11.4	6.9	14.5
Tmax	24.1	25.8	31.9	36.1	37.7	39.7	42.1	40.4	41.7	38.0	31.0	25.9	42.1
Tmin	-19.3	-17.5	-8.2	-4.3	1.5	6.9	11.7	9.8	3.4	-1.2	-9.9	-16.7	-19.3
Precipitation, mm	170	138	117	122	106	139	137	134	127	115	133	165	1603
Wind, m <sup>3</sup> /sec	1.6	1.6	1.8	2.2	1.7	1.4	1.3	1.4	1.1	1.2	1.8	1.6	1.6
Humidity, %	73	72	70	69	72	74	78	76	78	76	71	70	73

Winds by direction, probability of wind speed by gradation, average and highest numbers of days with strong wind, probability of different wind speeds, etc. are shown in following tables.

## Number of wind occasions, %

Month	N	NE	E	SE	S	SW	W	NW	Calm
I	4	22	39	9	5	6	11	4	63
II	4	15	38	10	5	11	13	3	55
III	3	19	38	9	6	8	14	3	54
IV	4	16	28	7	8	15	19	3	61
V	3	16	35	6	8	11	17	4	62
VI	2	10	26	8	7	17	26	4	72
VII	3	8	20	6	11	18	30	5	81
VIII	3	13	28	8	12	12	20	3	78
IX	3	13	27	8	9	18	17	5	78
X	5	16	37	11	7	7	15	2	73
XI	4	20	37	12	6	8	8	4	68
XII	3	23	37	11	5	7	11	3	70
Year	2	18	26	4	1	11	37	2	61

Average number of days with strong winds ( $\geq 15$  m/sec)

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Year
0.8	1.3	1.7	1.8	1.1	0.5	0.2	0.6	0.8	0.7	2.4	1.5	13



Maximum number of days with strong winds

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Year
6	11	6	8	4	3	1	2	6	3	8	6	41

Probability of wind's speed per gradations (% of total number of occasions)

Wind speed, m/sec											
Month	0-1	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-17	18-20	21 -24
I	76.4	10	6	2.9	1.9	0.4	0.9	0.1	0.4	1	0.03
II	73.1	12.6	6.5	3.3	2	0.2	1.2	0.1	0.4	0.6	0.04
III	67.5	15.8	7.4	2.9	2.4	0.4	1.5	0.4	0.7	0.8	0.2
IV	64.2	17.1	7.7	4	2.9	0.6	1	0.2	0.9	1.3	0.1
V	69.6	15.1	7.9	3.2	2.2	0.4	0.6		0.6	0.4	
VI	73	14	8.4	2.2	1.6	0.4	0.3		0.04	0.1	
VII	74	14.7	7	2	1.2	0.2	0.7		0.2		
VIII	74.2	13.1	6.9	2.5	1.7	0.5	0.6	0.1	0.1	0.3	
IX	80	9.7	5	2.4	1.7	0.3	0.4	0.1	0.2	0.2	
X	79.7	9.7	4.7	2.4	1.5	0.4	0.8	0.1	0.2	0.5	
XI	72.3	10.6	5.8	3.8	3	0.4	1.3	0.4	1	1.4	
XII	76.6	8.6	6.1	2.8	2	0.3	1.3	0.3	0.8	1.2	

The following two tables show the meteorological data that must be taken into consideration during any type of construction process.

## Estimated value of wind temperature

Location	Air temperature				Period $< 8^{\circ}$ average daily temperature		Duration of the period with an average daily temperature $> 0^{\circ}$	Average temperature at 13.00	
	Average maximum of the hottest month	Average of the cold period	Average of the coldest day	Average of the cold fine days	Duration in days	Average temperature			
Kutaisi	28.9	5.0	-5	3	90	5.8	0	7.1	27.3

The table shows the main factors for calculating the building's thermal-technical values, the estimated value of the air temperature (based on data provided by Kutaisi meteor-station). Similar calculations have not been done for the Tskaltubo stations. However, if we take into consideration the close correlation between the Tskaltubo and Kutaisi station in the past, with certain caution, we can apply the Kutaisi data to Tskaltubo.

## Estimated wind speed

Location	Highest possible wind speed 1, 5, 10, 15, 20 YY. m <sup>3</sup> /sec				
	1	5	10	15	20
Kutaisi	31	35	37	38	39

The table shows the estimated wind speed (the highest possible wind speed) based on the data provided by the Kutaisi city meteor-station

data. The data shown in this table is used to establish the climatic parameters for the wind load on the buildings and the constructions. Contrary to the temperature table, the data of this table should be applied with even greater caution, because the comparison between the Tskaltubo and Kutaisi wind data is comparatively weaker.

## Medicinal-Climatic Assessment

The mineral springs and baths do not affect the human body for a long time, but the climate of the resort influences it quite significantly throughout the duration of a guest's stay.

There are two main indicators that are needed to describe the weather – the quality of comfort and the stability endurance level. The concept of comfort includes: air temperature, humidity, cloudiness and precipitation. The stability endurance level is determined by: the barometer pressure fluctuations, the wind speed and the daily temperature amplitude. One of these determines the desired conditions for staying in the open air. The level of weather instability conditions the possible exacerbation of diseases and therefore there is a necessity for its prevention.

The uncomfortable factors include high air temperature and high humidity in the summer. 20-25° is considered to be a comfortable air temperature, while the air temperature up to 33° is considered to be moderately hot, 33-37° to be hot and above 37-40° to be an extremely hot temperature.

The high humidity reduces sweating, which causes the body to overheat. High humidity also affects the respiratory function. A wet film is formed on the surface of the respiratory organs, which prevents evaporation, making gas exchange and the transfer of oxygen to the blood very difficult, causing the feeling of stuffiness. This mainly occurs when the absolute humidity exceeds 14-18 mm. In these conditions an unpleasant feeling of stuffiness develops. 18-22 mm is humid, 22-26 mm is very humid and above 26 mm is extremely humid.

The high temperature and the high humidity in Tskaltubo are very frequent in the summer, leading to the reduction of oxygen in the air and a negative effect, especially on the heart patients. The uncomfortable climate is conditioned by winds as well. The West winds, the cloudiness and the precipitation worsen the weather too. The East layered winds are the worst for making the air become extremely hot and dry, which is very poorly tolerated by the patients. In summer the weather is often hot, humid and stuffy, which affects the patients' body negatively. The first half of autumn has the best climatic features, with the optimum temperature and stability in the meteorological elements. In the second half of autumn, the comfortable conditions are partly continued. The mild temperature in the winter allows patients to stay outdoors except for on windy days, which reduce the effectiveness of treatment. The first half of spring demonstrates climate instability, and has a negative impact on people, while the second half is relatively stable and comfortable.

The heating of the asphalt, rocky covers, masonry and concrete structures and soil heating causes the increase in air temperature.

Tree planting is a powerful tool for lowering the high temperature. The vegetation catches the sunlight and protects the soil from heating, as due to the large evaporations of the plant's surface, the temperature decreases. The processing of radioactive warmth exchange goes on normally in the body when being surrounded by plants. A second way to alleviate the hot summer days is through the resort ventilation, which is possible through air circulation. Air circulation arises when different areas are heated in different ways. Under such an uneven temperature the cool air moves to the hot areas.

The wind and the plants in the vicinity of the resort contribute to the normal temperature regime, reducing the wind strength, performing a dust protection function, and enriching the air with oxygen and microelements of the plant origin.

It should be noted that the park resorts located around the spa area have ample sized green areas that need rehabilitation work, which should be correctly planned by the dendrologist.

#### 4.2.3. Healing Water

According to the classification of the mineral waters, the Tskaltubo mineral waters belong to the group of Thermal-gaseous-radioactive waters.

Tskaltubo's thermal gaseous radioactive waters are of moderate mineralization. Not exceeding 0.76 grams of salts per liter, according to its chemical composition, it belongs to the hydrocarbons- sulfate-chloride-calcium-magnesium-sodium waters.

Despite its weak mineralization, Tskaltubo's waters contain calcium and magnesium ions in a very active condition. Extensive amounts of gaseous components and their unique combination make the Tskaltubo mineral waters very effective. The sulfuric and carbonic calcium salts make Tskaltubo's mineral waters hard.

The observation of the mineral waters conducted made it clear that its chemical content is permanent and does not change at any time of year. The first series of analysis made in 1959 showed that the ingredients (water composition) are permanent (stable).

About 200 scientific works have been made on the impact of the Tskaltubo mineral waters on the human body. The hydro-product acts on the skin; therefore, the body's response is studied through looking at changes in the skin and its nervous and vascular system. Normally, the thermal waters cause some redness. This happens in case of Kislovodsk carbonic acid Narzan water and Sochi-Macesta hydrogen and other waters. This reaction is caused by

dilatation of the peripheral capillary system in the process of the redistribution of the blood from the central to its peripheral system. Tskaltubo thermal waters are an exception to this, as the skin, on the contrary, turns pale. Professor Valendinski first described this quality. It can be explained by its spasmodic stricture action on a peripheral capillary system. A similar reaction is caused by Belokurikha mineral waters (Professor Shershevski).

L.K Arzhelas' experiments proved that the radium contained in Tskaltubo's mineral waters causes stricture of the peripheral capillary (very thin blood vessels). But if we remove the mentioned factor, then Tskaltubo's mineral water loses this influence over the peripheral blood vessels.

#### 4.2.4. Treatment indications for Tskaltubo

There is quite a large group of diseases indicated for treatment in Tskaltubo:

##### **I. Diseases of the heart and the organs of the blood circulation system**

(Mainly found in combination with other diseases for which the treatment is recommended to be done in Tskaltubo).

Baths are taken twice a day for 20 minutes for 20 days.

##### **a. Myocardial diseases**

1. Chronic rheumatic myocarditis, when there is no expressed deviation of the neutrophils to the left.

2. Luetic myocarditis, with a mild to moderate circulation insufficiency but without aortic aneurysm, expressed angina attacks, a history of myocardial infarction, for those patients, who recently have had a specific treatment.

For cases 1 and 2: recreational treatment is recommended.

3. Myocardiodystrophy with fatigue and also of metabolic, endocrine, toxic or infectious origin with mild or moderate blood circulation insufficiency.

4. Cardiosclerosis – for myocardial or arteriosclerotic mild or moderate blood circulation insufficiency without angina attacks and a history of myocardial infarction.

For cases 3 and 4: with moderate insufficiency – recreational treatment is recommended, for patients with mild insufficiency – outpatient treatment is advised.

b. Valve diseases

Mitral and aortic valves diseases, and congenital heart disease, with mild or moderate circulatory insufficiency when there is no expressed deviation of neutrophils to the left (for moderate insufficiency and sub-febrile temperature – recreational treatment, for mild insufficiency – outpatient treatment).

For a) and b) patients: with sub febrile temperature and erythrocyte sedimentation reaction acceleration there is no contra-indication for spa treatment in Tskaltubo.

c. Cardiovascular diseases

1. General arteriosclerosis with mild or moderate circulatory insufficiency.

2. Aortic sclerosis with mild or moderate circulatory insufficiency, when there is no heart angina and aortic aneurysm.

For patients 1 and 2: with moderate insufficiency – recreational treatment is advised, for mild insufficiency – outpatient treatment is recommended.

3. Lueticmesaortites under mild or moderate blood circulation insufficiency, without angina and aortic aneurysm events, for those patients who have conducted a specific treatment earlier (recreational therapy).

4. Thrombophlebitis residual effects 2 months after completion of acute or sub acute events (with expressed forms – recreational treatment to be implemented, with mild forms – outpatient treatment is advised).

5. Obliterating endarteritis, especially spastic forms.

d. Neurohumoral regulation violation

1. Benign hypertension (essential) without cerebral vascular sclerosis and cardiac angina events (with clearly expressed elements – recreational treatment is advised, in other cases – outpatient treatment).

2. Symptomatic hypotension (outpatient treatment is advised).

3. Cardiac neurosis and angioneuroses (with an expressed form – recreational treatment is recommended, in mild cases – outpatient treatment).



## **II. Locomotor organs diseases and surgical diseases**

### **a. Joints diseases**

Chronic arthritis and osteoarthritis (of non-tuberculosis origin).

1. After acute rheumatism (Bouillaud disease), predisposition to exacerbations and during movement – recreational treatment is advised, without these elements – outpatient treatment.
2. Infectious or toxic origin.
3. Traumatic origin.
4. Gout origin (expressed changes in osteoarticular and muscular apparatus – recreational treatment is advised, in other cases – outpatient treatment).
5. Endocrine origin (treatment as in the Case 4).

### **b. Spine diseases** (non-tuberculosis origin).

1. Chronic spondylarthritides of infectious and toxic origin.
  2. Chronic spondylitis;
    - a. Toxic and infectious (except tuberculosis origin) in chronic and sub acute phases, when the patient is able to move independently.
    - b. Traumatic (Kummel disease).
  3. Spondyloses without sharp limitations of the movement of the spine.
- 1, 2 and 3 Case, recreational treatment is advised.

### **c. Bone, muscle and tendon diseases**

1. Bone fractures with badly developed or painful callus.
2. Infectious osteitis and periostitis (including luetic) and traumatic.
3. Myosites, bursites, and tendovaginites of infectious, toxic and traumatic origin.

4. Cicatricial contractures (after burns, phlegmons) of myogenic and arthrogenic quality (of non-tuberculosis and no paralytic origin) without bone articular end deformation.

Treatment for the Cases 2, 3 and 4 is the same as for the Case 1.

### **III. Nervous System Diseases**

#### **a. Peripheral nervous system diseases.**

1. Radiculides, poliradiculoneurites, plexites, mononeurites, neuralgias, neurofibromyosites of infectious, rheumatic, on the grounds of intoxication and also of secondary origin, dependent on the spine, gynecology and other diseases, are indicated for treatment in Tskaltubo after completion of the acute period.

2. Results of the peripheral nervous system wounds and other injuries that do not require surgical treatment or after completion of the latter, but prior to the beginning of the completion stage of the process.

In the clearly expressed cases of 1 and 2 diseases – recreational treatment is advised, in weakly expressed cases – outpatient treatment.

#### **b. Functional diseases of the nervous system.**

Not expressed forms of reactive neuroses or dysfunction of the autonomic nervous system (treatment according to the severity of disease is advised – recreational or outpatient, except July and August).

### **IV. Metabolic diseases**

#### **Gout and not expressed forms of obesity**

(For expressed forms – recreational treatment is advised, for mild forms – outpatient treatment).

### **V. Renal Diseases**

Chronic nephroses and nephrites without kidney insufficiency events, without sharp increase in blood pressure and retinitis events – are indicated conventionally; treatment in a sanatorium is advised.

## **VI. Gynecological Diseases**

1. Adnexites (salpingites-oophorites), periadnexites of various etiology (except of tuberculosis origin), chronic or not earlier than 8 weeks after the end of the acute period (in the case of predisposition to aggravation – recreational treatment is advised, in other cases – outpatient treatment).
2. Chronic metrites-endometrites without predisposition to bleeding.
3. Chronic cervicites and colpites.
4. The uterus deviation with limited movement.
5. Chronic parametrites, no earlier than 8 weeks after the end of the acute process (in the stage of infiltrates - recreational treatment, in the stage of healing – outpatient treatment).
6. Chronic pelviperitonitis – not earlier than 6 months after the end of acute period.
7. Postoperative infiltrations and exudations in the decay stage.
8. Ovarian function insufficiencies under normal or reduced amount of uterus (outpatient treatment).

## **VII. Skin Diseases**

1. Psoriasis without erythrodermal events and predisposition to the spring-summer exacerbation (widely disseminated – recreational treatment is advised, local – outpatient treatment).
2. Skin itching (universal form – recreational treatment is advised, local – outpatient treatment).
3. Itching (Hebra form – recreational treatment is only advised).
4. Neurodermatitis (expressed form – recreational treatment is advised, in other cases – outpatient treatment).
5. Scleroderma – initial forms, without dramatically expressed atrophy (treatment as in the case 4).

6. Piodermities – chronic form.

7. Chronic eczema.

The difference in the radioactivity and in the temperature of the mineral waters of Tskaltubo provides the possibility for differential treatment for the above indicated diseases at the resort. Thus, for example, high blood pressure and some forms of heart diseases are successfully cured by #4 and #5 sources. Radiculides (inflammation of the nerve trunk roots), plexites (inflammation of the nerve plexi), neurites (inflammation of the nerve trunks), polyneurites (inflammation of plural neural trunks) and rheumatic diseases are cured mainly by # 1, 2, 3 and 6 sources baths. Also, the practical observations demonstrated that the treatment of some gynecological diseases at the # 7, 2 and 1 baths have given good results.

### **Contra-indications for treatment in Tskaltubo**

The number of contra-indicated diseases is very few. These diseases are:

1. Every disease in its acute phase;
2. Decompensate forms of heart diseases;
3. Every kind of Tuberculosis;
4. Deep organic disease of the central nervous system and
5. Malignant tumors.

#### **4.2.5. Description of the sources and bathes**

**Source #1 (Dzvali Abono = an old bath)** – is located in the central part of the park resort, the bath building is built with two large pools (piscina), one for women (for 60 people) and one for men (for 50 people). Currently the bath is under reconstruction.

Water temperature – 34.8°C

Radioactivity – 4.0-5.0 units with Mache<sup>1</sup>

Source debit – 3,364,600 liters/sec.

Capacity – 100 people simultaneously

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<sup>1</sup> Mache - physicist, after whom the first unit for radon concentrations was named. 1 Mache=13.47 Becquerel (Bq)

**Source #2 (Gubernatori bath = Governor's bath)** - is located near the #1 sanatorium. §

Water temperature – 34.6°C  
Radioactivity – 4.0-5.5 units with Mache.  
Source debit – 2,177,913 liters/sec.  
Capacity – 52 people simultaneously

**Source #3** – is located near Source #1, to the South-West. The interception of this source is slightly different from the previous two. The catchment basin is made at the outlet, where the mineral water joins the water from the wells #125 and #122, as well as #8 gryphone<sup>2</sup> waters, resulting in increased water debit. There are 10 individual cabins in the bath.

Water temperature – 34.7°C  
Radioactivity – 6.0 units with Mache.  
Source debit – 517.166 liters/sec.  
Capacity – 10 people simultaneously

**Source #4** – is located in the North-Eastern part of the resort park with the two common pools. Next to this bath there used to be a source with drinking mineral water “the stomach water” the debit of this source – 86.584 l/sec, temperature – 31°C, radioactivity – 3.9 units with Mache.

Water temperature – 33.2°C  
Radioactivity – 5.0-6.8 units with Mache.  
Source debit – 982.323 liters/sec.  
Capacity – 24 people simultaneously

**Source #5** – is located in the Eastern part of the park resort, near Source #4. There are two common pools and 22 individual cabins in the bath building, including two experimental ones.

Water temperature – 34.2°C  
Radioactivity – 3.5 units with Mache.  
Source debit – 1,594,341 liters/sec.  
Capacity – 60 people simultaneously.

**Source #6** – is actually a catchment from 22 interception wells, based on which a really complex treatment is built – with three common pools and 50 individual cabins. The following treatment rooms are arranged in the bath building: physiotherapy, mechanotherapy, subaquatic bath, irrigation, inhalation, exercise therapy, massage and hydrotherapy showers.

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<sup>2</sup>Gryphon: steep-sided cone shorter than 3 meters that extrudes water

Water temperature – 36.0°C  
Radioactivity – 4.8-5 units with Mache.  
Source debit – 2,832,550 liters/sec.  
Capacity – 100 people simultaneously

**Source #7** – is located near Source #1, to the South-East; receives mineral water from the wells #48 and 49 with two common pools and 4 individual cabins. The “Beauty Source” pump-room was located next to this bath.

Water temperature – 34.4°C  
Radioactivity – 5.5 units with Mache.  
Source debit – 1,020,000 liters/sec

**Source #8** – is located near Source #1. The bath building is constructed on the base of it. The bath building was divided into 4 parts, each consisting of 28 individual cabins.

Water temperature – 34.2°C  
Radioactivity – 3 units with Mache.  
Source debit – 2,160,000 liters/sec.  
Capacity – 112 people simultaneously

**Source #9** – a half open building, located close to Source #6. Was operated only during the warm season.

Water temperature – 35.2°C  
Radioactivity – 1-2 units with Mache.  
Source debit – 1,666,393 liters/sec.  
Capacity – 100 people simultaneously.

Tskaltubo resort operated throughout the year and the treatment course was determined to last for 20 days. Shortening the course of the treatment was not allowed.

There is a difference in the water temperature, which allows the water to be divided into 2 groups: “warm” waters and “hot ” waters.

Sources #4, 5 and 8 belong to “warm” waters.

Cardio-vascular diseases and functional disorders are well treated with “warm” waters.

Sources #1, 2, 3, 6, 7 and 9 belong to “hot ” waters.

Rheumatologic and other diseases are treated with “hot” waters.

Such categorization is based on the temperature difference only, which varies by 1.5°C. As for the chemical differences, there is almost no difference between the sources (see map 10).

Pictures of the baths are in the annex to this report.



#### 4.2.6. Mineral Water Transportation

The opinion existed, and still exists in certain circles, that the transportation of Tskaltubo's mineral water will harm the water and decrease its healing properties. Until the 1930s, when baths were built directly at the sources, such problems did not exist. The need for building new baths put forward the study issue of the transportation of the mineral water. It should be emphasized that the issue of the mineral water transportation could be practically solved sooner than scientifically studied.

The first bath (#7), which is located 24-26 meters away from the source of the mineral water, was built in 1933-1934. The first experiments were conducted in 1937-1938.

Based on the example of the bath #7, G. Tsitlanadze, E. Metekheli and E. Varshamova studied the water of the well #122, which was received from the main rocks, and was then supplied to one of the individual baths of the bath #7. This bath was 132 meters away. It was determined that Tskaltubo mineral water does not undergo substantial changes for such a short-range transportation and retains its medicinal properties.

In the 1950s, based on the example of the bath #6, which is located at a distance of 120-200 meters from the wells respectively to the left and to the right, as well as by studying the characteristics of the mineral water transported from #85 well to the #1 resort, across a distance of 240 meters, K. Tsagareli, B. Berodze, T. Shikhashvili (this and many other works<sup>3</sup> mentioned here are made by direction of G. Tsitlanadze) confirmed that the physical and chemical changes of Tskaltubo's water transported to close distances are so insignificant that it does not have any influence on its balneological properties.

The issue of Tskaltubo's water interception over greater distance is currently being raised again. There are modern techniques that allow the possibility for retaining the composition and the nature of the healing water during interception, so therefore this issue needs further studies based upon the best practices and experience.

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<sup>3</sup> G. Tsitlanadze, E.I. Chilingarishvili. On the issue of treatment of rheumatic diseases of the heart and joints in Tskaltubo standing water baths. Balneology Institute of Georgia Works, vol .20.1947. pp. 147-158.

Pondoev G., N. Okropiridze., E. Shainian. Sciatica treatment in Tskaltubo standing water baths. Balneology Institute Works, vol .20, pp. 179-193.

#### 4.2.7. Radon Concentration

A very interesting point was noted during the above tests: as the #122 well water contained a very small amount of Radium emanation, maybe, the per cent of the radioactivity content in the sources of Tskaltubo is not of crucial importance<sup>4</sup>.

This provision does not seem disputable; Tskaltubo springs are of weak nature in terms of radioactivity and, between various springs, the quantitative variation expressed in the units of contents cannot develop into quality. The main point is that during the process of taking mineral water baths in Tskaltubo, the mineral water is running (mineral water is constantly coming into the bath, fills it up and then flows, thus keeping its physical and chemical properties while taking a bath) and the fact that in the gaseous fraction of this water, the Radon concentration is 3-5 times higher than that in the water.

#### 4.2.8. Sanitary zones

In order to protect the revitalizing recourses of Tskaltubo, in 1952, the Resort and the Physiologic Therapy Research Institute elaborated and approved the “Project of Environmental Sanitary Protection Zones for the Tskaltubo Resort”. The project’s aim was the implementation of the hydro-technical works including the following: the development of the resort, the removal of buildings and constructions from the balneology zone (those not connected with the use of mineral waters directly), the construction of sewage treatment facilities, the search for new water supply sources for the resort’s economy, and the arrangement of the greening and windbreak zones from the east to protect it from the snowdrift and dust.

The first sanitary zone includes a park (80 ha) and represents a central and northern part of the balneology zone with all its wells and mud springs. There is a 30 ha strict protection zone around the mineral water well and healing springs (map 11).

According to a Decree (#13/33, 2012 of May 25) of the “Natural Resource Agency”, The Legal Entity of the Public Law of the Ministry of Energy and Natural Resources, JSC “Balneoservice” received a license (#1000581) for the use of Tskaltubo municipality’s mineral

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<sup>4</sup>Tsitlanadze G., Metekheli E., Varshamova A. Tskaltubo natural mineral waters physical-chemical changes and its balneotherapeutics significance when interception and gravity supply. Balneology Institute Works, vol .20, Tskaltubovol.3, 1947, pp. 225-239.

deposits allowing the extraction of “Tskaltubo” thermal-mineral waters for touristic and recreational business and use of the underground resources for external application (healing baths). The license was issued for a period of 25 years and covers a total of 23.85 ha of land (see Map #10). The extraction of the thermal-mineral waters for external application is allowed (according to the license) in the volume of 19,000 cubic meters a day.

JSC “Balneoservice” is in charge of the territory shown on Map #10 and also the bathhouses # 1, 4, 5, 6, 7, 8, 9, well-room “Beauty Spring” and “Stomach Spring”.

At the moment, the license holder is arranging drainage networks and full rehabilitation of the sewage system, conducting park arrangement works, and re-construction works on the hydro-technical facilities of the complex underground communication for mineral water in the first sanitary protection zones. A master plan for the development of the sanitary zone is missing.

#### 4.2.9. Legal Framework

The Law of Georgia “On Sanitary Zones of the Protection of Resorts and Resort Locations” (adopted on March 20, 1998, № 1296-II) bans the following in the first sanitary zone: works that are not directly related to the use of the natural healing resources, construction of industrial and agricultural objects, mountainous and land processing works, and permanent and temporary housing of physical persons. Other activities that may have a negative impact on natural healing factors and sanitary condition of the resort are banned.

The following works are allowed on the territory of this zone: mountainous and ground works connected to the use of the natural and healing resources, construction of facilities (for trapping, pumping stations, piping, tap water galleries and well-rooms, overpasses and other facilities related to extraction and application of medicinal mud), river bank strengthening works, erosion and landslide preventing works, means of communication and construction-repairs of the park objects.

Use of the water objects for medical, resort and recreation purposes and also their use for sewage is conducted in concordance with the Law of Georgia “On Tourism and Resorts” (adopted on March 9, 1997; № 599-II) Articles 3.7 and 3.8 and Law of Georgia “Sanitary Protection Zones for Resorts and Resort Locations, Articles 4.1-4.2-4.3.

The sanitary protection of the drinking water pipes and water-supply springs of the resort is conducted in concordance with the Law of Georgia on water supply infrastructure and water supply to populated places.

The control over the application of the sanitary protection rules of the resort is conducted by administration of the Tskaltubo Municipality, which informs the population, enterprises, organizations and other institutions about the sanitary protection of the districts and zones and also about the current regimes applied to the first sanitary protection zone.

The sanitary protection measures of the Tskaltubo resort are implemented by Tskaltubo municipality, JSC “Balneoservice” and also by those organizations that are mandated to ensure the sanitary protection of the sanatorium-resort, the recreational institutions and other objects.

The sanitary and the epidemic preventive measures are implemented by the relevant state, regional and local authorities.

Activities related to exploitation of the natural healing resources and the infrastructure of the sanitary protection zones are conducted by relevant state government bodies that ensure the

provision of all the sanitary-recreational, upgrading and rehabilitation and other types of works are coordinated.

An auction or a best-bid-based transfer of the state-owned assets in the sanitary protection zones can be made only with the permission of the Tourism and Resort Management State Body.

According to the Georgian legal framework, the Tskaltubo Municipality Sakrebulo, based on a positive conclusion of JSC “Balneoservice”, shall issue the construction permits for the first sanitary protection zone of the resort.

#### 4.2.10. Air Quality

##### **Introduction**

Air quality is of significant importance to guarantee a healthy environment for patients and spa guests in the Tskaltubo health resort area. Health resorts have to ensure air quality within the allowed limits to prevent adverse health effects or impairment through air admixes caused by anthropogenic influences. Natural air admixes that impair health, especially pollen, however, are unavoidable.

In order to evaluate air quality, certain key compounds have been measured and the current status of pollution has been analyzed through air admixes in the health resort. There are no regular air quality monitoring sites in the target area. The closest area where regular air monitoring is carried out is Kutaisi, which is located at a distance of 7 km from Tskaltubo.

The National Environmental Agency (NEA) carries out the collection, maintenance and analysis of environmental pollution monitoring data, as well as its further processing. NEA ([www.nea.gov.ge](http://www.nea.gov.ge), [www.meteo.gov.ge](http://www.meteo.gov.ge)) is a legal entity of public law (LEPL) operating under the Ministry of Environment Protection. NEA is the only institution in Georgia that has the legal mandate to carry out regular observation of hydro-meteorological processes, chemical and biological monitoring of marine, surface and ground waters, atmospheric air, as well as soil contamination and geological hazards, etc.

Within the feasibility study, six main parameters have been selected for measurement during the period of September 1-5: Total Particulate Matter (Total PM), Emissions of Carbon monoxide (CO), Mean concentration of nitrogen dioxide (NO<sub>2</sub>), Emissions of sulphur dioxide (SO<sub>2</sub>), Lead, and Ground level Ozone. Air samples at the observation points were taken three times a day. Concentration of the pollutants were compared against the national standards, or Maximum Allowed Concentrations (MAC) of harmful substances in ambient air determined

by the Ministry of Labor, Health and Social Protection of Georgia in 2003. However, this document does not differ too much from the old Soviet norms for protecting ambient air quality.

### Standards and guidelines

Air protection and related issues are regulated by the Law of Georgia on Protection of Ambient Air and by 15 subordinate regulations adopted according to the provisions of the Law.

For the purpose of air protection, Georgian legislation defines the MAC of harmful substances in ambient air. These standards, together with those of the World Health Organization (WHO) and the EU, are given in Table 1. It is assumed that if the concentration of a substance is lower than the indicated standard, it is not harmful for human health, even in the case of life-long exposure.

Calculation and determination of emission limits for air polluting industries is based on the MAC of harmful substances. Such limits are defined individually for facilities subject to environmental permits (the limits are defined during the permitting process), while the emission norms of the remaining small enterprises, as well as motor transport, are established by relevant technical regulations. The content of different harmful additives in petrol and diesel fuel (lead content in petrol, sulphur content in diesel, etc.) is regulated by decrees of the Government of Georgia.

Name of harmful substance	Maximum allowed concentration mg/m <sup>3</sup>			Concentration averaging period
	According to National legislation (NL)	Recommendation of the WHO	According to EU Legislation	
PM <sub>2.5</sub>	-	0.01	0.025	1 year
	-	0.025	-	24 hours
PM <sub>10</sub>	-	0.02	0.04	1 year
	-	0.05	0.05	24 hours
Particulate matter (total)	0.5	-	-	30 min
	0.15	0.12	-	24 hours
Nitrogen dioxide	-	0.2	0.2	1 hr
	-	0.04	0.04	1 year
	0.04	-	-	24 hours
	0.2	-	-	30 min
Sulphur dioxide	-	0.5	-	10 min
	-	-	0.35	1 hr
	-	0.05	-	1 year
	0.05	0.02	0.125	1 day
	0.5	-	-	30 min
Carbon monoxide	-	100	-	10 min
	-	10	10	8 hr



	-	30	-	1 hr
	5	60	-	30 min
	3	-	-	1 day
Lead compounds	-	0.0005	0.0005	1 year
	0.0003	-	-	1 day
	0.001	-	-	30 min
Ground level ozone	-	0.12	0.12	8 hr
	0.03	-	-	1 day
	0.16	-	-	30 min

Maximum allowed concentrations of harmful substances in ambient air measured by Geographics (2014)

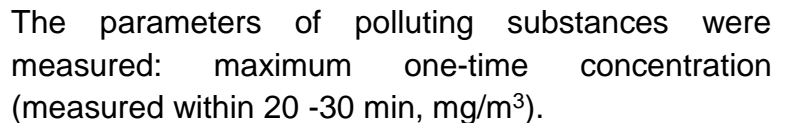
The MAC of harmful substances in ambient air represents the maximum concentration of that substance (averaged for a specific time period) which does not affect a person's health or the environment over regular periodic or lifetime exposure. The list of these limits, their types and values are defined by the Order #38/n (February 24, 2003) of the Minister of Labor, Health and Social Protection of Georgia on "Approval of Environment Quality Norms" and Order #297/n of the Minister of Labor, Health and Social Protection (August 16, 2001) on Amendments to the Orders. It should be noted that this document practically repeats the main provisions and norms stated in the Soviet Era document of similar content. Accordingly, in some cases the national limits do not correspond to the EU norms and WHO recommended standards. Therefore, the air quality national norms need to be revised in line with EU Legislation.

### Sampling Site Description

The air quality measurement sites were chosen in the spa area in order to assess:

- Concentration, especially at those sites where treatment is carried out (e.g. the spa area where treatment is applied) – Near Bath #6 within the park area.
- The influence on the most densely built-up areas with the direct impact of traffic (to determine additional impact) – Town center near the market place (see illustration).

Sampling points were selected on the basis of Tskaltubo's town zoning. One sampling point is located in the middle of the city park, which is determined as a recreational zone and corresponds to the place a). A second sampling point is located at the built-up area, which is determined as a residential zone and corresponds to place b). The field data objective was to collect all the above-mentioned six parameters' concentration data for 5 sampling days, three times per day. To achieve the field data objective, sampling was performed for 5 consecutive calendar days.



Air quality was assessed through comparison with measured concentrations in the appropriate standards. In particular, mean measured concentrations for a 20-30 min measurement period were compared to 20-30 min MAC (maximum allowed one-time concentration).

The following methods and instruments were used to carry out the measurements:

- Total Suspended Particles (TSP)– Instrumental measurements, device - Kanomax model 3443;
- Carbon monoxide and nitrogen dioxide– Instrumental measurements, device - gas analyzer Elan CO + NO<sub>2</sub> , with dual band;
- O<sub>3</sub>– Instrumental measurements, device - chemiluminescence gas analyzer Model 3.02Π-A;
- Sulfure Dioxide – Photo-Colorimetric method using barium chlorid
- Lead concentration detection– fiber filter media for collection of Pb and analyzed by spectrophotometry Agilent 700 ICP OS.

## Results

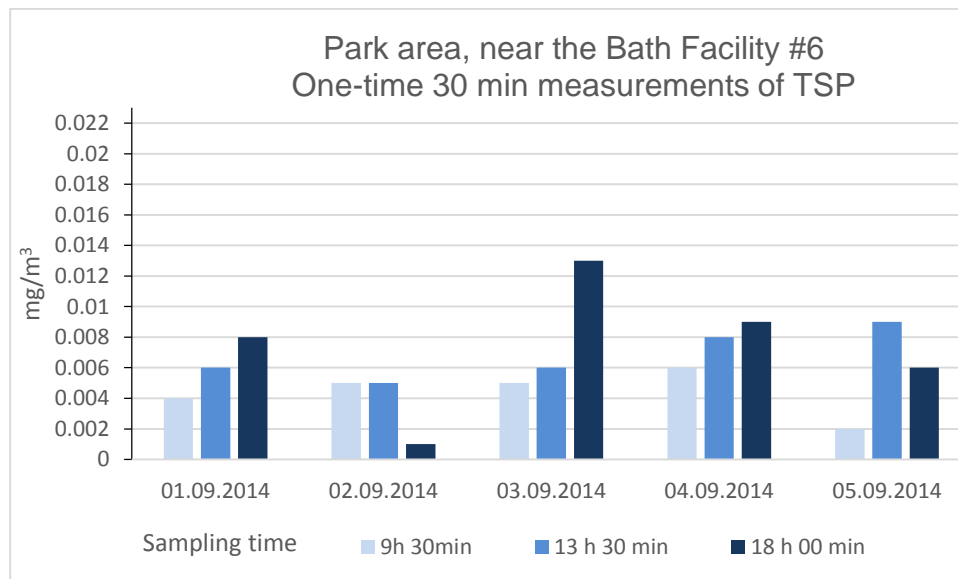
115

## Total Suspended Particulate Matter (TSP)

Particles found in the air we breathe vary greatly in size. Particulate matter are particles that are less than 10  $\mu\text{m}$  (10  $\mu\text{m}$  or 10 micrometres) in diameter and can be inhaled. The smaller the particle, the further into the lungs they can penetrate. For people with existing respiratory conditions, such as asthma or bronchitis, breathing in particles can make the condition worse. Particles can also reduce the body's capacity to resist infection. Based on health effects, the National Legislation (NL) for TSP allows one-time 30-minute average concentration greater than 0.5  $\text{mg}/\text{m}^3$ . The 24-hour average guideline is 0.15  $\text{mg}/\text{m}^3$ . The EU legislation establishes MACs only for specific fractions of dust–  $\text{PM}_{10}$  and  $\text{PM}_{2.5}$ . Georgia measures only the TSP.

Solid particulates, often called dust, gets into the ambient air as a result of various processes:

- TSP comes from sources like dusty roads, soil tiling, quarries and fuel combustion and cement production.
- $\text{PM}_{10}$  and  $\text{PM}_{2.5}$  come from sources such as burning coal, oil, wood and light fuel oil in domestic fires, transportation and industrial processes. Natural sources of particles include sea salt, dust, pollens and volcanic activity.
- $\text{PM}_{2.5}$  is also formed through the chemical reactions in the atmosphere.



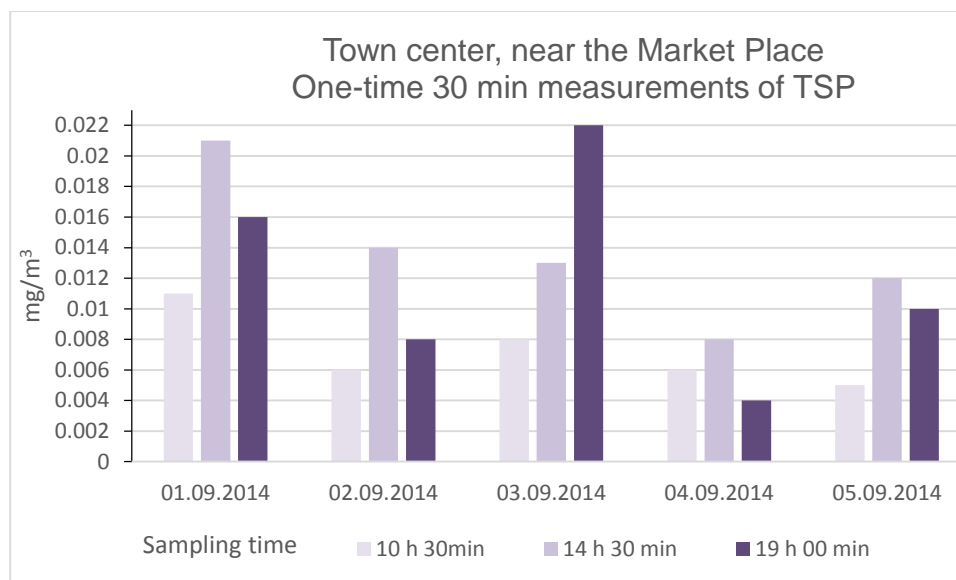


Figure 1-2. One-time 30 minute measurement of TSP recorded at Park and town center in September 2014.

Concentration of TSP in Tskaltubo Town (according to two sampling points) does not exceed the permissible level of MAC according to the national legislation. Even still, concentrations of TSP are higher in the town center compared to the Park area. Figure 1-2 shows how concentrations vary at different times during the day. At the Market place site, the highest concentrations occurred mostly at midday, resulting from motor vehicle circulation (a bus station located near the market place represents the main transport hub for Tskaltubo and adjacent municipalities).

### Carbon monoxide

Carbon monoxide is a colourless gas that reduces the amount of oxygen that is received by body tissues. It suppresses transportation of oxygen by blood. Based on health effects, the NL for CO allows one-time 30 min average concentration greater than 5 mg/m<sup>3</sup>. The 1-day average guideline is 3 mg/m<sup>3</sup>.

Carbon monoxide is a product of incomplete combustion. The main sources are motor vehicle exhausts (generated in the process of incomplete combustion due to insufficient temperature, or due to malfunction of the air supply system of the internal combustion engine). It is also emitted from energy production plants, in particular those using oil and coal combustion, and from the metallurgical industry.

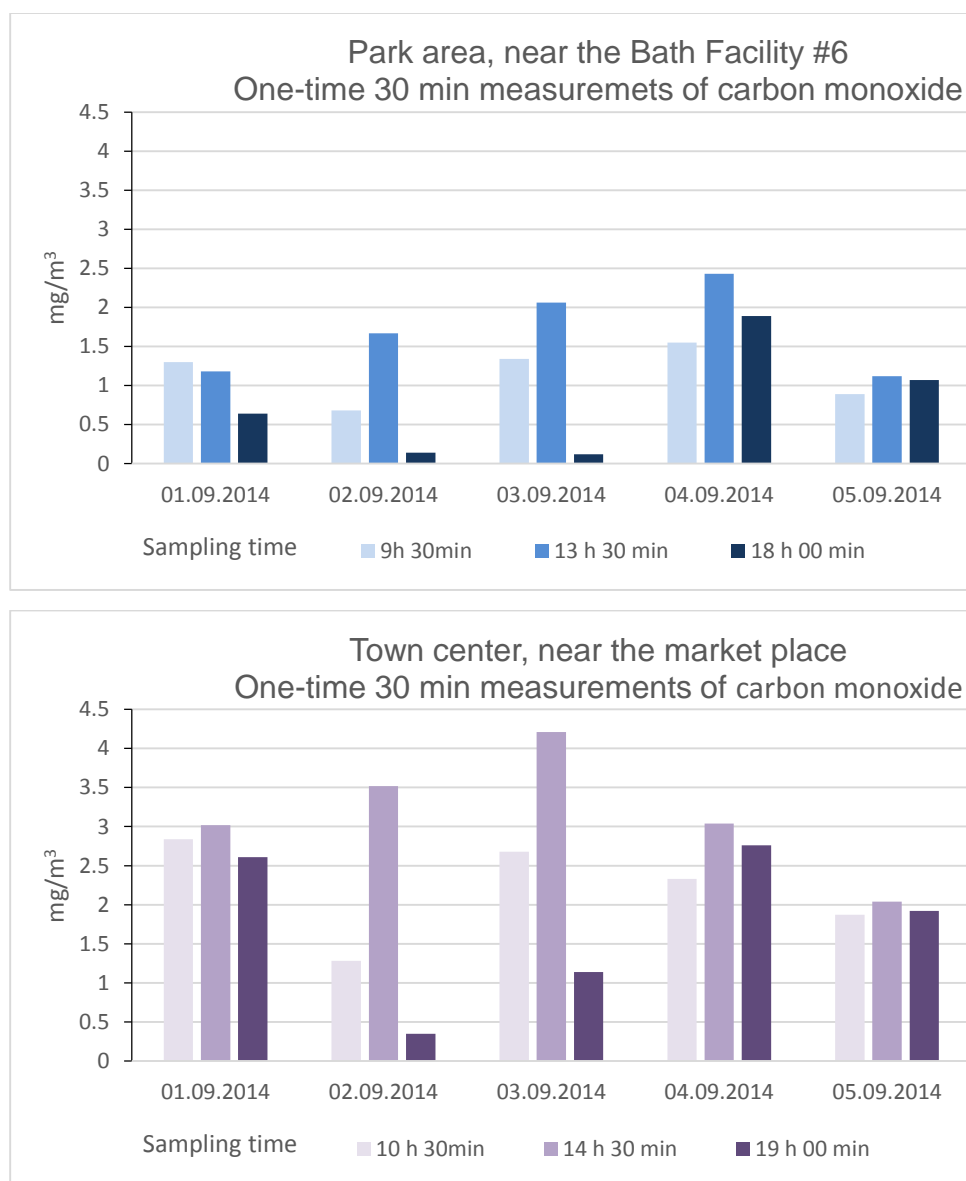


Figure 1-2. One-time 30-minute measurement of carbon monoxide recorded at Park and town center in September 2014

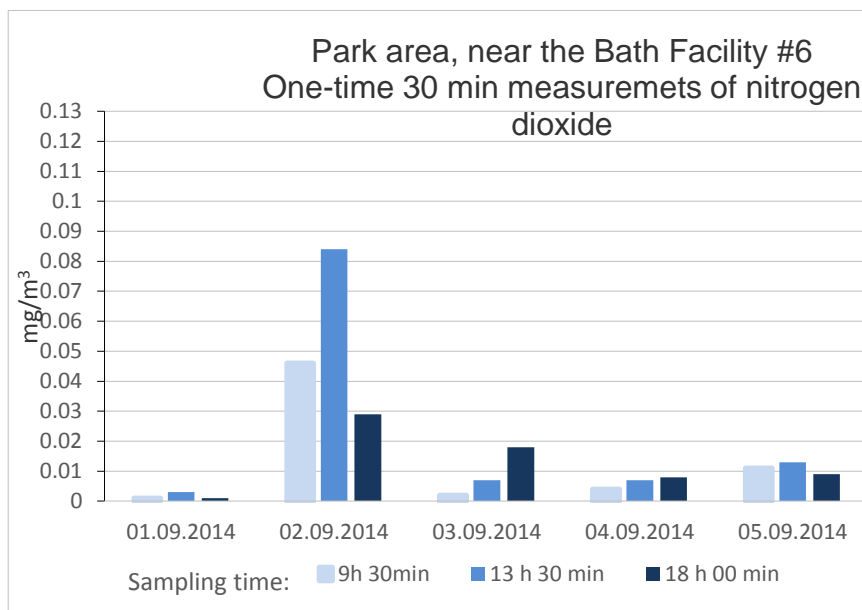
Concentrations of carbon monoxide in Tskaltubo Town (according to two sampling points) do not exceed the permissible levels of MAC according to the national legislation. However, concentrations of carbon monoxide are higher in the town center compared to the Park area and the results are close to the MAC. Figure 1-2 shows how concentrations vary at different times during the day. At the town center, the highest concentrations occurred at midday. The main sources of CO in Tskaltubo during the summer are motor vehicles, while in winter it is home heating fires and motor vehicles.

## Nitrogen dioxide

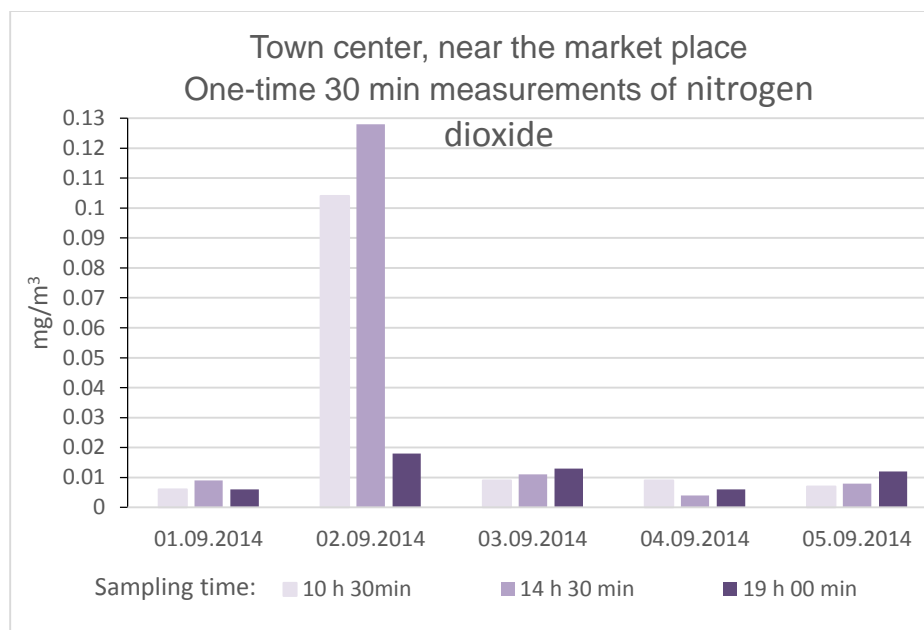
Nitrogen dioxide and monoxide are the products of fuel combustion at a very high temperature in abundance of oxygen. The main sources are motor vehicle exhausts, emissions from power stations and the burning of solid waste.

At high concentrations in ambient air, nitrogen dioxide can irritate the lower airways of the respiratory tract, especially the lung tissue.

Nitrogen dioxide is another gas that affects the respiratory system. Based on health effects, the NL for  $\text{NO}_2$  allows one-time 30-min average concentration greater than  $0.2 \text{ mg/m}^3$ . The 24-hour average guideline is  $0.4 \text{ mg/m}^3$ .





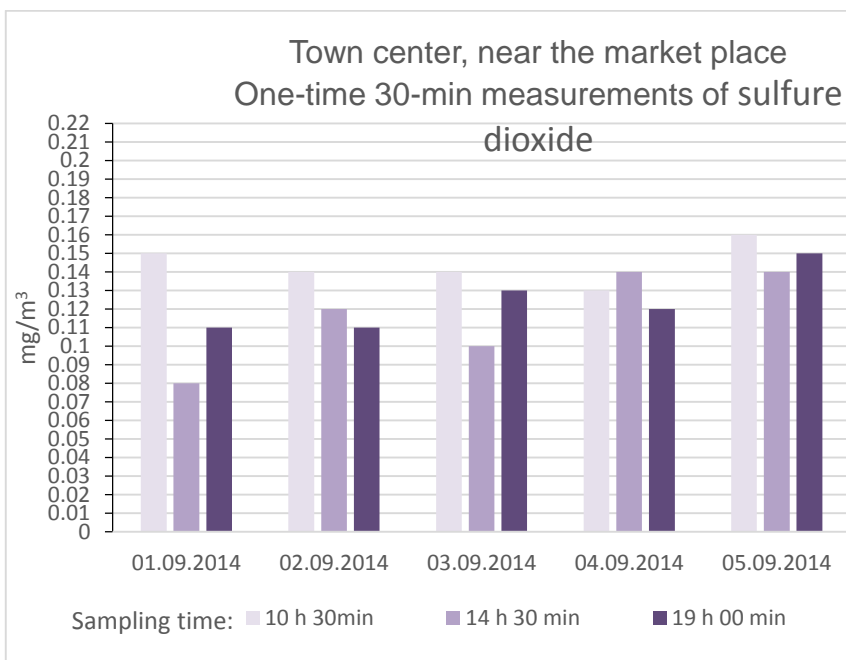
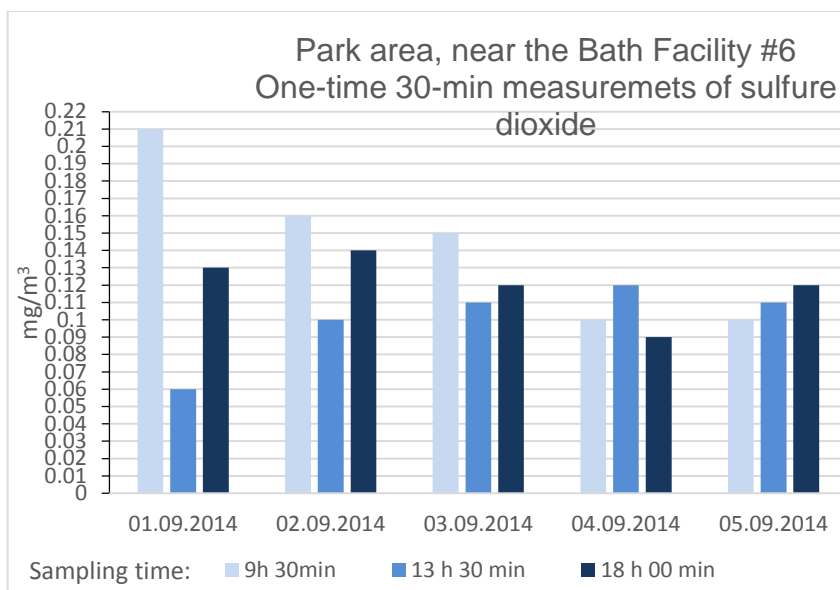


*One-time 30-minute measurement of nitrogen dioxide recorded at Park and town center in September 2014 (Geographic)*

A summary of the  $\text{NO}_2$  concentrations measured at Tskaltubo in two sampling sites is shown in fig 1-2. The main source of  $\text{NO}_2$  in Tskaltubo town is motor vehicle emissions. Therefore the concentrations on the 2nd of September in both sampling sites are higher than the main trend shown on other days, however it is still not above the maximum allowed level. Apparently the reason for this outcome was some reconstruction and rehabilitation works that were carried out in the park and surrounding areas on that day, involving the operations of some special construction equipment. Solid waste burning is also a possible source of  $\text{NO}_2$  emissions, since there is no landfill and supposedly waste is burnt directly in open areas.

## Sulphur dioxide

Sulphur dioxide gets into ambient air mainly due to the combustion of sulphur containing fuel. The main sources are power stations working on coal, or masut, boiler rooms, metallurgical plants, and diesel motor vehicles. Levels of Sulphur dioxide higher than the permissible levels irritate the upper airways of the respiratory tract. Harmful impact on nasopharynx and mucous membranes can occur. Based on health effects the NL for  $\text{SO}_2$  allows one-time 30-min average concentration greater than  $0.5 \text{ mg/m}^3$ . The 24-hour average guideline is  $0.04 \text{ mg/m}^3$ .



One-time 30-minute measurement of sulfure dioxide recorded at Park and town center in September 2014

Concentrations of sulfure dioxide in Tskaltubo Town do not exceed the permissible level of MAC according the national legislation. Concentrations of sulfure dioxide are the same in the town center compared to the Park area. Figure 1-2 shows how concentrations vary at different times during the day.

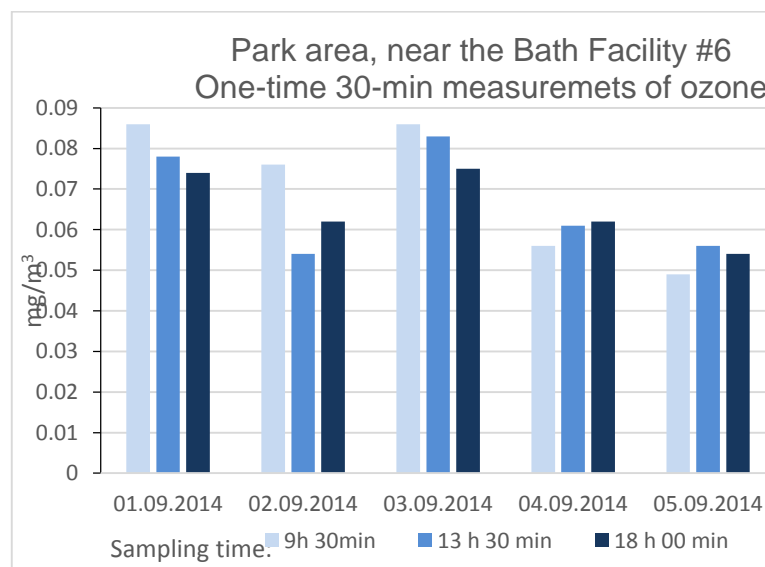
### Ground level Ozone

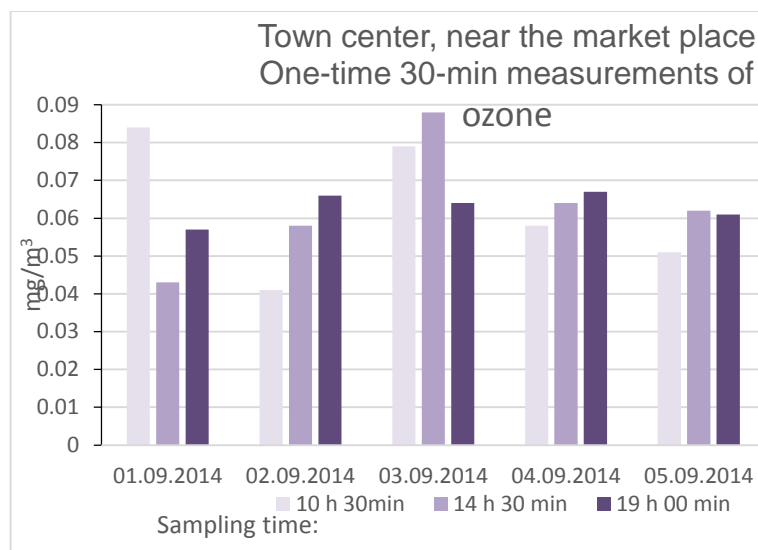
Pollutants emitted into the near-earth layer of the ambient air (troposphere) have a direct negative impact on human health and ecosystems in general. Ground level ozone is a gas

that is formed as a secondary pollutant at ground-level by the reaction of a mixture of other chemicals– NO<sub>x</sub>, CO and VOCs– in the presence of sunlight. Two of these so-called “secondary” pollutants are of particular concern: tropospheric or ground level ozone (O<sub>3</sub>) and fine particulate matter (PM<sub>10</sub>). PM<sub>10</sub> is one of the main components of smog– a significant problem in all large cities. Ground level ozone affects human health, crops and vegetation. High levels of ozone can damage the respiratory system.

According to the EU Air Quality Standards, the target values for ozone from 2010 for protection of human health is a maximum daily 8 hour mean not to exceed 120 ug/m<sup>3</sup> (0.12 mg/m<sup>3</sup>) more than 25 days per calendar year, averaged over 3 years. Based on health effects, the NL for O<sub>3</sub> allows one-time 30-min average concentration greater than 0.16 mg/m<sup>3</sup>. The 24-hour average guideline is 0.03 mg/m<sup>3</sup>.

Concentration of ground-level ozone in Tskaltubo Town does not exceed the permissible level of MAC according to the national legislation. Figure 1-2 shows how concentrations vary at different times during the day.





*One-time 30-minute concentrations of ozone during a day recorded at Park and town center in September 2014*

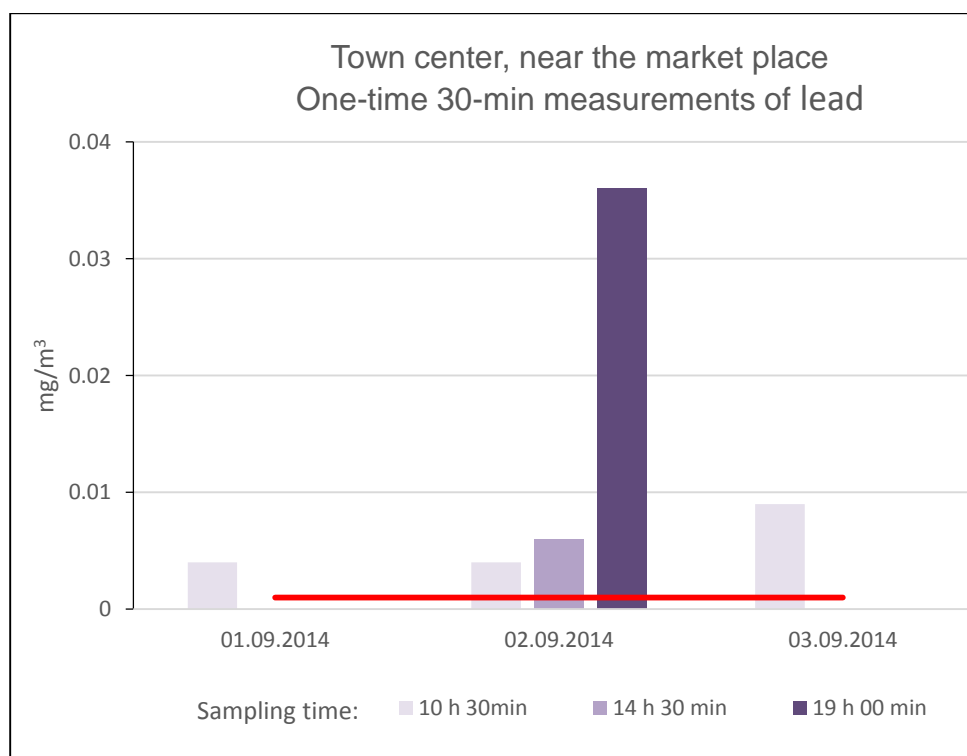
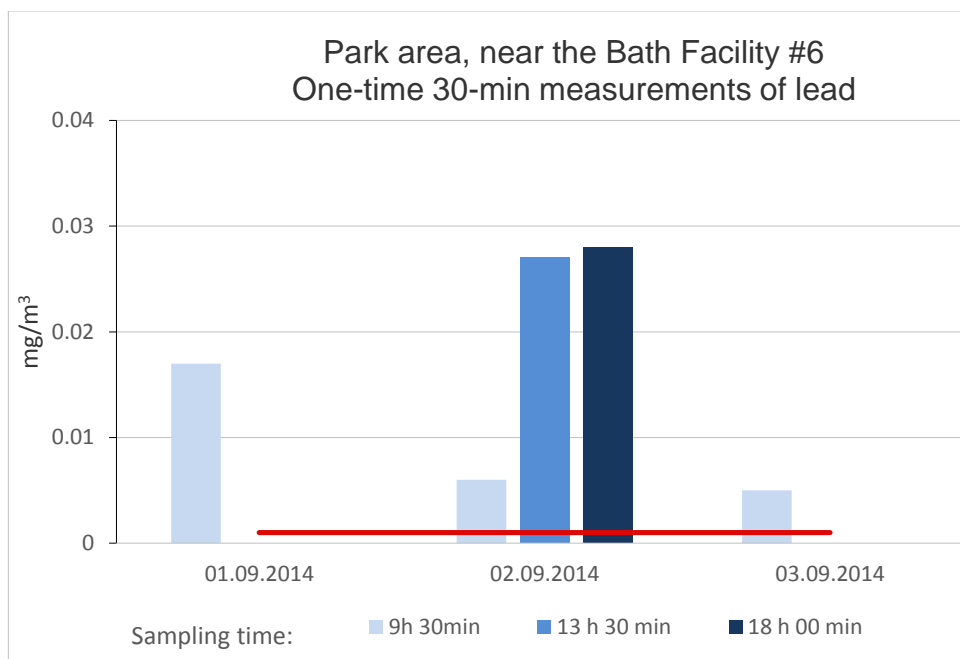
## Lead compounds

The main sources of lead and lead containing substances in ambient air are motor vehicles (burning of leaded petrol) and metallurgical plants.

The poisoning impact of lead is revealed at molecular and cellular levels. It impairs nervous, mental and physical development.

The ambient lead levels are high than the permissible level of MAC according to the national legislation. Based on health effects, the NL for lead allows one-time 30 min average concentration greater than  $0.001 \text{ mg/m}^3$ . The 1-day average guideline is  $0.0003 \text{ mg/m}^3$ .

Average air quality concentration for lead is higher at different times during the day. Vehicle emissions contribute to the lead emissions in the atmosphere. Industrial and combustion sources cannot be considered as lead emission sources in Tskaltubo, especially after the collapse of Soviet Union. Apparently, municipal solid waste burning is the combustion source of the high concentration of lead.



One-time 30-minute concentrations of lead during a day recorded at Park and town center in September 201

**Table of measurements of air pollution parameters.**

Park Area, near the Bath Facility #6						
	TPS	Carbon monoxide	Nitrogen dioxide	Sulfure dioxide	Ozone	Lead
<b>01.09.2014</b>						
9h 30min	0.004	1.3	0.001	0.21	0.086	17x10 <sup>-6</sup>
13 h 30 min	0.006	1.18	0.003	0.06	0.078	-
18 h 00 min	0.008	0.64	0.001	0.13	0.074	-
<b>02.09.2014</b>						
9h 30min	0.005	0.68	0.046	0.16	0.076	6x10 <sup>-6</sup>
13 h 30 min	0.005	1.67	0.084	0.1	0.054	27x10 <sup>-6</sup>
18 h 00 min	0.001	0.14	0.029	0.14		28x10 <sup>-6</sup>
<b>03.09.2014</b>						
9h 30min	0.005	1.34	0.002	0.15	0.086	5x10 <sup>-6</sup>
13 h 30 min	0.006	2.06	0.007	0.11	0.083	-
18 h 00 min	0.013	0.12	0.018	0.12	0.075	-
<b>04.09.2014</b>						
9h 30min	0.006	1.55	0.004	0.1	0.056	-
13 h 30 min	0.008	2.43	0.007	0.12	0.061	-
18 h 00 min	0.009	1.89	0.008	0.09	0.062	-
<b>05.09.2014</b>						
9h 30min	0.002	0.89	0.011	0.1	0.049	-
13 h 30 min	0.009	1.12	0.013	0.11	0.056	-
18 h 00 min	0.006	1.07	0.009	0.12	0.054	-
Town Center, near market place						
	TSP	Carbon monoxide	Nitrogen dioxide	Sulfure dioxide	Ozone	Lead
<b>01.09.2014</b>						
10h 30min	0.011	2.84	0.006	0.15	0.084	4x10 <sup>-6</sup>
14 h 30 min	0.021	3.02	0.009	0.08	0.043	-
19 h 00 min	0.016	2.61	0.006	0.11	0.057	-
<b>02.09.2014</b>						
10h 30min	0.006	1.28	0.104	0.14	0.041	4x10 <sup>-6</sup>
14 h 30 min	0.014	3.52	0.128	0.12	0.058	6x10 <sup>-6</sup>
19 h 00 min	0.008	0.35	0.018	0.11	0.066	36x10 <sup>-6</sup>
<b>03.09.2014</b>						
10h 30min	0.008	2.68	0.009	0.14	0.079	9x10 <sup>-6</sup>
14 h 30 min	0.013	4.21	0.011	0.1	0.088	-
19 h 00 min	0.022	1.14	0.013	0.13	0.064	-
<b>04.09.2014</b>						
10h 30min	0.006	2.33	0.009	0.13	0.058	-
14 h 30 min	0.008	3.04	0.004	0.14	0.064	-
19 h 00 min	0.004	2.76	0.006	0.12	0.067	-
<b>05.09.2014</b>						
9h 30min	0.005	1.87	0.007	0.16	0.051	-
13 h 30 min	0.012	2.04	0.008	0.14	0.062	-
18 h 00 min	0.01	1.920	0.012	0.150	0.061	-



## 4.2.11. Conclusions

## Conclusions

- Results obtained from the air quality sampling show that concentrations of the main pollutants in Tskaltubo do not exceed the maximum allowed concentration, except for the lead concentrations.
- In general, air quality in Tskaltubo town is good.
- The main contaminant of concern in Tskaltubo urban areas is lead emitted by motor vehicles. There was a concentration greater than 28  $\mu\text{g}/\text{m}^3$  measured at the park site and at the town center, with a maximum measurement of 36  $\mu\text{g}/\text{m}^3$ .
- It is clear that the transport sector is the primary source of air pollution in Tskaltubo. Emission of polluting substances from this sector is increasing year by year and this trend is expected to continue. The acting national standards for fuel quality and motor vehicles emissions are lower than those in EU legislation. Unfortunately the economic situation within Georgia does not allow for the immediate adoption of standards comparable to those within the European Union. Therefore the gradual improvement of these standards is intended to, step by step, harmonise them with EU standards.
- The number of private vehicles has grown rapidly over the past decade. Most of the cars purchased are second-hand cars imported from abroad and the average age of the fleet in Georgia is 10-15 years. Diesel engine cars are very popular. All of these factors lead to high emissions from motor transport.
- The public transport system should be improved to become more attractive for both residents and tourists. Alternative roads are being constructed for traffic optimisation in Tskaltubo. Improving public awareness of this would also be of benefit.

## 4.2.12. Water Supply Network

Water supply network of Tskaltubo town and its surrounding villages is under the responsibility of the SC Tskaltubo of United Water Supply Company of Georgia (UWSCG). The water supply system was originally designed to only supply the town of Tskaltubo, but currently the system also supplies the villages of Maghlaki, Gvishtibi, Ternali, Gumbra and Khomuli.

Tskaltubo is supplied with water from a well field located 14 km south-west of the town. All together, the well field contains 22 boreholes, out of which 9 are operational. Water intake with its electricity supply facilities have been renovated and 16 wells will be rehabilitated.

Some of boreholes will remain as stand-by. The works are already contracted and once the project is completed giving a maximum water production of 24,000 m<sup>3</sup>/d. Drinking water is pumped from a rather good quality underground aquifer. It is only chlorinated before being sent to the distribution network. There are about 90 km of main network in Tskaltubo (see map 13).

7,177 households are connected to the water supply system and they will shortly be equipped with meters. There are 278 commercial units connected to the water supply. All commercial connections are equipped with meters. 4,756 households are supplied with potable water on a 24 hour basis per week. The total length of the potable water networks is 149 km. The total rehabilitated/replaced drinking water network is 24.5km, 27% of the main network in Tskaltubo. The normal functioning of this system is essential not only for the improvement of the living conditions of Tskaltubo's permanent inhabitants, but also for the creation of tourism development conditions as well.

As we have already mentioned, the Tskaltubo project includes several sub-projects, which are as follows:

Completed and ongoing subprojects in Tskaltubo started 2009

N	Project Name	Implementation Period	Programm	Sponsor
1	Tskaltubo water supply pipeline rehabilitation (3.6km)	2009	RMIDP	WB
2	Rehabilitation of water supply and sewerage system in the central part of Tskaltubo town (ws 0.7km & ss 13km)	2012-2013	RDP II	WB
3	Rehabilitation of Tskaltubo water supply system (0.7km)	2012	IDP3	EU
4	Rehabilitation of Tskaltubo water supply system (19.5km)	2012-2013	WIMP	EIB

The main benefits resulting from the project implementation will be the improvement of the water quality and the quantity for the town population of Tskaltubo. The projects will have the following tangible and intangible benefits:

**Additional water quantity** – The rehabilitated water supply system will create the chance to have permanent and better quality water.

**Reducing the costs for the exploitation** – According to the presented project, the water usage will be optimized; the population, who was not getting the water, will now receive the water permanently.

**Saving the energy effectiveness** – The presented project implementation will enable effective water supply and water leakages will be reduced. The cost for the exploitation also will be saved, which will be counted as a benefit for the project's economical evaluation.

**Environmental Service** – The improved and better condition of pipes will reduce water leakages, thus saving power usage, which will be counted as an environmental benefit.

**Reduced incidence of water borne disease** – The improved water system will eliminate the risk of cross-contamination of the drinking water. The following socio-economic benefits should be noted: diminution of the private health and the public health expenditures, and avoidance of spending economic valuation of visitors on local commerce and businesses, etc.

#### 4.2.13. Sewage Network System

The total length of the wastewater collection system is 35 km, separated by the river in 2 major hydraulic catchments (collectors). There are 3 collectors, located in the sanatorium park, which are currently under renovation. Some other parts of the collection network are also being renovated and some new parts are being constructed. The network collects the sewage by gravity and it end up in a pumping station located southwest of the town. This pumping station formerly fed the sewage treatment plant. There are two pipes connected upstream to the pumping station, one from each bank of the river, of 300 mm and 500 mm diameters. The pumping station is now totally out of order; the pumps pit is flooded and the building is in a very poor condition. Neither the civil structure, nor the electromechanical equipment can be overhauled or retrofitted. Currently, the sewage flows to the river through an overflow near the pumping station (see map 14).

Tskaltubo's wastewater treatment plant was abandoned at the end of the Soviet period. It is located approximately 650 m south of the sewage pumping station, on flat land, along the Tskaltubostskali River. An agricultural area surrounds it.

The plant was comprised of the following works: Inlet chamber, Grit chambers (x2), Conventional primary settlers (x8), Trickling filters with forced aeration (x2 – diameter: around 17m), with recycling pumping station, Secondary settlers (x4), chlorination, sludge drying beds.

The treated water was discharged into the Tskaltubostskali River. This plant has not been working for more than 20 years. All of the equipment and the metal sheet works are strongly corroded and damaged. Nothing can be reused. The plant was initially built from precast panels, and is in very poor condition. The only part of the plant that could still have some value would be the sludge drying beds. It should be taken into consideration that these could be reused after cleaning, if they are refilled with appropriate gravels and sand, and new pipes and valves are installed.

#### 4.2.14. Waste Management System

##### **General overview**

The overall system of waste management is not effective, and does not comply with international standards and requirements. The Municipal waste is disposed without sorting, recycling, re-use or composting. The solid waste is disposed into landfills or uncontrolled dumping sites all over the country. There is no special infrastructure for Hazardous Waste disposal and/or treatment, so the common construction practice accepted by the authorities is to dispose of these types of wastes at the municipal landfills.

In all cities, the amount of waste generated is about 270 kg/cap. Information on waste generation in rural areas is not available and therefore no comparison can be made between the urban-rural areas.

Georgia is taking the necessary steps to improve the current situation and after the adoption of the waste management law, which was developed under the Twinning project, the practical implementation of the data collection will be initiated and the actual problems and challenges that might arise after the enforcement will be addressed.

According to the Georgian legislation, the local Municipalities are responsible for the service and final disposal of the household wastes. Only the big cities monitor the amount of waste entering the dumpsites daily.

With the most recent institutional changes, the Ministry of Regional and Infrastructure Development is setting up a company to be responsible for the municipal waste infrastructure management.

The City of Kutaisi is the capital of the Imereti Region and an important development nucleus in Western Georgia. Both the city and the region are the second most populous ones in Georgia, right after the capital Tbilisi. Within the framework of the Georgia-German Financial Cooperation, an integrated solid waste management system for the City of Kutaisi is being implemented. The objective of the Project is the preparation of a landfill conservation strategy, a feasibility study report for the construction of new sanitary landfills in Kutaisi and the determination of a suitable number of transfer stations. The conservation of the old dumpsites is to be implemented in 2014-2016. A new regional sanitary landfill will serve all of the municipalities in the Imereti Region, including Tskaltubo. The objective of this project is to decrease the negative influence of the municipal waste in the environment and to improve the population's quality of life in the city of Kutaisi.

## **Current Situation in Tskaltubo Town**

The Tskaltubo Municipality does not have a municipal landfill within the municipality's territory. For solid waste disposal, the Tskaltubo Municipality uses the Kutaisi dumpsite (an extension of Nikea Street, near the area of the village Geguti). Waste is disposed in the municipal landfills without any prior separation. Industrial, construction, medical, biological and other kinds of waste are disposed together with household waste. The Tskaltubo Town Cleaning Service (a non-commercial legal entity) transfers this waste to the Kutaisi dumpsite. Currently, the collection of waste, generated from the villages, does not take place. Furthermore, every village that is not covered by the waste collection from the nearest municipal services, sets up its own spontaneous dumpsite or burns it, and pollutes the surrounding areas and environment.

## **Waste Management Infrastructure**

The Tskaltubo Municipality is responsible for the collection and the transportation of household waste. However, a regular waste collection service is only available in Tskaltubo Town. However, the situation is improving every year.

Domestic waste is collected by the following methods: Containers are provided on the streets. The volume of the containers is between 0.8 to 1 cubic meters. The waste is loaded into the waste transporters once or twice per day. After cleaning the streets, gardens, parks, and beaches, the waste is collected in containers, or just gathered at an adjacent area. This waste is often burnt.

One of the decisions regarding the waste, adopted during the rehabilitation of Tskaltubo infrastructure projects, was: The old pipes (steel and cast iron water and waste water pipes which were built 50-60 years ago) that needed to be entirely replaced were not unearthed and removed. Due to the cost implications and the risks associated with their safe disposal, the new pipes were laid alongside the old ones and the old pipes are kept in place.

### **4.2.15. Institutional Framework**

Consequently, in line with this reform, on April 24, 2012 the new state-owned Solid Waste Management (SWM) Company of Georgia was established under the Ministry of Regional Development and Infrastructure. The government holds 100% shares of the company. The company implements solid waste management actions with respect to landfills in Georgia, excluding the City of Tbilisi and the Adjara region. One of the company's missions is to ensure reliable statistics on the waste disposed in the landfills and to establish and improve the accounting system for the disposal waste in the landfill.



Source: Research & Presentation Geographic

#### 4.2.16. Legislative Framework

There is no legislation concerning the management of waste in Georgia and no official definition of municipal or household waste has been provided. However, the bill of the new Law on Waste Management has been presented to the parliament and is awaiting approval. The new draft Law incorporates many elements of the EU waste legislation, as well as definitions and procedures.

The current legislative system is not clear on responsibilities, because various types of waste are regulated by legislation of Ministry of Environment (Act on Environment), Ministry of Health, Ministry of Agriculture and Municipal legislation. The latter seems to have the most influence on municipal waste management in Georgia.

In the absence of a framework waste legislation, the waste is managed according to the municipal regulations:

##### National Acts:

- Law on Environment Protection (1996)
- Law on Licenses and Permits (2005)
- Law on Healthcare (2007)



- Law on Transit & Import of Waste into and out of the Territory of Georgia (1997)
- Law on Local Self-governance and Governance (2005)
- The “National Action Plan on Persistent Organic Pollutants” (21.04.2011)
- Order of the Minister of Health on „Sanitary Rules and Norms for Construction and Arrangement Solid Municipal Waste Landfills” (1996)
- The amendment to the law on Environmental Impacts Permit (22.03.2011) “already functioned Landfills have to obtain permits before the 1.01.2014”
- Statute of the Government of Georgia “Permit issue rules for production, transportation, import, export re-export and transit and list of restricted materials” (28.09.2006) - postponed till 1.07.2011

#### International Conventions

- Basel Convention on the Control of Transboundary Movements of Hazardous Waste and their Disposal (1999)
- Stockholm Convention on Persistent Organic Pollutants (POPs) (2006)
- Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (2007)

#### 4.2.17. Protected Cave Areas

The Imereti Cave Protected Areas are located in the Imereti region and cover four municipalities – Tskaltubo, Khoni, Terjola and Tkibuli. The total area of the Imereti Cave’s Protected Areas is 504.6 ha. Sataplia Nature Reserve is 330 ha, Sataplias Managed Reserve (34 ha), Prometheus Cave Natural Monument (46.6 ha), Homuli Cave Natural Monument (see Map 3). The Administrative building is located at Sataplia Managed Reserve. The management of the Imereti caves is conducted from here. It is noteworthy that Sataplia Managed Reserve and Prometheus Cave Natural Monument has one of the most well-arranged infrastructures.

The cave’s air has a high natural radiation level and a high concentration of light ions that have a positive impact on human organisms. The content of carbon dioxide in the Cave’s air is from 0.05 to 0.3%. No other gases, or harmful or dangerous life threatening elements were discovered in the Cave.

The climate of the Prometheus Cave is comparatively stable. The cave air has not changed significantly. The average temperature in the Cave is from 13.5-14.5°, the annual temperature varies from  $\pm 0.2-0.5$  °-max; the comparative humidity of the Cave is 96-99%. The concentration of radon in the gallery of the Cave fluctuates from 307 to 6905 Bq/m<sup>3</sup>.

The Gamma-radiation background is between 45 and 133 nSv/hr. In the same gallery of the Cave (summer 2007) the radon's concentration was two and more times higher than in the spring of 2008. In 2007 the content of the gaseous ions was 1.59 times higher than in 2008. With regards to the gamma-radiation background, observation data differs insignificantly (10%).

In 2012, the Agency for Protected Area and Check Development Agency signed an agreement on the improvement of the Cave management. Two visits of Check experts took place in 2013 to implement the activities envisaged in the framework of the project.

It is noteworthy that the development of the speleo-therapy in the Caves may be a real step in the future cooperation. Experts from Czech Republic installed Radon measuring equipment in the Satsurblika Cave to see if the conditions of the Cave are good enough for the possible development of speleo-therapy. The results of the research will be known by the end of 2014.

It is also worth mentioning that JSC "Balneoservici", in its future development plan, considers Tskaltubo as the place where speleotherapy will be rehabilitated (treatment using the microclimate of the Caves). This tradition existed and was successfully applied for treatment of respiratory tract and vascular diseases. The "TetriMghvime" ("white Cave") was used then for that purpose.

The Cave is of a corridor-gallery type. Its maximum length is 5 meters long, with a width of 30 meters, and a length of 100 m. The entry is a 3.6-meter long tunnel. There was abundant scientific material about the healthy microclimate of these Caves. Several thousands of people have been treated there<sup>5</sup>. This material has to be analyzed and made known to public. Just some minimum improvements have to be made: the road to the Cave, the electricity, the cleaning and arrangement of visual effects in the galleries, the delivery of inventory, etc. Even today a lot of visitors go to these Caves regardless of "the wild neglected state", because people have the need to have treatment there. According to "Balneoservice", this Cave should not be used for tourism purposes in order to avoid possible contamination of its microclimate.

#### 4.2.18. Legal, Regulatory and Permitting Requirements

The EU Convention on Environmental Impact Assessment (so called “ESPOO” Convention, 1991) was supplemented in 2001 by the Strategic Environmental Assessment Protocol, which is currently adopted and enforced as the Strategic Environmental Assessment Directive (EU SEA Directive 2001/42/EC). According to this directive, governments are obliged to undertake systematic (strategic) assessments of the lands use and plans, infrastructure development plans, regional development plans, programs and master plans in terms of possible adverse impact on environment resulted from their implementation.

The Georgian environmental legislation, despite the progress in the harmonization with the EU legislation, currently does not consider the strategic environmental assessment of the governmental plans and programs. Moreover, the master plans of the resorts and its reconstruction are not included in the List of activities subject to EIA and the Environmental Permit presented in the Law of Georgia on Environmental Impact Permit (2007), and thus do not require the preparation of an EIA report.

However, the local and regional development plans, programs and master plans in Georgia have traditionally been supplemented by the ecological component. Giving the scale and importance of the Resort Project, it is recommended that a comprehensive environmental study is undertaken for this project, including the baseline environmental conditions, the anticipated impact factors and the environmental risks.

A number of Georgian laws and regulations exist related to the environment, social, labor, land, cultural heritage, and other technical issues, which are relevant to this environment.

The Constitution of Georgia sets general regulating principles of environmental protection. Namely, Article 37, Clause 3 states that all citizens have the right to live in a healthy environment and use the natural and cultural surroundings. In addition, the citizens are obliged to protect the natural and cultural surroundings. Below is a list of the principle environmental, social, health care, cultural heritage, and technical laws and regulations:

##### Principle Laws and Regulations

Year	Law / Regulation
	<u>Environment</u>
1994	on Soil Protection
1996	on System of Protected Areas
1996	on Protection of Environment
1996	on Mineral Resources

1997	on Wildlife
1997	on Water
1998	on Hazardous Chemicals
1999	on Protection of Ambient Air
1999	Forestry Code of Georgia
1999	on Compensation of Damage from Hazardous Substances
2000	on Regulation and Engineering Protection of Coastline and River Banks of Georgia
2002	Regulation on Environmental Impact Assessment (approved by the Order No. 59 of the Minister of Environment).
2005	on Red List and Red Book of Georgia
2006	on Licenses and Permits
2007	on Status of Protected Areas
2007	on Ecological Examination
2007	on Service of Environmental Protection
2007	on Environmental Impact Permit
	<u>Cultural Heritage</u>
2007	Law on Cultural Heritage
	<u>Social, health and labor issues</u>
1997	Law of Georgia on Health Care
1997	Law on Professional Unions
2006	Labor Code of Georgia
2007	Law on Public Health
	<u>Land and land ownership</u>
1997	The Civil Code of Georgia
1997	The Civil Procedural Code of Georgia
1996	The Law of Georgia on Ownership of Agricultural Land
2010	Law on State Owned Property
2007	Law of Georgia on Entitlement of Ownership Rights to Lands Possessed (Employed) by Physical and Legal Persons of Private Law
	(Employed) by Physical and Legal Persons of Private Law
2007	Law on Replacement Cost Reimbursement and Compensation for the Use of Agricultural Land for Non-Agricultural Purposes
2007	Presidential Decree #525 on Rules for Entitlement of Ownership Rights to Lands Possessed (Employed) by Physical and Legal Persons of Private Law and Approval of Ownership Certificate Format

The Law on Environmental Impact Permit, Law on Licenses and Permits and Law on Ecological Assessment regulate the environmental permitting system in Georgia. These laws are described below.

In Georgia, the following laws mainly regulate projects requiring ecological examination:

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

The Law on Environmental Impact Permit contains the list of activities subject to EIA and the related procedures and regulations governing the issuance of environmental impact permits (EIP). A resort rehabilitation project does not require an EIP and/or State Ecological Expertise (SEE) under the Georgian legislation, since in accordance with the Article 4 of the Law of Georgia on Environmental Impact Permits, resort rehabilitation is not listed as a type of project subjected to EIP or SEE. Setting the norms for maximum permissible levels of air and water emissions specifically for the project is not required either. According to current legislation, the water and air emissions during the rehabilitation and the operation of the project facilities should therefore comply with the existing norms established by the Technical Regulations of the Environmental Protection (Order of the Minister of Environment Protection No. 745, dated 13.11.2008).

### **Law of Georgia on Ecological Examination**

This law makes the ecological examination an obligatory step in order to issue the environmental impact permit or construction permit for certain types of activities.

### **Law of Georgia on Licenses and Permits**

This law regulates the issuance of licenses or permits, gives an exhaustive list of licenses and permits, and sets the rules for issuing, amending, and cancelling permits. The law defines three principles for issuance of the license:

- “One-stop shop” principle – meaning that a licensing administrative body shall ensure the approval of the additional licensing conditions by the other administrative bodies.
- “Silence gives consent” – the licensing administrative body is obliged to make a decision in due course after the submission of the application. Otherwise, if a decision is not made in the determined time period the license is deemed issued.
- “Umbrella principle” – the holder of the general license is not obliged to apply for a specialized license.

## **Law of Georgia on the Protection of the Environment**

This law regulates the legal relationship between the bodies of the state authority and the physical/legal persons regarding environmental protection and use of natural resources on Georgian territory, and defines the responsibilities of state institutions. The law gives major principles for environmental management, licensing, standards, EIA, and related issues and describes different aspects of the protection of the ecosystems, protected areas, and biodiversity.

## **Law of Georgia on Natural Resources**

This law defines the status of the natural resources, describes their use, and sets out the types of licenses and rights and obligations of the users. The law sets responsibilities to preserve the lands from contamination and ensures conformity of the agricultural activities with the relevant legal requirements. It describes the economical principles for the consumption of the natural resources.

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

This law aims at ensuring preservation of soil integrity and improving its fertility. It defines obligations and responsibilities of the land users and the state regarding provision of soil protection conditions and ecologically safe production. The law sets the maximum permissible concentrations of hazardous matter in the soil. It also restricts the use of fertile soil for non-agricultural purposes; execution of any activity without stripping and preserving the topsoil; open quarry processing without subsequent re-vegetation of the site; terracing without preliminary survey of the area and an approved design; overgrazing; wood cutting; damage of soil protection facilities; any activity that would degrade the soil quality (e.g., the use of unauthorized chemicals/fertilizers, etc.).

## **Law of Georgia on the Protection of the Atmospheric Air**

This law regulates the protection of atmospheric air from adverse anthropogenic impact within the whole Georgian territory (Part I, Chapter I, and Article 1.1). Adverse anthropogenic impact is any human-caused effect on the atmospheric air causing or capable of causing negative impacts on the human health and the environment (Part II, Chapter IV, Article II.I).

## **Law of Georgia on the System of Protected Areas**

This law sets out the categories of protected areas (including national parks, state reserves, managed reserves, etc.) and defines activities allowed in their boundaries.

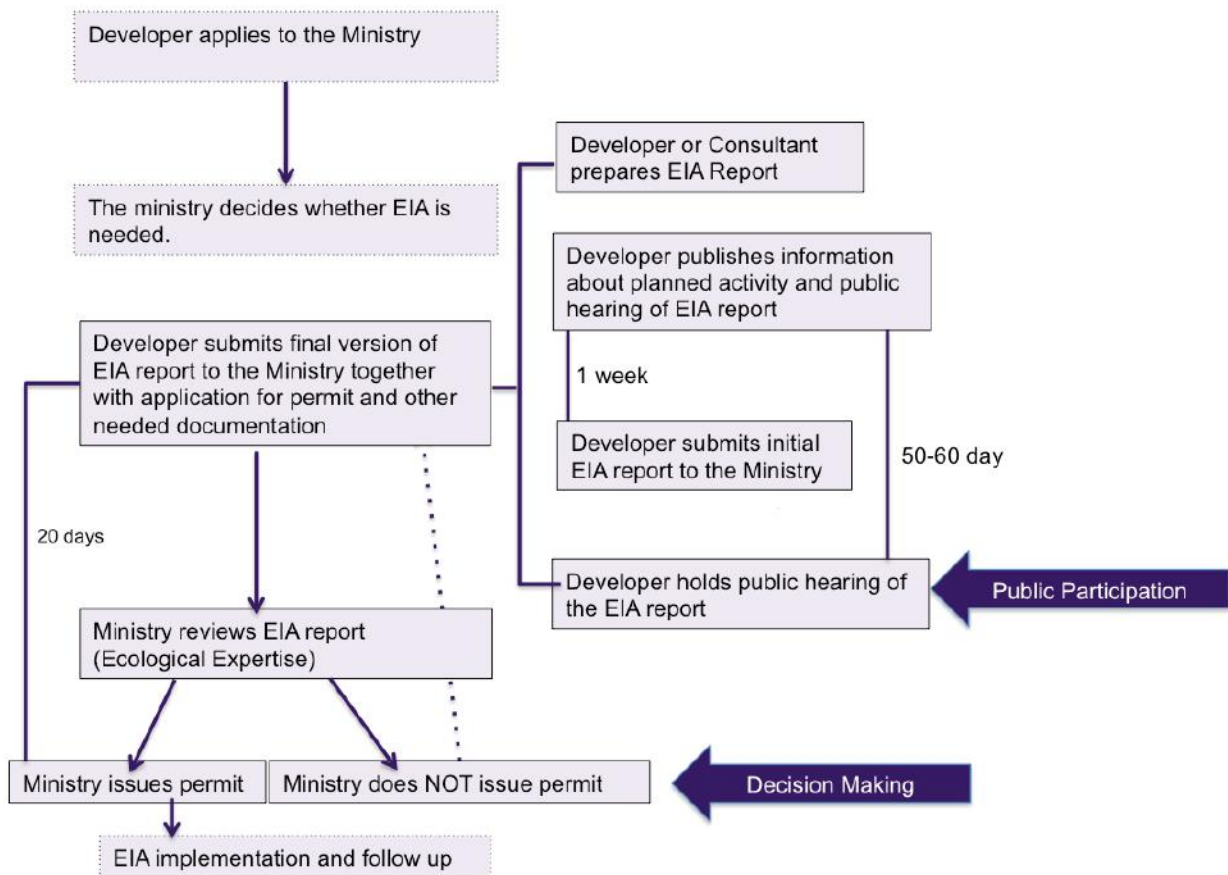
## Law of Georgia on Water

This law regulates the protection and the consumption of surface and groundwater, commercial water production, protection of aquatic life, fauna, flora, forest, land and other natural resources.

Consistent with the legislation, the water within the territory of Georgia is under state ownership.

## Labour Code of Georgia

This code regulates labour relations between all workers and employees in Georgia. It supports the realization of the human rights and freedoms through fair reimbursement and the creation of safe and healthy working conditions.



*EIA Procedure in Georgia / created Geographic*



## Land Use Legislation

Four major laws govern the land use issue, namely, the Law on Land Registration of 1996, the Law on Agricultural Ownership of 1996, the Law on Privatization of State-Owned Agricultural Lands of 2005 and the Law on Soil Protection of 1994. Furthermore, regarding the expropriation, the Law of Georgia on the Procedure for Expropriation of Property for Necessary Public Needs (adopted on 23<sup>rd</sup> of July 1999) governs expropriation issues where necessary. According to this Law, the Republic of Georgia can expropriate any property that is within the scope of the projects that are crucial for public needs. The expropriation procedure can be resulted in decision realized through a Regional Court that is preceded by a Presidential Decree indicating the significance of public need. The description of the property to be expropriated and the instructions on the necessity to pay due compensation are included in the decision. The properties to be expropriated should be confiscated by negotiation as much as possible.

Another legislation regarding the land use is the Law of Georgia on Payment of Substitute Land Reclamation Cost and Damages in Allocating Farm Land for Non-Farming Purposes (adopted on 2nd of October, 1997). The compensation procedure for the affected landowners (fixed and variable costs for the land according to its location and quality) is defined in the extent of this Law. According to the Law, certain payments must be done for compensation of the profit losses in the case of the cultivation of a parcel if the agricultural use of the land is changed.

The issues for obtaining State ownership rights to privately owned land parcels based on the necessary public needs are regulated by the following legislative acts of Georgia:

- The Constitution of Georgia, August 24, 1995;
- The Civil Code of Georgia, June 26, 1997;
- The Law of Georgia on Privatization of State-owned Agricultural Land, July 8, 2005;
- The Law of Georgia on Ownership Rights to Agricultural Land, March 22, 1996;
- The Law of Georgia on Registration Ownership Rights to Immovable Property, December 28, 2005;
- The Law of Georgia on the Rules for Expropriation of Ownership for Necessary Public Need, July 23, 1999;
- The Civil Procedural Code of Georgia, November 14, 1974;
- The Law of Georgia on Protection of Cultural Heritage;
- The Law of Georgia on the Property of Local Self-governing Units.

## **The Constitution of Georgia**

The Constitution of Georgia is a supreme legal act that defines the nation's public order, democratic and social-economic aspirations. It is the supreme regulation of a law-governed state that is based on the internationally accepted principles, recognizes universally accepted human rights and freedoms, and is a guarantee of property. The Constitution serves as the basis for the legislative base of the possession and ownership of the real estate (Paragraph 1, Article 21). Apart from this, the Constitution provides for limiting the proprietary right for a public necessity (expropriation) against an adequate compensation (Paragraphs 2 and 3, Article 21). The Constitution sets forth the fundamental principles necessary for providing public consultations: an individual may receive full, unbiased and timely information on his working and residential environment (Paragraph 5, Article 37). A citizen of Georgia may become conversant with the information as well as the official documents with the government agencies about him (Paragraph 1, Article 41).

## **Civil Code of Georgia**

The Civil Code of Georgia regulates the private civil relationships, and it evolves the property rights, the law on obligations, the family law and the law on inheritance. Those regulations of the Civil Code are particularly relevant in the property law section where the ownership, construction and servitude rights are discussed, and other type of rights directly effect the existing project.

## **The Law of Georgia on Privatization of State-owned Agricultural Land**

This Law regulates the privatization of State-owned agricultural land. On the basis of this law, the leased or non-leased State-owned agricultural land is subject to privatization. However, the categories of the agricultural lands listed below are not subject to privatization:

- Grazing lands except the grazing lands which before the law enactment were leased; grazing lands attached to existing structures being under ownership of legal and/or physical persons or state ownership in accordance to the rule refined by the Law; that
- Cattle-driving routs;
- Water fund land, except fish breeding artificial ponds and the lands of common water use categorically utilized as agricultural lands in accordance with the Law of Georgia on Water.
- Forest fund land used under agricultural designation;
- Recreational lands;
- Lands allocated to Historical monuments, natural and religious monuments;
- Land of protected areas;
- Agricultural reform lands in the Adjara Autonomous Republic;

- Agricultural lands being used by Budgetary Institutions and legal entities of the public law in the form of usufruct.

The privatization of the two categories (the forest fund and the recreation land) of the agricultural land is still allowed, although only for the development of the resort-recreational infrastructure for which the Government of Georgia makes a decision on. There are still certain restriction for foreigners buying agricultural land.

### **The Law of Georgia on Ownership to Agricultural Land**

The current law is completely different from the initial version adopted in 1996. The changes made to this law in different times (among them the amendments on the basis of the Law # 389 as of July 14, 2000) have significantly changed its initial format and simplified it to the maximum extent in compliance with the procedures considered under the Law.

The sphere of regulation of the Law on ownership rights to agricultural land mainly extends over the agricultural land parcels. Article 3.1 defines that “a land parcel with or without a household structure that is registered at the public register and used for cattle-breeding and plant cultivation produces is considered as an agricultural land parcel” with the existing household and additional structures or without them. Also the share of a member of household community within the shared hay fields, grazing lands or forestry areas and the part of the agricultural land that may be the object "of separate ownership right" (Article 3.2). The Law determines that the ownership right to agricultural land is granted to the State, physical person, the household community (Komli) and legal entity registered in accordance with the legislation of Georgia, which carries out the activities in the agricultural sphere. Apart from this, the Law declares the form of village and household community (Komli) ownership to state-owned grazing lands, private and form of community ownership in high mountain regions (Article 4.3). According to the Article 6 and 8, the acquisition of agricultural land is allowed on the basis of acquiring ordinary permits and general restrictions. Ordinary the rule considers the land alienation without any permits and other limitations, and the general restrictions consider the land alienation only on the basis of the consent of co-owner of the shared property. In the case of agricultural land acquisition the lessee has the priority right to purchase the land (Article 10). The alienation is restricted if the area after this action will be less than 5 hectare.

### **Law of Georgia on the Registration of the Rights to Immovable Property**

This Law defines the rules, terms, and conditions for the registration of the rights to immovable property (things), the rights and obligations of the subjects participating in the registration procedures. The goal of this law is declare and verify the ownership rights on to the immovable property (things) within the territory of Georgia court registration of these rights into the Public Register the Law describes the rules set forth for the organization and

functioning of the Public Register. The rights are subject to mandatory registration. Others may voluntarily be registered. The mandatory registration extends to:

- a) Obtaining ownership rights to immovable property based on sales transaction, exchange, given as a gift (bequeath), inheritance, through verification of ownership rights, privatization and also the abandonment of ownership rights being registered at the Public Register; and
- b) The rights to build, usufruct, mortgage and guarantee rights, rights to lease and rent (if such is based on the notarized agreement).

This law ensures the successful processing of the expropriation and obtaining of the necessary rights of way since in case of purchasing immovable property from an owner, it is required that the land and real property is registered into the public registry to provide the legal validity to the sales agreement. Pursuant to the active legislation of Georgia, the acquisition (purchase) of private property is legally valid and the ownership rights are declared only after its registration into the Public Registry.

### **The Law of Georgia on the Rules for Expropriation of Ownership for Necessary Public Need**

The State has the constitutional power to seize any property by means of expropriation for projects of imminent public necessity. The expropriator has to make every reasonable effort to acquire the property by negotiation and is required to value the property in accordance with the fair market value before the negotiations.

The Law requires the implementation of several steps for obtaining ownership rights:

- Issuance of a Presidential decree;
- Inventorization of all the property that is subject to expropriation;
- Informing the landowners on expropriation through publication;
- Submission of the Application to the Court and Court Decision;
- Providing the information to the landowners on the date of submission of the application to the Court and the date of the court hearing;
- Considering the Application and making a decision by the Court;
- Expropriation;
- Court proceedings in case if any disputes are being raised in regards to the property market value and the compensation amount.

### **Law on Replacement Cost Reimbursement and Compensation for the Use of Agricultural Land for Non-Agricultural Purposes**

This law specifies requirements for a land replacement fee (based on the location and the quality of the land) to compensate the government and the private landowners/ land users for property loss, plus lost profits by the beneficiary as a result of the allocation of the agricultural land for non-agricultural purposes.

### **Civil Code of Georgia**

The Civil Code of Georgia is a substantial part of the laws of Georgia that govern the private civil relations, including property, enjoyment, obligations, contractual, family and inheritance matters. A right of property indicates an absolute title authorizing the holder to freely possess and use, let out and dispose of/transfer the object of the right (Article 170). Under the Constitution, the right to the property is specifically protected and guaranteed.

The Constitution prohibits the cancellation or limitation of the right of possession, the acquisition and transfer of the property except in the event of expropriation, as mentioned above. The owner is fully entitled to let out the property he owns. The Civil Code of Georgia has the following forms of use: building leasehold, usufruct, servitude, leasehold, tenancy.

### **Law of Georgia on Cultural Heritage**

The State's obligation to protect the cultural heritage and requiring each citizen to care for, protect and preserve the cultural heritage the Law of Georgia on Protection of Cultural Heritage defines the protection legislative principals of the existing cultural heritages in Georgia.

According to the Law, State protection of the cultural heritage is being undertaken by the Ministry of Culture, the Monuments Protection and Sport, the Academy of Science of Georgia and the Archive Department of the Ministry of Justice within the State and non State Institutions, within the limits defined by the legislative of Georgia. Though, activities developed in this sphere are coordinated and managed by the Ministry of Culture, the Monuments Protection and Sports of Georgia.

From the ownership rights point of view the Law identifies the difference between the immovable monuments and the archaeological monument. The immovable monuments may be owned by the State, the local governance and self-government units, and by the physical and legal persons. Secondly the archaeological monuments are only under State ownership.

### **The Law of Georgia on the Property of Local Self-governing Units**

The said law identifies the property categories, the creation rules and the property rights of the local self-governing unit (hereinafter Self-governing Unit”) except land and natural resources for which the usage, possession and alienation is regulated by the special legislation of Georgia. According to Article 2, the property of the self-governing unit is divided into two categories: basic and additional properties. The alienation of the property of the self-governing unit is limited; the alienation of the additional property is possible on the basis of the rule defined by the law. On the basis of the mentioned law on the local state-owned properties, such as roads, bridges, tunnels, streets, underground crossings, pavements, traffic lights, constructions of outdoor lighting, squares, public gardens, boulevards, fountains, parks, green plants and bank protection constructions may be transferred to the self-governing unit.

### **Law of Georgia on Tourism and Health-Resorts**

The legislation of Georgia on tourism and health-resorts regulating the relationship in the scope of tourism and health resorts.

### **Law of Georgia on Protective Sanitary Zones of the Health Resorts and the Resort Localities**

This law defines the location of the resorts and enterprises in the resort areas, entrepreneurship, public housing and the necessary conditions for the use of the natural medical resources.

#### **4.2.19. Social Demography**

The town of Tskaltubo is the administrative centre of the Tskaltubo municipality. It received the status of a town in 1953. In 1959, Tskaltubo’s population constituted a total of 11,575, in 1970 it was 16,572 and in 1980 it increased to 17,800 people. According to the first Population Census in 2002, its population constituted 16,841 persons. Comparing to the data of 1989 (17,393), this means that Tskaltubo’s population decreased (compared to other cities of Georgia) only insignificantly by 3,2% in this period. The population Census of 2014 will give us up-to-date demographic data.

### **IDPs (Internal dislocated persons)**

In order to fully understand Tskaltubo’s demographic situation, we need to take into account that there is a high number of IDPs living there. As of May 2014, there were 5,459 IDPs (2,171 families) living in the municipality (*Source: Information of the community*). Some of the IDPs live in the

sanatoriums and others in specially built micro-districts in Tskaltubo. The numbers of IDPs living in the sanatoriums are shown in the following table:

Sanatorium	Number of IDP's
"Metallurgi"	188
"Sanatorium 1"	54
"Tbilisi"	160
"Geologi"	213
"Savane"	405
"Rkinigzeli"	165
"Medea"	142
"Aia"	247
"Sinatle"	47
"Imereti"	82
"Tskaltubo"	206
"Gelati"	117
"Megobroba"	275
"Samgurali"	359
«Sanatorium 2»	73
<b>Total</b>	<b>2,733</b>
<i>Source: Tskaltubo Municipality</i>	

Precise, accurate data on the permanent population in Tskaltubo (including IDPs) will be available after the November 2014 Population Census.

### Labor resource

For the further tourism development of Tskaltubo, a lot of labor resources will be necessary. In general, this should not be a problem due to a number of reasons:

- In Tskaltubo and also in the Imereti region, unemployment is high.
- Kutaisi, the second largest city in Georgia, is nearby and offers a lot of well-educated people.

Nevertheless, the fact of high unemployment does not mean that the sources of willing and educated people in the tourism will be fulfilled. As proof, we recommend the example of the Swiss aid program "Cuisine sans frontiere", which organizes courses for future cooks and waiters. From all of the unemployed people, they only found 28 persons participating in one of these courses.



## 4.2.20. Social sphere

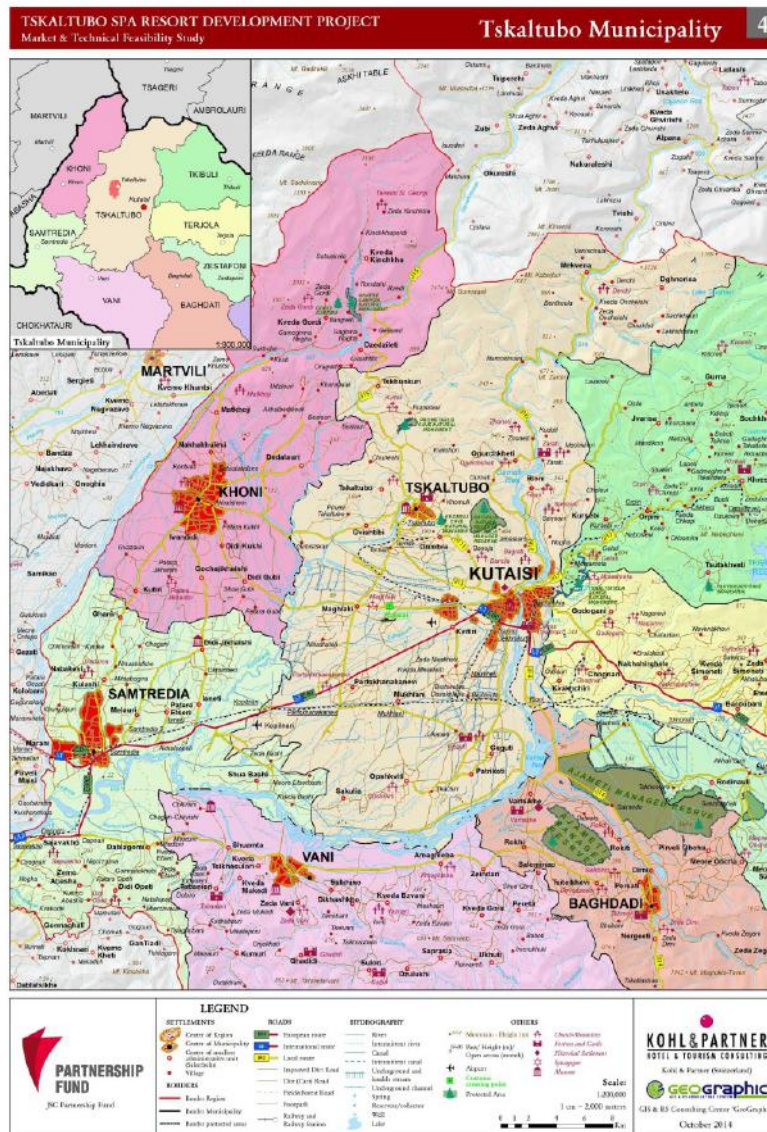
Tskaltubo resort has the following social objects:

<b>Administration building</b> <ul style="list-style-type: none"> <li>• Sakrebulo (Local council),</li> <li>• Gamgeoba (Local municipality),</li> <li>• Police,</li> <li>• Prosecutor's office,</li> <li>• Court</li> <li>• Bank;</li> </ul>	<b>Healthcare facilities</b> <ul style="list-style-type: none"> <li>• Hospital (3),</li> <li>• Polyclinic (1),</li> <li>• Bath-house building (9),</li> <li>• Drug-store (4);</li> </ul>
<b>Cultural and educational facilities</b> <ul style="list-style-type: none"> <li>• Museum-library (1),</li> <li>• School (9),</li> <li>• Kindergarden (3);</li> </ul>	<b>Restaurant facilities</b> <ul style="list-style-type: none"> <li>• Restaurant (2),</li> <li>• Cafe (4),</li> <li>• Cafeteria (1);</li> </ul>
<b>Trade objects</b> <ul style="list-style-type: none"> <li>• Shop (39),</li> <li>• Supermarket (2),</li> <li>• Food market (2);</li> </ul>	<b>Leisure-Recreation object</b> <ul style="list-style-type: none"> <li>• Sanatoriums (19),</li> <li>• Hotel (8),</li> <li>• Family hotel (3);</li> </ul>
<b>Recreation objects</b> <ul style="list-style-type: none"> <li>• Park (1),</li> <li>• Forest-park (1),</li> <li>• Mini-park (3),</li> <li>• Garden (3),</li> <li>• Boulevard (1),</li> <li>• Orchard (1);</li> </ul>	<b>Entertainment and sightseeing objects</b> <ul style="list-style-type: none"> <li>• Attraction/Amusement (1),</li> <li>• Theatre (1),</li> <li>• Concert hall (1),</li> <li>• Internet-casino (1),</li> <li>• Casino (1),</li> <li>• Internet-café (1);</li> </ul>
<b>Sport objects</b> <ul style="list-style-type: none"> <li>• Sports hall (1),</li> <li>• Sports ground (3),</li> <li>• Stadium (1),</li> <li>• Tennis court (1);</li> </ul>	<b>Transportation objects</b> <ul style="list-style-type: none"> <li>• Railway, bus station (2),</li> <li>• Petrol station (4),</li> <li>• Car service center (3).</li> </ul>

The existing social sphere objects of the Tskaltubo resort are marked on map 12.







Tskaltubo used to have **bus** connections with almost all of the cities in Georgia. As of today, the buses connect Tskaltubo with Kutaisi, Tbilisi, Batumi, Poti and with most of the other locations within Georgia. The transportation is mainly made with minibuses. There is an old “Soviet” type bus station in Tskaltubo, which is usable for any possible future organized transports.

The road connection to Kutaisi is very modern. There are local category roads from Tskaltubo to Khoni, Maghlaki and Gumbari. There is a detour road in the direction towards Tsageri.

The town's network structure is radial. The first circle around the park/sanitary zone is clearly distinguished and follows the park zone. In future, it is advisable to transform the first circle into a pedestrian walkway

and to allow movement of only environmentally clean types of transport (electro-mobiles).

The second circle of the Tskaltubo radial road structure is not connected but in future it might be possible to close the circle. Once again, only light and public transport should move there. The first and the second circles are connected by radial rays, which should end in deadlocks, and desirably with developed automobile parking.

According to the last master plan in 1983, there should be a third radial road around Tskaltubo. This road was supposed to be an administrative border of the town. Building the third road is difficult but possible. This circle shall be used by cargo and transit traffic and would also offer petrol and car-service stations.

In the past, most visitors arrived by train. Therefore Tskaltubo does not really have parking lots or a parking system.

- Taxi services are only provided by the private sector.
- There is only one fire-depot in Tskaltubo, but it is advisable to have at least two of them in the future.
- It is advisable to have at least three petrol stations along the third circle; the same applies to the automobile service stations.
- One more emergency medical aid point should be added to the existing one.

#### 4.2.21. Engineering Network

##### **Water supply**

Tskaltubo's water supply head gate is located in the village of Mitsa-Tsiteli. There are sixteen wells around the head gate, equipped with artesian pumps. The water then flows to the head gate and from there, through the pumping station; the water is supplied to the first and second zone.

The main and local water supply network is shown on map 13. The same map shows the reservoirs, pumping wells, wells and hydrants. Recently, the Georgian Municipal Development Fund (MDF) with the assistance of the World Bank (see chapter 2.2.6) started rehabilitation work on the water supply systems in Tskaltubo. Therefore we expect a significant improvement in the current situation.

According to the new and updated construction norms and rules, the water supply to the public sector building constitutes 300 cubic meters a day per person, while to the dwelling sector it is 200 cubic meters a day per person.

##### **Household Sewage**

The household sewage network of the town of Tskaltubo was formed in stages, at different points of time. In many places, the sewage network is very old, especially in the big sanatoriums and hotels, which were built in 1930s and 1950s. The household sewage network covers approximately 60% of the Tskaltubo's developed territory. The sewage flows from the two pumping stations to the treatment facility that is located outside the town on the right embankment of the Tskali River in Tskaltubo. The cleaned water then flows into this river. Flows from the bathhouses are also directed to the Tskali River in Tskaltubo, but via a separate collector.

Because of the hypsometric location of Tskaltubo, it is advisable to construct three more pumping stations, while the treatment facilities cannot be located in the resort zone. Recently, the Municipal Development Fund (MDF) of Georgia with the assistance of the World Bank started the rehabilitation of the sewage system in Tskaltubo. The situation has improved significantly but not completely. The household sewage network of Tskaltubo is shown on map 14.

### **Drainage**

The Drainage network in Tskaltubo is fragmented and covers the territory of the central park and the several streets of the residential zone. In the Western part of the town, there is a territory that is often flooded by heavy rain. There is a plan to install a drainage channel for the protection of this zone from flooding.

Recently, the Municipal Development Fund (MDF) of Georgia, with the assistance of the World Bank, started the rehabilitation of the drainage network in Tskaltubo. The situation has improved significantly but not completely. The drainage network of Tskaltubo is shown in map 15.

### **Gas Supply Network**

A gas supply network covers the Tskaltubo town- resort to a large extent. The main pipe comes from Kutaisi. The network covers the individual houses of the eastern part, crosses the forest-park zone and enters the northern part of the town. The second direction comes from the western part of the town and joins the main network in its northern part. A positive point worth mentioning is that the sanatoriums/hotels located around the park/sanitary zone are supplied with gas from the backside (i.e. from the town side) and do not cross the sanitary/health and recreation zones. The gas supply network is shown on map 16.

### **Power Supply Network**

The territory of the Tskaltubo town-resort is fully serviced by electricity. The main supply comes from the southern part of the town, a sub-station located in the low-storied part of the town. The town's electricity supply is mainly an underground cable, while high voltage poles and transmission lines cover only a small part. There are more than 50 transforming vaults of different capacity. Planned repairs and the rehabilitation of the electricity supply network are currently underway. The elements of the power supply of the Tskaltubo resort is shown on map 17. The street lighting system of Tskaltubo is shown on map 18.

### **Internet / TV Supply**

The coverage with TV and Internet is relatively high but very slow. The basic installations are made and can be expanded easily. The supply with fast internet is very important for such kind of a resort.

### 4.3. Inventory and Description of the State owned sanatoriums

#### 4.3.1. Detailed stock principles and methodology

A total of 23 large holiday hotels, sanatoriums and their auxiliary buildings were built during the Soviet era of the resort. All the buildings are located along a circular road around the central park (map #3.1). 18 of them are State owned today. (Building 17&18 were not in our scope of work, while one of them is used as a hospital today, and second one is situated in the Sanitary Zone).

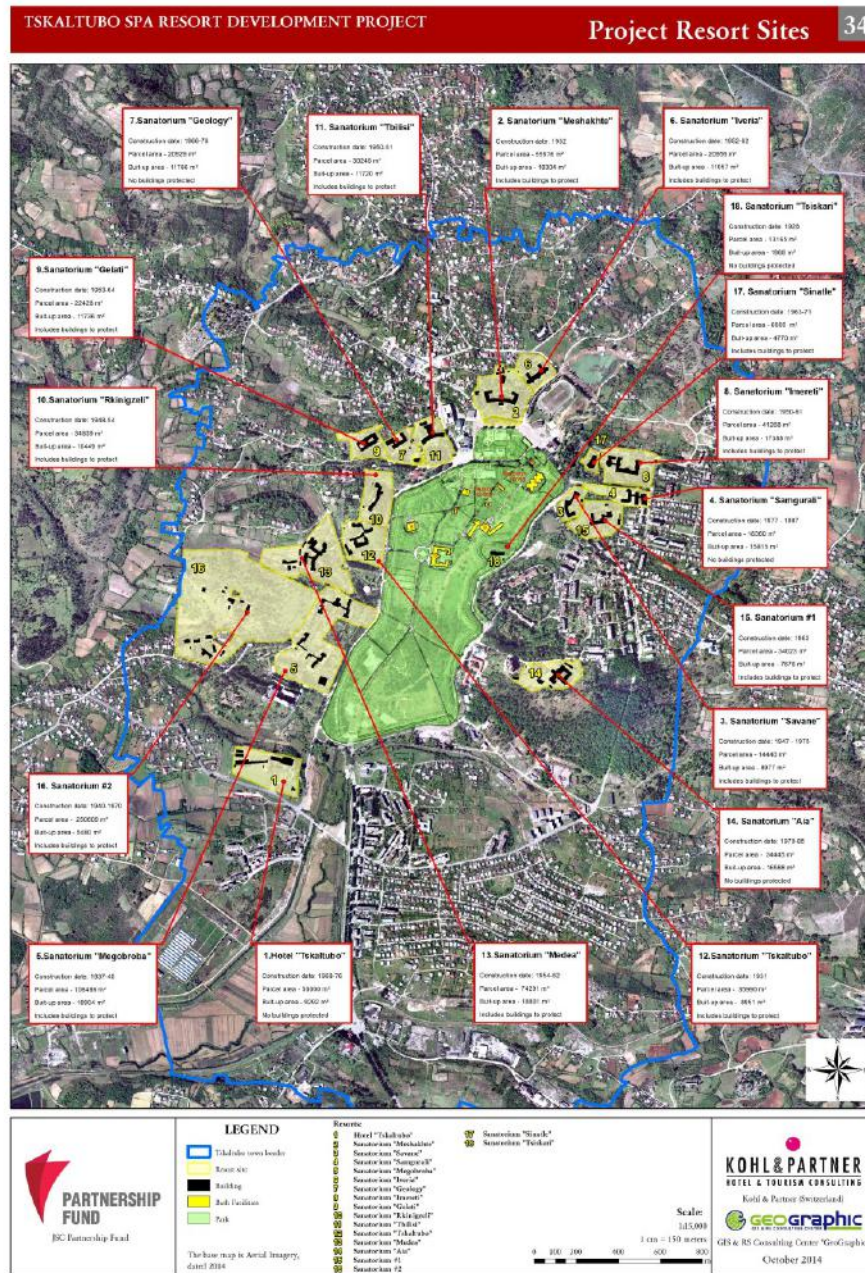
List of existing Sanatoriums, which are state owned, with their respective details as of today:

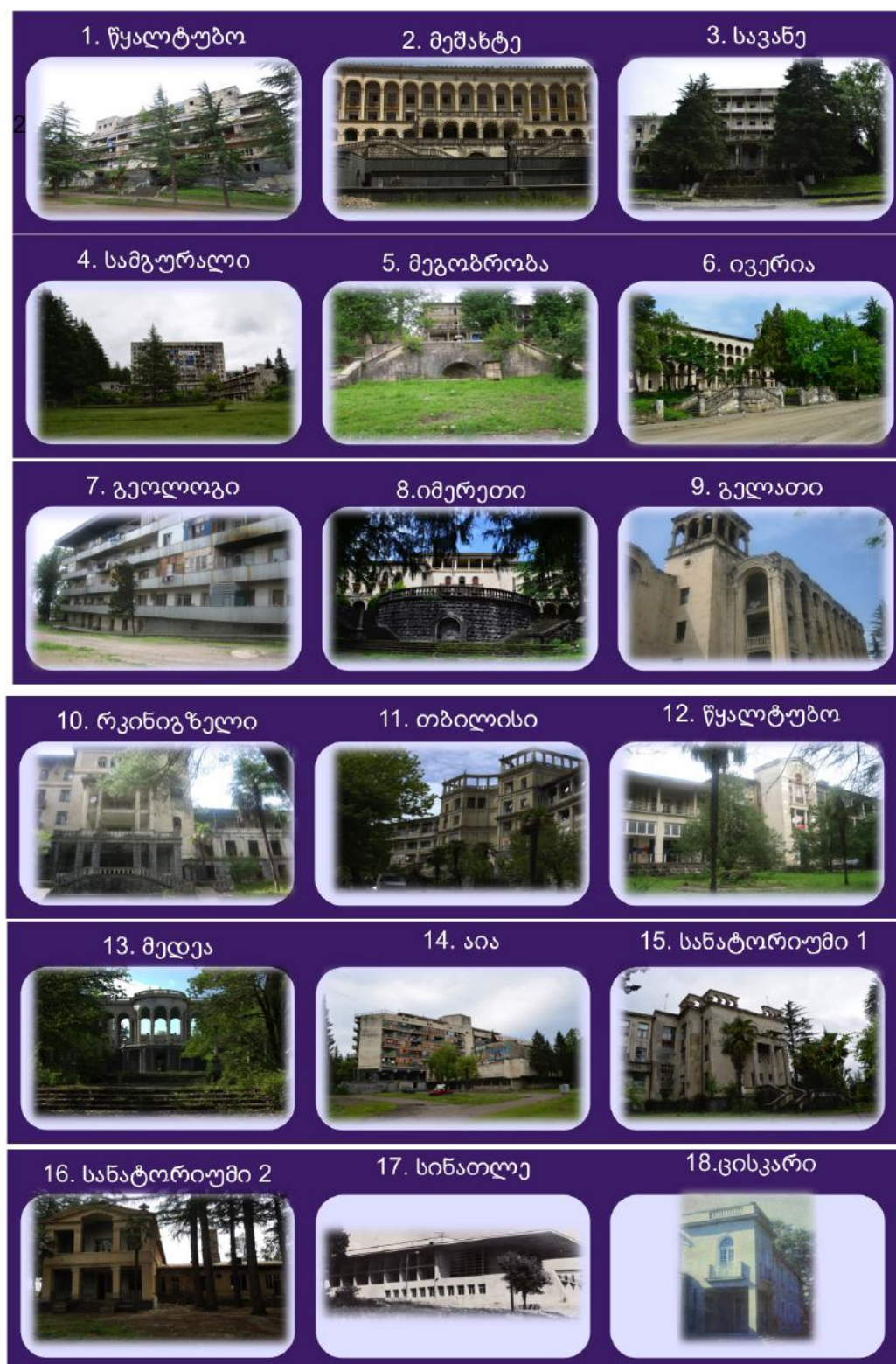
	Name	Address	Years construction: Start-Finish	Total land area (sq.m)	Total build up of the main building (m <sup>2</sup> )
1	Hotel "Tskaltubo"	4, Tamar Mepe Str.	1968-76	50,000	9,292
2	Sanatorium "Meshakhte"	13, Rustaveli Str.	1952	55,976	18,304
3	Sanatorium "Savane"	19, Rustaveli Str.	1947-1975	14,440	8,977
4	Sanatorium "Samguruli"	2,Sulkhan-Saba Str.	1977-1987	18,360	15,815
5	Sanatorium "Megobroba"	47, Rustaveli Str.	1937-1940	106,486	18,903
6	Sanatorium "Iveria"	1, 26 May Str.	1952-1962	20,956	11,057
7	Sanatorium "Geologi"	4, Baratashvili Str.	1966-1976	20,929	11,786
8	Sanatorium "Imereti"	3, Sulkhan-Saba Str.	1950-1961	41,268	17,388
9	Sanatorium "Gelati"	8, Baratashvili Str.	1953-1964	22,428	11,736
10	Sanatorium "Rkinigzeli"	51, Rustaveli Str.	1948-1954	37,839	10,449
11	Sanatorium "Tbilisi"	2, Baratashvili Str.	1950-1951	30,246	11,720
12	Sanatorium "Tskaltubo"	49, Rustaveli Str.	1931	35,990	8,951
13	Sanatorium "Medea"	3, Gurieli Str.	1954-1962	74,291	18,801
14	Sanatorium "Aia"	2, Guramishvili Str.	1970-1985	34,445	16,588
15	Sanatorium #1	1, Chavchavadze Str.	1963	34,023	7,676
16	Sanatorium #2	10, Samakashvili Str.	1940-1970	250,609	5,480
17	Sanatorium Tsiskari		1928	13,165	7,872
18	Sanatorium Sinatle		1963-1971	6,000	15,900



	TOTAL			864,451	226,695
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Situation Map of all State owned hotels/sanatoriums:







A detailed evaluation of these eighteen objects started with a comprehensive inventory taking. The company Geographic – Georgia carried out the inventory survey, methodology consisting of the following stages:

- Preparation of the field inventory form;
- Creation of a Geodatabase based on the field inventory form;
- Planning and execution of field survey works;
- Making entries to the Geodatabase based on the information from field survey inventory form;
- Creation and formation of maps and tables based on the information obtained;
- Formulation of final evaluations for the eighteen hotel / sanatoriums inspected.

When filled inventory forms were prepared, we took into account the necessity to make the field inventory form as detailed as possible and describe the territory of the object, the main building, auxiliary buildings, engineering networks and greening. Orthophoto (aerial imagery) of the eighteen objects were also analyzed (details in separate documentation)

For this purpose, buildings on the map of each object were numbered using a unique four-digit code, allowing clear identification of the objects in the geodatabase and relevant maps (please see the field maps of the objects in map 2). Planning and green zones of the territory was plotted on the given maps using the stereo-analysis method.

In order to make the process of the filling in of the Field Inventory Form quick and easy, we mainly had to circle a correct answer. The field card consisted of four main parts:

- Description of the territory of the object (area of the territory, naming all buildings and structures, fencing, greening, engineering networks, etc.) - Filled in by an architect and an engineer;
- Detailed description of the architectural part of the main building- filled in by an architect;
- Description of the main building's construction- filled in by a designer-constructor;
- Condition of the engineering networks of the main building and the territory- filled in by an infrastructure network engineer.

After completion of the field works, the groups presented their material at a general meeting, discussed it, made clarifications and corrected errors.

Our findings were crosschecked using different sources: information obtained on the site, literature, technical information requested from local municipalities and internet. We can say that the field and desktop study of 16 (18) objects provided contains exhaustive information required for investment programs.

#### 4.3.2. Description of the Hotels / Sanatoriums

##### 1. Hotel Tskaltubo



Hotel “Tskaltubo” was built in 1968-76, following a design belonging to L. Lortkipanidze. The hotel was built to provide 204 beds. The maximum number of floors is 5. There are also 1-storey and 2-storey parts of the building.

The land plot of the Hotel “Tskaltubo” is located in the Southwest part of Tskaltubo.

The Water supply works as per schedule. The Sewage system works partially. The pipes of both these networks are in bad condition. The head gate and treatment plant are working. The electricity supply is permanent, however the night lighting is damaged. Solid waste removal takes place regularly.

The configuration of the building is linear, with rooms located on both sides of a corridor. Balconies are built along the whole perimeter of the building. The building has a basement and a technical floor. The roof is flat, and has to be repaired completely. The physical condition of the building is very poor: load-bearing construction, attics and staircases are in bad condition. The façade openings-windows and ventilation channels are in very bad condition. There are leakages in the basement and the foundation has minor damage.

##### Conclusion

The building is not distinguished for its architectural details. As the land plot is at the entrance of the resort village we propose to use this space for different purposes as mentioned in the zoning plan (parking, shopping and leisure area).

## 2. Hotel / Sanatorium “Meshakhte”



Sanatorium “Meshakhte” was built in 1952. Beginning in 1989, it was capitally repaired over the course of three years. G.M. Khimshiashvili and G.V. Meleg designed it. The cardio logical profile of the sanatorium was changed to focus on nervous and loco motor diseases. The hotel’s maximum capacity was 350 beds. At the moment, the hotel is empty and not

functioning. The maximum number of floors is 4. There are 1-storey and 2-storey parts as well.

The territory is green. There are pine and hardwood, grapes and subtropical plants. Planting has not been well attended and there is litter in the area.

The water supply works as per schedule. The sewage system works partially. The pipes of both these networks are in bad condition. The head gate and treatment plant are working. The electricity supply is permanent, however the night lighting is damaged. Solid waste removal takes place regularly.

The land plot of Sanatorium “Meshakhte” is located in the Northern part of Tskaltubo. The landscape has been well maintained, with a beautiful park, a canal, bridges and fountains. It has several small, interesting architectural details too. The greenery consists of pine trees, hardwood, palm trees, a lawn and subtropical plants. This has not been well maintained and is full of litter. The fence around the territory of the sanatorium is in bad condition.

The electricity and water supply is as per schedule. The sewage system works partly; however both pipelines are in bad condition.

The configuration of the building is linear, with rooms that are located on both sides of the corridor, and balconies alongside the façade of the building. There is a basement and a technical floor. The roofing is flat, and needs to be repaired completely. The basement has leakages and the foundation has minor damages. It is a courtyard-style house. The condition of the balconies of the building, its terraces and verandas are average. The roofing is tiled and needs to be repaired in a few places. The physical condition is good: the load-bearing constructions, bulkheads and foundation are in good condition. The condition of the staircases and ventilation channels are average; the condition of the attics is bad; the condition of openings and windows of the façade are very bad.



Water supply works in certain parts. The household sewage works and power supply is permanent.

The building has an excellent music hall. In both rooms the paintings on the ceiling are preserved. The grand staircase railings are made of wood and decorated with traditional Georgian décor. There are a lot of décor elements in the building (capitals, basis and rosettes). The windows of the building are a synthesis of gothic figures and Georgian décor.

Building number 02	Sanatorium Meshakhte	
Plot Area	m2	55,976
Built up Volume	m3	73,823
Built up Area Hotel (over ground)	m2	20,544
Built up Area Hotel (underground)	m2	668
Hotel built - up Area	m2	21,212
Standard		Luxury
Common Area (assumption 20%)	m2	4,242
Construction Price over ground m2	\$	1,295
Construction Price underground m2	\$	400
Construction Price common area m2	\$	200
FF & E per room	\$	40,000
Average m2 per room (gross)	m2	90
Hotel rooms	No	228
Investment Building over ground	\$	26,599,145
Investment Building underground	\$	267,375
Investment common Area	\$	4,242,488
TOTAL Hotel Investment	\$	31,109,008
Investment FF & E	\$	9,130,667
Start up Costs (5%)	\$	1,555,450
TOTAL Investment	\$	41,795,125
Total Investment per room	\$	183,098
Buildings		14
Buildings with historical value		10

There is a villa (luxury rooms) on the territory of the sanatorium that was built in 1952. The building is rectangular, with rooms located on both sides of a corridor. The number of beds is 10. At the moment it is not functioning.

The building is monumental. The whole complex is an example of Stalin's resort architecture. The interior staircase décor and balustrades of the terraces are an historical architecture.

## Conclusion

The building needs capital repairs; wiring, water supply and sewage pipes have to be replaced completely. Two of the main buildings of the sanatorium "Meshakhte" are in good condition and just need redecoration. The land plots and the building's engineering part needs to be done again. The auxiliary buildings need capital repairs. The park is clean, however the trees need treatment. The trails are well maintained. The fountain was repaired recently, however, the tiling used does not match the décor of the building. The whole complex, including the theater is an historical architectural value. Architectural solutions and small architectural details should be preserved. The façade openings and the décor of the gate are also interesting. The summer theatre needs cosmetic repairs.

Already in the past the sanatorium was managed with together with the neighbour building Iveria. We recommend at this location a concept of a 5 star hotel with a licensed casino and an organisational merge with the hotel Iveria as a 4 star hotel under the same management. These hotels have the best strategic location.

### 3. Hotel / Sanatorium “Savane”



Construction of the sanatorium started in 1947 and was completed in 1975. A. Intskirveli and T.A Potskhishvili designed it. The sanatorium was built to accommodate 150 beds. The maximum number of floors is 5. The profile of the sanatorium is neurological. At the moment, the sanatorium is empty and not functioning.

The land plot of the sanatorium “Savane” is located in the Northeast part of the city of Tskaltubo. The territory of the sanatorium is not very well maintained, although there are small architectural details that are worth mentioning.

Hardwood, pine and bushes make up the greenery. The water supply is permanent, the household sewage works partially; the pipes of both these systems are in bad condition, and the drainage pipes need cleaning as well.

The Architectural style is of Stalin’s period. The configuration of the building is of a courtyard house style, with the bedroom floor in the style of a one-sided corridor. The architectural and artistic value of the building is medium. The physical condition of the building, load-bearing constructions, openings and windows of the façade, and the terraces are very bad. The condition of balconies and ventilation channels is also poor. The roofing type is tiled, and the roof cannot be repaired. A building that is connected to the main building with a bridge, and the bridge itself, is in a dangerously poor condition.

Building number 03		Sanatorium Savane
Plot Area	m2	14,440
Built up Volume	m3	31,339
Built up Area Hotel (over ground)	m2	8,713
Built up Area Hotel (underground)	m2	414
Hotel built - up Area	m2	9,127
Standard		midscale
Common Area (assumption 20%)	m2	1,825
Construction Price over ground m2	\$	896
Construction Price underground m2	\$	280
Construction Price common area m2	\$	150
FF & E per room	\$	20,000
Average m2 per room (gross)	m2	70
Hotel rooms	No	124
Investment Building over ground	\$	7,803,029
Investment Building underground	\$	115,884
Investment common Area	\$	1,369,031
TOTAL Hotel Investment	\$	9,287,944
Investment FF & E	\$	2,489,429
Start up Costs (5%)	\$	464,397
TOTAL Investment	\$	12,241,770
Total Investment per room	\$	98,350
Buildings		7
Buildings with historical value		4

Conclusion:

The plot and the engineering network and the building itself need capital repairs. The water, sewage, wiring and heating systems have to be replaced. The ventilation shaft can be rehabilitated. Only restorative works on the main building should be allowed. Because of the design and the location of the buildings we recommend a hotel with medical products (clinic, plastic surgery etc.)

#### 4. Sanatorium “Samguruli”



The buildings construction started in 1977 and finished in 1987. M. Liparteliani did the design. The capacity was 306 beds. The profile of the sanatorium was arthritis diseases.

Sanatorium “Samguruli” is located in the North-East part of Tskaltubo. There is one main building. The territory has not been well maintained. The greenery mainly consists of pines, hardwood and mixed bushes, which have been unattended and have some litter in them.

The water supply is permanent; the household sewage works partially; the pipes of both these systems are in poor condition. The electricity supply is permanent. Solid waste is not removed.

The complex belongs to Soviet Modernist architecture of the 1970s. Its architectural and artistic value is average. The complex consists of three parts (diagnostic center, sanatorium and cafeteria-club) that are connected by bridges. The central part is 9-storeys, while the front building and the back building are two and three-story's respectively the bedroom

floors in the sanatorium are of a corridor type, with rooms on both sides of the corridor. The physical condition of the building is poor. The condition of carrying construction of the restaurant and sanatorium is bad, while in the diagnostic

Building number 04		Sanatorium Samguruli	
Plot Area	m2		18,360
Built up Volume	m3		51,454
Built up Area Hotel (over ground)	m2		15,815
Built up Area Hotel (underground)	m2		0
Hotel built - up Area	m2		15,815
Standard			midscale
Common Area (assumption 20%)	m2		3,163
Construction Price over ground m2	\$		843
Construction Price underground m2	\$		280
Construction Price common area m2	\$		150
FF & E per room	\$		20,000
Average m2 per room (gross)	m2		70
Hotel rooms	No		226
Investment Building over ground	\$		13,339,803
Investment Building underground	\$		0
Investment common Area	\$		2,372,250
TOTAL Hotel Investment	\$		15,712,053
Investment FF & E	\$		4,518,571
Start up Costs (5%)	\$		785,603
TOTAL Investment	\$		21,016,227
Total Investment per room	\$		93,022
Buildings			8
Buildings with historical value			0

center is good. The openings and windows of the façade are all in poor condition. The roofing type is flat and needs repairs.

#### Conclusion

The condition of the building is not very good and there is also no building with any architectural value. Perfect located near the sanitary zone. Could be used for a hotel or hotel with medical products (3 or 4 star).

## 5. Hotel / Sanatorium “Megobroba”

The Sanatorium “Megobroba” was built in 1937-40 and was designed by S.M



Lentovski. In 1951-54, architect Sh. Kalashnikov made some moderate reconstructions to the roofing and façade in order to change the constructive (plant buildings) architectural style of the building. The profile of the sanatorium is loco motor, cardiovascular, nervous and gynecologic diseases. The maximum number of floors is 3.

The plot of Sanatorium “Megobroba” is located in the Western part of Tskaltubo. The territory is not well maintained. Some small architectural forms are worth mentioning. The greenery is mostly hardwood, pines and palm trees, which have not been well maintained and have some litter in them. The water supply is from the reservoir. The household sewage works partially and the pipes of both networks are in average condition, while the electricity supply is as per the schedule. The drainage ditches need cleaning. The building complex consists of four buildings and two food-blocks. The buildings are

Building number 05		Sanatorium Megobroba	
Plot Area	m2		106,486
Built up Volume	m3		91,696
Built up Area Hotel (over ground)	m2		31,945
Built up Area Hotel (underground)	m2		4,381
Hotel built - up Area	m2		36,326
Standard			midscale
Common Area (assumption 20%)	m2		7,265
Construction Price over ground m2	\$		665
Construction Price underground m2	\$		280
Construction Price common area m2	\$		150
FF & E per room			20,000
Average m2 per room (gross)	m2		70
Hotel rooms	No		456
Investment Building over ground	\$		21,249,250
Investment Building underground	\$		1,226,723
Investment common Area	\$		5,448,923
TOTAL Hotel Investment	\$		27,924,896
Investment FF & E	\$		9,127,143
Start up Costs (5%)	\$		1,396,245
TOTAL Investment	\$		38,448,283
Total Investment per room	\$		84,250
Buildings			19
Buildings with historical value			16

connected with food-blocks by bridges. One bridge, a part of the second bridge and a food-block are destroyed. Configuration of the building is linear. The bedroom floors in three buildings are of a one-sided corridor type and in the fourth building there are a few different styles. The balconies are in very bad condition. The roofing is tiled. The roof needs major repairs. The physical condition of the building is very bad. The basement has leakages. The foundation is in good condition. The load-bearing construction of some of the buildings is in good



condition, but in some buildings they are in bad condition. A synthesis of Stalin's architecture with constructivist elements and late modern is noteworthy.

### Conclusion

The land plot and building's engineering network needs capital repairs. Only restoration works are allowed on certain buildings. Because of its location (near the entrance, near the amusements and children playground), we recommend a family orientated positioning.

## 6. Hotel / Sanatorium “Iveria” (Second building of “Meshakhte”)



The Sanatorium was built in 1952-62 and was designed by M.M Buz-Ogli. The Sanatorium was built with a capacity of 300 beds. The Sanatorium's profile was loco motor diseases. At the moments it is not functioning. The maximum number of floors is 4.

The Sanatorium “Iveria”'s land plot is located in the Northern part of Tskaltubo. The territory has not been well maintained. The greenery is represented by pines and hardwood, which have not been maintained and contains litter. The remaining fencing in the territory is in bad condition. The water supply and household sewage pipes are in bad condition.

The configuration of the complex is of a courtyard house style. The bedroom floors are of a corridor style, with rooms located on two-sides. The building is an example of Stalin's architecture. It is distinguished by high architectural and artistic values. The valuable architectural details are in average condition. The physical condition of the building is good. The condition of carrying constructions is good. The attics, stanzas and terraces are in poor condition. The balconies are in an average state. The condition of openings and windows of the façade are very bad. The roofing type is tiled and the roof needs to be repaired completely.

Building number 06		Sanatorium Iveria	
Plot Area	m2		20,956
Built up Volume	m3		46,126
Built up Area Hotel (over ground)	m2		11,115
Built up Area Hotel (underground)	m2		0
Hotel built - up Area	m2		11,115
Standard			midscale
Common Area (assumption 20%)	m2		2,223
Construction Price over ground m2	\$		1,076
Construction Price underground m2	\$		280
Construction Price common area m2	\$		150
FF & E per room	\$		20,000
Average m2 per room (gross)	m2		70
Hotel rooms	No		159
Investment Building over ground	\$		11,958,498
Investment Building underground	\$		0
Investment common Area	\$		1,667,250
TOTAL Hotel Investment	\$		13,625,748
Investment FF & E	\$		3,175,714
Start up Costs (5%)	\$		681,287
TOTAL Investment	\$		17,482,749
Total Investment per room	\$		110,103
Buildings			6
Buildings with historical value			5

Conclusion:

Construction-wise, the main building is in good condition. Repairs would be advisable, while engineering network needs to be replaced completely. Only restoration works are allowed. We recommend the building be managed together with sanatorium Meshakhte as it was done in the past. The combination of a 5 and 4 star hotel could be very attractive for an investor.

## 7. Hotel / Sanatorium “Geologi”



Sanatorium “Geologi” was built in 1966-76 and designed by V.Kedia, K. Stepanova and P. Kuparishvili. The Sanatorium’s profile was neurological. The Sanatorium was built with a capacity of 360 beds. The total number of floors is 4.

Sanatorium “Geologi”’s Land Plot is located in the North-West part of Tskaltubo. The area of the

territory has a Sanatorium, transformer vault, a boiler vault (which is not functioning), and a church. Borders of the land plot of the sanatorium, as per the 2002 kfw database, are not registered at the public registry. At the moment, there is a church on the territory of the sanatorium, which belongs to the Patriarchy who has registered the land plot at the public registry.

The greenery consists mainly of pines, hardwood, palms and lawns. The plants are not well tended and there is a lot of litter around. The Sanatorium’s territory is fenced, but the fence is in an average condition. The water supply is permanent, but the pipes are in bad condition. The Sewage works and pipes are in an average condition. The electricity supply is permanent. Solid waste is removed sporadically. The Sanatorium consists of three parts: bedrooms block, cafeteria and a connecting bridge. The Bedrooms block is of an angular structure.

The location of rooms is in a corridor style, with rooms on both sides of the corridor. The terraces and balconies, which are on the whole perimeter of the building, are in bad condition. The building has a technical floor and a basement that is full of water. The roofing is tiled.

The carrying constructions, roofing and foundation are in good condition. The

Building number 07		Sanatorium Geology	
Plot Area	m2		20,929
Built up Volume	m3		26,525
Built up Area Hotel (over ground)	m2		10,363
Built up Area Hotel (underground)	m2		1,625
Hotel built - up Area	m2		11,988
Standard			midscale
Common Area (assumption 20%)	m2		2,398
Construction Price over ground	\$		664
Construction Price underground	\$		280
Construction Price common area	\$		150
FF & E per room	\$		20,000
Average m2 per room (gross)	m2		70
Hotel rooms	No		148
Investment Building over ground	\$		6,876,791
Investment Building underground	\$		454,899
Investment common Area	\$		1,798,146
TOTAL Hotel Investment	\$		9,129,835
Investment FF & E	\$		2,960,857
Start up Costs (5%)	\$		456,492
TOTAL Investment	\$		12,547,184

ventilation channels are in an average condition; the attics and staircases are in a bad condition; and the condition of openings and windows of the façade is very bad. The water supply to the building is permanent. The household sewage is in a dangerous condition and the electricity supply is permanent.

The building is not distinguished by architecturally and artistically valuable elements.

Conclusion:

The condition of the dwelling block is satisfactory and can be repaired. The construction of the cafeteria needs significant repairs. The construction of the connecting bridge is quite solid, the bridge itself needs capital repairs. The territory and sanatorium's engineering parts need to be rehabilitated completely. Could be used for a hotel or hotel with medical products (3 or 4 star).

## 8. Hotel / Sanatorium “Imereti”



The Sanatorium was built in 1950-61 and was designed by L. Janelidze and V. Meskhishvili. The buildings capacity was 305 beds. The Sanatorium’s profile was general.

Sanatorium Imereti’s Land Plot is located in the Northeast part of Tskaltubo. There is one main building, which has a

sanatorium connected by a bridge and a gallery, and also one debris and a dwelling block. There is also a local electricity station in the territory.

The territory is very well maintained and its hard landscaping is worth mentioning. Pines, hardwoods, palm trees and bushes represent the greenery. The water supply is permanent. The sewage works partially. The pipes of both these systems are in bad condition. The electricity supply is as per the schedule. The building is an example of Stalinist architecture style. It is distinguished by its high architectural and artistic value. The valuable architectural details are in an average condition. The configuration of the complex includes an inside yard. The bedroom block is of a corridor style, with rooms located on both sides of the corridor. The physical condition of the building is average. The condition of the carrying constructions is good. The condition of the attic is bad. The balconies, verandas, openings and windows of

Building number 08		Sanatorium Imereti	
Plot Area	m2		41,268
Built up Volume	m3		58,413
Built up Area Hotel (over ground)	m2		13,859
Built up Area Hotel (underground)	m2		3,659
Hotel built - up Area	m2		17,518
Standard			Budget
Common Area (assumption 20%)	m2		3,504
Construction Price over ground m2	\$		697
Construction Price underground m2	\$		280
Construction Price common area m2	\$		150
FF & E per room	\$		12,000
Average m2 per room (gross)	m2		50
Hotel rooms	No		277
Investment Building over ground	\$		9,662,983
Investment Building underground	\$		1,024,490
Investment common Area	\$		2,627,684
TOTAL Hotel Investment	\$		13,315,158
Investment FF & E	\$		3,326,160
Start up Costs (5%)	\$		665,758
TOTAL Investment	\$		17,307,076
Total Investment per room	\$		62,440
Buildings			8
Buildings with hisorical architecture			3

the façade are in very poor condition. The roofing type is tiled and the roof needs to be repaired completely.

Conclusion:

The building and the engineering network need capital repairs. Only restoration works are allowed in case of this building. Could be used for a hotel or hotel with medical products (3 or 4 star).



## 9. Hotel / Sanatorium “Gelati”



Sanatorium “Gelati” was built in 1953-64 and was designed by N.S. Poliudov and A.P. Abramov. The last repairs were made in 1983. The Sanatorium’s profile was anthology and neurology. The Sanatorium’s capacity was 202 beds.

Sanatorium Gelati’s land plot is located in the Northwest part of Tskaltubo. The territory is well maintained and is distinguished for its small architectural forms. Pine trees, hardwood, palm trees, lawn and subtropical plants represent the greenery. These plantations are not well tended and there is litter around. The Sanatorium’s fencing is in bad condition. The water supply is permanent. The pipes of water supply system and sewage are in average condition.

The electricity supply is permanent. Solid waste is removed sporadically.

The building is an example of Stalinist architecture style, which is distinguished by its architectural and artistic valuable details. The building’s layout structure includes an inner yard. The layout of the bedroom blocks is of a mixed style. The terraces, balconies and verandas are in bad condition. A 3-storey part of the building has a basement. The roofing is tiled. The floors need cosmetic repairs. The roof needs repairs in some places. The carrying constructions are in good condition, while the ventilation channels, openings and windows of the façade and attics are in bad condition. The sewage system of the building is in a dangerous condition

Building number 09		Sanatorium Gelati
Plot Area	m2	22,428
Built up Volume	m3	44,692
Built up Area Hotel (over ground)	m2	9,468
Built up Area Hotel (underground)	m2	2,268
Hotel built - up Area	m2	11,736
Standard		Budget
Common Area (assumption 20%)	m2	2,347
Construction Price over ground m2	\$	815
Construction Price underground m2	\$	280
Construction Price common area m2	\$	150
FF & E per room	\$	12,000
Average m2 per room (gross)	m2	50
Hotel rooms	No	189
Investment Building over ground	\$	7,717,683
Investment Building underground	\$	635,148
Investment common Area	\$	1,760,458
TOTAL Hotel Investment	\$	10,113,289
Investment FF & E	\$	2,272,320
Start up Costs (5%)	\$	505,664
TOTAL Investment	\$	12,891,274
Total Investment per room	\$	68,078
Buildings		2
Buildings with hisorical architecture		2

### Conclusion

The Land plot's engineering networks need partial rehabilitation. The building and its engineering networks require capital repairs. The roof and elevator need to be replaced and a construction for children decorated with a beautiful mosaic panel needs some restoration. Only restoration works can be undertaken on this building (on its exterior as well as its interior parts). For our assumptions we calculated a budget business model (3 star). Different additional products are possible

## 10. Hotel / Sanatorium “Rkinigzeli”



Sanatorium “Rkinigzeli” was built in 1948-54. V. Vekilova and N. Puchepcova, with the participation of N. Shchebueba, were the designers. The last repairs took place in 1973. The sanatorium’s profile was cardiovascular diseases. Its capacity was 350 beds.

Sanatorium Rkinigzeli’s land plot is located in the Northwest part of Tskaltubo. There are four buildings: a sanatorium, a restaurant, a garage and a building of an unknown function. The territory is very well tended and is distinguished by its small architectural forms. The greenery is represented by pine trees, hardwood, palm trees, lawn and subtropical green plants that are not well tended and there is litter around. The Sanatorium’s fencing is in an average condition.

The Water supply is as per the schedule. The household sewage works partially. In both cases, the pipes are in an average condition. The electricity supply is permanent. The removal of solid waste is conducted irregularly. The land plot’s engineering networks require rehabilitation.

Building number 10		Sanatorium Rkinigzeli	
Plot Area	m2		34,839
Built up Volume	m3		37,378
Built up Area Hotel (over ground)	m2		10,583
Built up Area Hotel (underground)	m2		0
Hotel built - up Area	m2		10,583
Standard			midscale
Common Area (assumption 20%)	m2		2,117
Construction Price over ground m2	\$		916
Construction Price underground m2	\$		280
Construction Price common area m2	\$		150
FF & E per room	\$		20,000
Average m2 per room (gross)	m2		70
Hotel rooms	No		151
Investment Building over ground	\$		9,690,467
Investment Building underground	\$		0
Investment common Area	\$		1,587,450
TOTAL Hotel Investment	\$		11,277,917
Investment FF & E	\$		3,023,714
Start up Costs (5%)	\$		563,896
TOTAL Investment	\$		14,865,527
Total Investment per room	\$		98,326
Buildings			4
Buildings with hisorical architecture			2

The building is an example of Stalinist architectural style, which is distinguished by its architectural and artistic details and deserves to get protection.

The structure of the building is linear. The bedroom floors are of a mixed style. The balconies are in poor condition, while the verandas are in average condition. The basement of the building needs repairs. The roofing is tiled. The physical condition of the building is average: the roof, attic and carrying constructions are

in good condition, the floors need cosmetic repairs, the staircases and openings and windows of the façade are in an average condition, and the ventilation channels are in bad condition.

### Conclusion

The main buildings, together with its garden and staircases have a high historical architectural value. The lamp poles in the garden must be reconstructed (a sample is available). The piazza in the restaurant was transformed (walls built) and if restoration works take place, it would be advisable to restore the veranda. Only restoration works can be applied in case of this building (on its exterior as well as interior parts). The building's condition overall can be rated as average. Its technical part is in a dangerous condition. The restaurant needs major repairs, while the engineering networks need rehabilitation. Could be used for a hotel or hotel with medical products (3 or 4 star).

## 11. Hotel / Sanatorium “Tbilisi”



Sanatorium “Tbilisi” was built in 1950-51 and was designed by Dr. V.K. Oltarzhevski and B.A. Sobolevski. Major reconstruction works took place in 1963-65, when the back façade was attached. In 1984, three years of capital repairs started. The sanatorium’s profile was loco motor diseases. In 1984, the capacity of the sanatorium was 732 beds. The maximum number of

floors is six.

Sanatorium Tbilisi’s land plot is located in the Northern part of Tskaltubo. There are three building there: a sanatorium, auxiliary building and boiler vault. The territory is not well maintained. Some small architectural forms are noteworthy. The greenery consists mostly of pine trees, hardwood, palm trees, lawn, bushes and subtropical green plants, which are not well tended and contain litter. The fencing in the sanatorium’s territory is in bad condition.

The water supply is as per the schedule. The water supply system is in an average condition. The household sewage works partially but its pipes are in a bad condition. The electricity supply is permanent.

The structure of the building is of a courtyard house type. The central part is higher and is decorated with columns. The wings are emphasized, and in the central part of the building there is an atrium style inner yard with columns. The location of rooms is of a corridor type, with rooms located on both sides of the corridor. There are deep stanzas on the façade. There are a lot of decorative elements on

Building number 11		Sanatorium Tbilisi	
Plot Area	m2		30,246
Built up Volume	m3		56,714
Built up Area Hotel (over ground)	m2		12,606
Built up Area Hotel (underground)	m2		0
Hotel built - up Area	m2		12,606
Standard		midscale	
Common Area (assumption 20%)	m2		2,521
Construction Price over ground m2	\$		1,166
Construction Price underground m2	\$		280
Construction Price common area m2	\$		150
FF & E per room	\$		20,000
Average m2 per room (gross)	m2		70
Hotel rooms	No		180
Investment Building over ground	\$		14,703,606
Investment Building underground	\$		0
Investment common Area	\$		1,890,900
TOTAL Hotel Investment	\$		16,594,506
Investment FF & E	\$		3,601,714
Start up Costs (5%)	\$		829,725
TOTAL Investment	\$		21,025,945
Total Investment per room	\$		116,755
Buildings			7
Buildings with hisorical architecture			5

the exterior and interior parts of the building, which are made of precious decoration material. The building is an example of late Stalinist architecture. The physical condition of the building is average: some pieces of the roof need repairs; the foundation of the building and its carrying constructions are in good condition; the floors require some cosmetic repairs; the condition of the staircase is average; the attic, openings and windows of the façade and ventilation channels are in poor condition. The balconies, verandas and terraces are in an average condition. The roofing is tiled.

### Conclusion

Some parts of the land plot's engineering network needs to be renewed. The building is in good condition but needs cosmetic repairs. The park is very precious; an inventory must be taken and it must be rejuvenated. The trees need treatment. The engineering part of the building needs to be replaced.

At certain buildings only restoration works should be allowed. Could be used for a hotel or hotel with medical products (3 or 4 star).



## 12. Hotel / Sanatorium “Tskaltubo” (Sanatorium “Phazisi”)



Sanatorium “Tskaltubo” was built M.V. Buz-ogli. Sanatorium’s profile was general. The maximum number of floors is four.

The Land plot of Sanatorium “Tskaltubo” is located in the western part of Tskaltubo. . There is a sanatorium, transformer vault and some debris. The territory is very well maintained and small

architectural forms are of note. Pine trees, hardwood, palm trees, lawn, represent the greenery and subtropical green plants, which are not well tended and contain litter. The sanatorium’s fencing is in a bad condition.

The water supply is as per the schedule. The household sewage works partially but the pipes of both networks are in poor condition. The electricity supply is permanent. The solid waste is removed periodically.

The Sanatorium’s complex consists of three parts: a 100-bed block built in 1936, a 53-bed block built in 1967, and a 72-bed block built in 1971. The configuration of the complex is complicated, with asymmetric blocks connected to each other by bridges. The balconies and verandas are in an average condition. The roofing is tiled. The roof needs to be repaired completely. The building is in an average condition.

The Sanatorium “Tskaltubo” is one of the most distinguished buildings of the resort thanks to its architectural aesthetics and the park. The synthesis of Stalinist architecture with constructivist elements and late modern styles is worth noticing. There is a

Building number 12		Sanatorium Tskaltubo	
Plot Area	m2		35,990
Built up Volume	m3		37,282
Built up Area Hotel (over ground)	m2		11,474
Built up Area Hotel (underground)	m2		0
Hotel built - up Area	m2		11,474
Standard			midscale
Common Area (assumption 20%)	m2		2,295
Construction Price over ground m2	\$		842
Construction Price underground m2	\$		280
Construction Price common area m2	\$		150
FF & E per room	\$		20,000
Average m2 per room (gross)	m2		70
Hotel rooms	No		164
Investment Building over ground	\$		9,665,735
Investment Building underground	\$		0
Investment common Area	\$		1,721,100
TOTAL Hotel Investment	\$		11,386,835
Investment FF & E	\$		3,278,286
Start up Costs (5%)	\$		569,342
TOTAL Investment	\$		15,234,463
Total Investment per room	\$		92,942
Buildings			12
Buildings with hisorical architecture			10



painting of M. Zichi at the restaurant, painted in 1940, but it is almost completely destroyed.

### Conclusion

The building needs cosmetic repairs. The engineering networks need rehabilitation. Parts of the land plot's engineering networks need capital repairs. On certain buildings only restoration works should be allowed. Could be used for a hotel or hotel with medical products (3 or 4 star).

### 13. Hotel / Sanatorium “Medea” ( Sanatorium “Tsekavshiri”)



The Sanatorium was built in 1954-62 and designed by A. Intskirveli and T. Potskhishvili. The Sanatorium's capacity was 326 beds and its profile was general.

The Land plot of sanatorium “Medea” is located in the western part of Tskaltubo. There is one main building- the Sanatorium,

with an auxiliary diagnostic facility, plus a garage, carpenters, diesel room, warehouse, debris of guards' room, automobile pit, transformer vault and two buildings of an unknown function. The territory is not well tended.

The greenery is represented by pine trees, hardwood and palm trees and has been unattended and littered.

The Water supply is as per the schedule; the sewage works partially; the condition of the pipes is average. The purifying unit is in working condition. The electricity supply is permanent. The drainage needs to be cleaned in several places. Solid waste is removed regularly. The water supply pipes are newly installed but not connected. The underground electricity cable is annulled.

The configuration of the complex is asymmetric and complicated. The location of rooms is a corridor style, with rooms on both sides of the corridor. The Sanatorium and its auxiliary buildings are connected via a

bridge. The building has a basement. The roofing is tiled. There are balconies and terraces on the façade. The physical condition of the building is average. The carrying constructions and foundations are in good condition. The balconies,

Building number 13		Sanatorium Medea
Plot Area	m2	74,291
Built up Volume	m3	71,273
Built up Area Hotel (over ground)	m2	22,288
Built up Area Hotel (underground)	m2	3,029
Hotel built - up Area	m2	25,317
Standard		Luxury
Common Area (assumption 20%)	m2	5,063
Construction Price over ground m2	\$	1,134
Construction Price underground m2	\$	400
Construction Price common area m2	\$	200
FF & E per room	\$	40,000
Average m2 per room (gross)	m2	90
Hotel rooms	No	248
Investment Building over ground	\$	25,275,366
Investment Building underground	\$	1,211,600
Investment common Area	\$	5,063,400
TOTAL Hotel Investment	\$	31,550,366
Investment FF & E	\$	9,905,778
Start up Costs (5%)	\$	1,577,518
TOTAL Investment	\$	43,033,662
Total Investment per room	\$	173,772
Buildings		20
Buildings with hisorical architecture		5

ventilation channels are in poor condition. The openings and windows of the façade and terraces are in a very poor condition. The building is an example of the “Stalinist Empire” style and is rich in decorative elements.

Conclusion:

Rehabilitation of the building is possible. The roofing needs repairs, the façade needs cosmetic repairs, the basement should be cleaned and the engineering infrastructure needs to be replaced completely. On certain buildings only restoration works should be allowed. The building should be used as the 2<sup>nd</sup> 5 star hotel in the resort.

## 14. Hotel / Sanatorium “Aia”



The Sanatorium was built in 1970-85 and was designed by F. Quparashvili, R. Kakhashvili, Ts. Khufarashvili and M. Chutkerashvili. The capacity was 270 beds. The Sanatorium's profile was general. The maximum number of floors is eight.

The land Plot of Sanatorium “Aia” is located in the Eastern part of Tskaltubo. There is one main building – a sanatorium – and also two garages, a boiler vault, auxiliary warehouse, electricity station, one debris and one building in a dangerous condition. The condition of the territory's maintenance is average. Pines, hardwood, palm trees and willows, which are not well tended at all, represent the greenery and there is construction and household litter all around the place. The irrigation system does not work. The gate and fencing is in bad condition.

The water supply is as per the schedule. The household sewage works partially. The pipes in both cases are in bad condition. The electricity supply is permanent. The configuration of the complex includes an inner yard. Rooms are located on both sides of the corridor and comfortable sunlight use is ensured. There is a veranda for public use at the Southeast end of each floor. The complex belongs to the Soviet modernist architecture of 1970s. Its architectural and artistic value is low. The physical condition of the building, its attic and carrying constructions is bad. The staircases, balconies and

ventilation channels are in an average condition. The openings and windows of

Building number 14		Sanatorium Aia
Plot Area	m2	34,445
Built up Volume	m3	68,815
Built up Area Hotel (over ground)	m2	18,990
Built up Area Hotel (underground)	m2	0
Hotel built - up Area	m2	18,990
Standard		midscale
Common Area (assumption 20%)	m2	3,798
Construction Price over ground m2	\$	939
Construction Price underground m2	\$	280
Construction Price common area m2	\$	150
FF & E per room	\$	20,000
Average m2 per room (gross)	m2	70
Hotel rooms	No	271
Investment Building over ground	\$	17,840,947
Investment Building underground	\$	0
Investment common Area	\$	2,848,500
TOTAL Hotel Investment	\$	20,689,447
Investment FF & E	\$	5,425,714
Start up Costs (5%)	\$	1,034,472
TOTAL Investment	\$	27,149,634
Total Investment per room	\$	100,078
Buildings		13
Buildings with hisorical architecture		0

the façade are in a very poor condition. The roofing type is flat and it needs major repairs.

### Conclusion

The building's and the land Plot's engineering infrastructure is in a dangerous condition. The building needs capital repairs or, even better, a total reconstruction. Because of its strategic location, being adjacent to the entrance of the resort and taking into consideration its direct connection to the 2<sup>nd</sup> ring road we propose to realize a convention and meeting center on this plot. In addition, the hotel already had more garages than any other building.

## 15. Hotel / Sanatorium N1 (USSR State Security Committee Sanatorium “Tskaltubo”)



The Sanatorium was built in 1963 and had a capacity of 100 beds. The Sanatorium’s profile was a multi-profile healthcare facility. The total number of floors is three. The Land plot of sanatorium N1 is located in the North-West part of the city of Tskaltubo. There is one main building – the sanatorium – as well as a laboratory, a private

house, transformer vault and debris.

The territory is not well tended at all. The greenery is represented by pine trees, hardwood and palm trees, which are not well tended and contain litter.

The water supply is as per the schedule. The household sewage works partly. Pipes in both cases are in bad condition. The electricity supply is permanent. The drainage pipes need cleaning.

The configuration of the complex is in wings. The layout of the bedroom blocks varies. A circle-shaped, one-storey restaurant is connected with the Sanatorium via a corridor. The architectural and artistic value of the building is average. The valuable architectural details are in an average condition. The complex was built in the late Stalinist period.

The physical condition of the building, attic, façade’s openings and windows, and balconies is poor. The condition of carrying constructions and staircases is good. The roofing is tiled and is in a good condition.

Building number 15		Sanatorium #1
Built up Area Hotel (over ground)	m2	10'207
Built up Area Hotel (underground)	m2	2'259
Hotel built - up Area	m2	12'466
Standard		midscale
Common Area (assumption 20%)	m2	2'493
Construction Price over ground m2	\$	763
Construction Price underground m2	\$	280
Construction Price common area m2	\$	150
FF & E per room	\$	20'000
Average m2 per room (gross)	m2	70
Hotel rooms	No	146
Investment Building over ground	\$	7'789'181
Investment Building underground	\$	632'520
Investment common Area	\$	1'869'900
TOTAL Hotel Investment	\$	10'291'601
Investment FF & E	\$	2'916'286
Start up Costs (5%)	\$	514'580
TOTAL Investment	\$	13'722'466
Total Investment per room	\$	94'109
Buildings	No	13
Buildings with hisorical architecture	No	9

### Conclusion

The building and engineering infrastructure need capital repairs.

Rehabilitation of the building is advisable. Perfect location for a mid scale hotel or a hotel with medical products..



## 16. Hotel / Sanatorium N2 (former Sanatorium “Tskaltubo“)



The buildings were built in the middle of the twentieth century (1940-1970). Architect N.P. Severov designed them.

The Sanatorium N2 land plot is located in the Western part of Tskaltubo. There are five main buildings (the Sanatorium, Stalin's recreation house, staff residential house, club and a tea house), sentry box, outbuildings

for household needs, open cinema, warehouse-aluminum module, food warehouse (underground), fuel reservoir, garage, ambulance-library, laundry (presently a cowshed), a residential house, ruins of a warehouse and ruins of a garage.

The landscaping level of the territory is low. The greening area consists of coniferous, broadleaf, grapes and subtropical plants, which are currently not well attended. The water supply from the reservoir is valve locked. The household sewage works partially, however all of the pipes are in bad condition. The electricity is switched off and the drainage pipes need to be cleaned. The plot is very unique in the whole resort. It is the highest point of the resort and the temperature on the hill (where the main houses are located) is always 3-4°C cooler than in the valley.

### **Sanatorium / Hotel (Main building I):**

The Sanatorium's capacity was initially 40 beds. The building's footprint is 943 m<sup>2</sup> and the built up area is 2,546 m<sup>2</sup>. There is a maximum of 3 floors. The total volume of the building is 7,638 m<sup>3</sup>.

The configuration of the building is a side-wing, with the bedrooms located on one side of a corridor. The architectural and artistic value is average and any architectural details that are of value are in an average condition. It is worth mentioning that the building is an example of the architecture common during Stalin's period. The infrastructure (water pipes, electricity wiring) have been removed and the sewage pipes need to be replaced. The physical condition of the building and the condition of the bearing structures are poor as well.

### Stalin's recreation house (Main building II):

Stalin's recreation house is of special historical note. The building's footprint is 652 m<sup>2</sup>, with a total built up area of 1,593 m<sup>2</sup> (including 652 m<sup>2</sup> of underground floor area). There is a maximum of 2 floors. The total volume of the building is 5,250 m<sup>3</sup>.

The configuration of the building is enfilade. The bedroom floors are of a mixed planning type. The architectural and artistic value is high; however a lot of the architectural details are in poor condition. The engineering infrastructures (water pipes, power supply, and partially sewage pipes, heating pipes and radiators) have been uninstalled. The physical condition of the building is poor. However, the condition of the bearing (base) structures is good.

### Staff residential house (Main building III):

The building's footprint is 527 m<sup>2</sup>, with a built up area of 1,035 m<sup>2</sup> (including an underground area of 254 m<sup>2</sup>). There is a maximum of 2 floors. The total volume of the building is 3,379 m<sup>3</sup>.

The configuration of the building is angular. The bedrooms are located on both sides of the

Building number 16		Sanatorium #2
Plot Area	m2	250,609
Built up Volume	m3	36,682
Built up Area Hotel (over ground)	m2	12,530
Built up Area Cottages / Bungalow	m2	30,000
Built up Area Hotel (underground)	m2	906
Hotel built-up Area	m2	43,436
Common Area (assumption )	m2	10,000
<b>1. Project Stalin's Villa (Upscale/Luxury)</b>		
Stalin's Villa	m2	1,593
Stalin's Villa	m3	5,250
Stalin's Villa (average height)	m	3.3
Average m2 per room (gross)	m2	100
Hotel Suites	No	16
Construction price per m2 (*)	\$	1,057
FF&E per room	\$	30,000
Investment Building over ground	\$	1,684,577
Investment Building underground	\$	0
Investment FF&E	\$	480,000
Total Investment	\$	2,164,577
Investment per room	\$	135,286
<b>2. Hotel Rooms (Midscale)</b>		
Other buildings	m2	10,937
Other buildings (average height)	m	3
Other buildings	m3	32,811
Average m2 per room (gross)	m2	75
Hotel rooms	No	145
Construction price per m2	\$	700
FF&E per room	\$	15,000
Investment Building	\$	7,655,900
Investment FF&E	\$	1,125,000
Total Investment	\$	8,780,900
Investment per room	\$	60,558
<b>3. Bungalows/Cottages (Budget)</b>		
Number of Cottages/Bungalows	No	300
Average size of Cottages/Bungalows	m2	100
Total Built up Cottages/Bungalows	m2	30,000
Common Area Cottages / Bungalow	m2	10,000
Construction price per m2	\$	300
FF&E per Cottage/Bungalow	\$	8,000
Investment Building	\$	9,000,000
Investment FF&E	\$	2,400,000
Total Investment Cottages / Bungalow	\$	11,400,000
Total Investment per Cottage	\$	38,000
<b>4. Common Area (Restaurant, Pool, Store..)</b>		
TOTAL common area (midscale)	m2	10,000
Construction price per m2	\$	150
Total Investment common area	\$	1,500,000
<b>Investment Recapitulation</b>		
Investment Stalin's house	\$	2,164,577
Investment Hotel	\$	8,780,900
Investment Cottages/Bungalows	\$	11,400,000
Investment common area	\$	1,500,000
Start-up / Pre Opening Costs	\$	1,192,274
<b>TOTAL Investment</b>	<b>\$</b>	<b>25,037,751</b>
Total investment per room	\$	54,312
(1 cottage = 1 room)		
Total FF&E (included in Total investment)	\$	4,650,000

corridor. The architectural and artistic value of the building is average. The water supply to the building has been blocked. The wiring, water pipes and sewage pipes need to be replaced. The physical condition of the building is very poor. The condition of the bearing structures is also poor.

#### **The Club (Main Building IV):**

The building's footprint is 177 m<sup>2</sup> with a total built up area of 177 m<sup>2</sup>. It is a one-floor building. The total volume of the building is 709 m<sup>3</sup>.

The configuration of the building is rectangular. The architectural and artistic value of the building is average. The wiring system, water and heating pipes have been uninstalled. The physical condition of the building is bad.

#### **Recreational House (Main Building V):**

The building footprint is 128 m<sup>2</sup> with a built up area of 128 m<sup>2</sup>. It is a one-floor building. The total volume of the building is 384 m<sup>3</sup>.

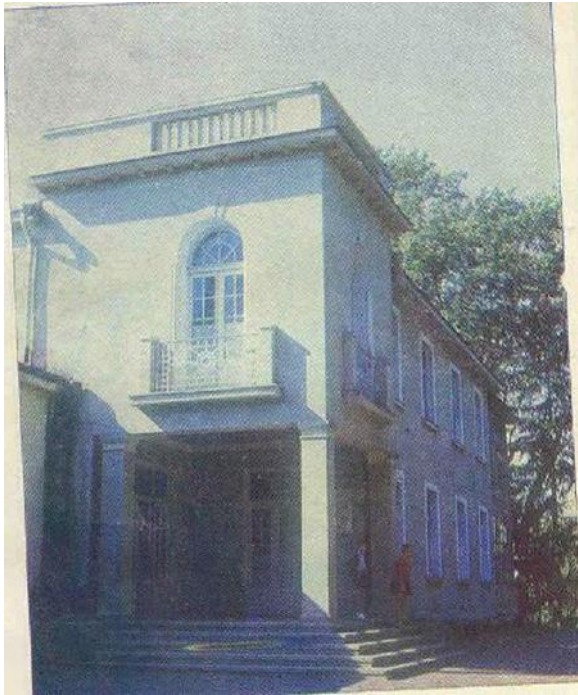
The configuration of the building is rectangular. The architectural and artistic value of the building is average and the valuable architectural details are in an average condition. The wiring system has been removed. The water and heating pipes have been uninstalled. The sewage pipes need to be replaced. A completely new pipe infrastructure needs to be installed. The physical condition of the building is poor.

#### Conclusion

For this plot we recommend something very special. Stalin's villa would remain as a luxury and specialty accommodation. Due to the luxurious style of the house, this could be one of the most prestigious places to stay in all of Tskaltubo.

Both the hotel and the cottages/bungalows should be on a budget/economy level. Coziness, family-orientated design and infrastructure will make these accommodations unforgettable for each visitor. Young couples looking for a romantic holiday, as well as families looking for fun, will find the right place to enjoy Tskaltubo.

## 17. Sanatorium Tsiskari



Today, the sanatorium uses a hospital and therefore we have kept the building out of our studies. There are 2 buildings on the plot. The architecture is very nice and the building is in functional condition. Sanatorium Tsiskari was not in the scope of our work.

## 18. Sanatorium Sinatle



Sanatorium 18 is the only building that is located within the sanitary zone. Therefore there are several different possible usages for this building, such as:

- A school for the education of hospitality and health/wellness staff
- A reserve for a bath – the springs are very close by and the building could also function as a bath.

#### 4.3.3. Existing Functional Zoning

The existing functional zoning of the Tskaltubo resort is a result of its development in the previous years. As one of the only Soviet resorts, the development of the resort was in coordination with the existing master plans. In the past couple of years, unorganized and uncontrolled building processes have disrupted the development. For example, the second ring road is not in coordination with the master plan any more. The ring is broken and although the closing of the ring would be still possible, it would go through some privately owned land-plots.

The border of the town as defined by the Public Registry, does not provide any opportunity to consider implementing the third ring road as it was planned in the master plan of 1983. The border defined by the Public Registry covers a smaller area than the third ring road, but it would, of course, be more logical to define the border of the town alongside the third circle.

The existing functional zoning of the resort is shown on map 20.

Each functional zoning area is mentioned separately. Structurally, the town maintains its planned order, however, there are some errors too: the resort's public and business area is not marked clearly; the town's central objects are disconnected from the railway station (one is in the North, while the other is in the South). The town's radial connections are mostly deformed (compared to the 1983 master plan). This situation must be in the center of focus for any future planning.

The reduction of the recreational territories and the uncontrolled increase of illegal individual constructions may be considered as an existing functional zoning error. There is a trend of arranging agricultural activities on abandoned sites, as a rule followed by individual developments. This process is not rapid only because the population of the town is not changing constantly.

#### 4.3.4. Existing administrative and institutional structural analysis

The Resort Department, under the Ministry of Health of Georgia used to be in charge of the process of treatment and recreation of patients in Tskaltubo.

Since April 1960, management of sanatoriums was handed over from the Resort Department, under the Ministry of Health of Georgia to the Resort Unit of the Professional Unions of Georgia. The territorial body was called "Tskaltubo Territorial Council of Resort Management of the Professional Unions of Georgia" (shortly "TskaltuboTerResCouncil"). A collegial body was established as a management unit. It was lead by the territorial chairman of the Council.



Since July 1989, Tskaltubo Territorial Council of Resort Management of the Professional Unions of Georgia was transformed into the Union of Tskaltubo Sanatorium and Resort Facilities (functions remained the same). The Union was managed by the Director General.

Tskaltubo Territorial Council of Resort Management of Professional Unions had the following functions:

- Manage operations of sanatorium-resort facilities under the Tskaltubo Territorial Resort Management Council and their enterprises and auxiliary economy;
- Organization of treatment and recreation;
- Inventory taking and rational use of natural resources;
- Development of the network of sanatoriums, all-inclusive hotels and other sanatorium-resort and healing objects and expansion of existing health-care facilities and absorption of new resort lands;
- Operation of mineral water wells and management of work of hydro-mineral and balneology-technical service;
- Exploration of natural resources, inventory taking and rational use. Development of the network of sanatoriums, all-inclusive hotels and other sanatorium-resort and health facilities; expansion of existing health-care facilities and appropriation of new resort lands;
- Supervision of work of hydro-mineral and balneology-technical services and of exploitation of mineral water resources;
- Management of design, construction, capital repairs and arrangement of sanatorium-resort objects;
- District planning of the resort and issuing conclusions on designs prepared by design organizations based on the General Plan;
- Elaboration of proposals on location of health-care spots for the ministry, institutions and organizations for future expansion of existing sanatorium-resort facilities and construction of new ones before the land-plots are assigned;
- Approval and re-approval of orders for the design of construction of new and transitional building process and also of technical and working-technical projects, estimates and financial reports.
- Organization of any planned construction and reconstruction of sanatorium-resort and health-care objects of Professional Unions;
- Definition of assignments for repair works on health facilities and objects;
- After completion of construction, reconstruction and capital repair's works, receive the sanatorium-resort object into exploitation;
- Ensure provision of all required material resource, in concordance with established rules, for sanatorium-resort facilities, related enterprises, auxiliary agricultural and production economies;

- Control over the technical condition of the building, engineering facilities and ensure their smooth operation and timely current and capital repairs.

In 1996, the Union of Tskaltubo Sanatorium and Resort Facilities was closed and Tskaltubo Branch of the Georgian Professional Union Republican Council JSC “KURORTINVEST” (“Resort Invest”) was established on its basis, however, with less management functions, including:

- Manage the operations of sanatorium-resort objects and related production and auxiliary facilities of Tskaltubo Branch of the Georgian Professional Union Republican Council.
- Organization of treatment and conclusions;
- Inventory taking of natural resources and their rational use;
- Development of the network of sanatoriums, all-inclusive hotels and other sanatorium-resort and healing facilities on the territory of Tskaltubo and expansion of existing health-care facilities and appropriation of new resort lands;
- Management of the operations of mineral water wells and hydro-mineral and balneology services.

According to the Minister of Justice Decree (No 156, of December 22, 2044), on February 27, 2005, Tskaltubo Sanatoriums and several facilities from the Balance Sheet of the Georgian Professional Union deed of gift in favor of the State was concluded in the form of a Notary Act.

#### 4.3.5. Current legislation framework regulation concerning spatial planning

Today there is a hierarchical system of legal and normative acts regulating spatial planning in Georgia:

- The Organic law of Georgia- “Local Self-government Code” (2014). Article 16, item 2.e. states that a local self-government has a right to approve city development documents, including land use general plan, plans regulating construction process, rules of construction and use of territories of settlements“;
- The Law of Georgia “On safety of Goods and Free Trade Code” (2012). With reference to this Code, a new institution “Technical and construction Supervision Agency was established” to “facilitate elaboration, discussion and methodological guidelines of planning documents on spatial and territorial planning within its competence” (Article 16.2.i.);



- The Law of Georgia “Principals of Spatial Arrangement and Urban Construction” (2005). This law defines the main principles and procedures of spatial planning;
- The Law of Georgia „On Cultural Heritage” (2007). This law provides some legal basis for protection of urban structures, architectural complexes and individual monuments possessing a status of cultural heritage;
- The Law of Georgia “On Architectural Activities” (1998). The main purpose of this law is to create comprehensive, environmentally safe and esthetical environment for people on the territory of Georgia;
- The decree of the Government of Georgia #52 “On recognition and enactment of regulating technical provisions in construction sector of Georgia” (14.01.2014);
- The decree of the Government of Georgia N59 – “Technical Regulations on the use of territories of settlements and main regulating rules for urban development” (15.01.2014). With the reference to this document, local self-governments have to elaborate rules on the use of their own territories and urban development adapted to their local circumstances.

In addition to the abovementioned legal and normative acts, the process of spatial development also follows a requirement of a set of sector related acts that regulate spatial arrangement. These acts are:

- Law of Georgia “On Tourism and Resorts”;
- Law of Georgia “On Sanitary Protection Zones of Resorts and Resort Places”
- Law of Georgia “On System of Protected Territories”
- Law of Georgia “On Water”, etc.

It is important that at the moment they are considering a draft of “Georgian Spatial Arrangement and Construction Code”. The last discussion of the draft took place on July 16-17, 2014; Adoption of the Code is planned during the autumn session of the Parliament of Georgia.

#### 4.3.6. Legislative and normative procedures

Compulsory procedures in the construction sector of Georgia are regulated by #57 “Decree of the Government of Georgia on Procedures for Issuance of Construction Licenses and Construction Conditions”.

According to this document, all objects are classified according to the size and risks into five classes. Objects of Class 1 do not require a license; building of Class II and III are of a comparatively smaller size. Hotels to be built in Tskaltubo or buildings subject to reconstruction mainly belong to class IV. Design documentation and construction permits required for this class are described in Chapter XYII of the Decree.

Organizational scheme of the construction project is as follows:

- Customer (or an owner of the land plot) applies to the architectural service of the municipality to obtain a design assignment for the given land-plot;
- Architectural Service of the municipality issues a planning task order based on the city's Land Use General Plan. If no Land Use General Plan is available, the Architectural Service of the municipality prepares the task order based on the dominating development type around the land plot which is to be designed;
- Based on this Order, the customer submits to the Architectural Service of the municipality a full set of project (design) documentation according to the provisions of # 57 Decree;
- The Architectural Service of the municipality sends the project (design) to the Ministry of Economy and Sustainable Development of Georgia for approval;
- If the Ministry gives a positive conclusion, the Municipality shall issue a Construction Permit for a certain period of time.

At all stages of these procedures, the administrative body may have comments and recommendations related to correction of errors.

The mentioned procedures apply only to objects that do not have the status of a cultural heritage monument. Procedures that apply to the buildings with the status of a monument are stipulated in 4.2.17 of this report.

#### 4.3.7. Conclusions

##### Conclusions

In particular, the following circumstances are worth mentioning:

- We believe that the town's most important task is to develop its historic and cultural base map and obtain the status of an urban monument.
- The town's structure maintained its optimum order, however, currently there are some trends toward chaotic and unpredictable development, which have to be stopped with the formation of a new master plan (based on the old ones and adapted with our considerations).
- We believe that completion of the road of the second circle and stage-by-stage construction of the third ring road and strengthening of radial connections is an important part of future development. In a subsequent step the third ring road should be built.
- Functional rehabilitation or pulling down of the dysfunctional industrial objects is one of the most urgent tasks of perspective development.
- The high voltage cable in the park has to be removed urgently, if possible by the responsible company, in order to avoid any accidents.
- The town has to obtain cultural heritage monument status for special important objects. Within our work, we propose certain restrictions for buildings with an architectural value (on 12 out of 16 plots). On total 46% of the buildings we considered such architectural value.
- Rehabilitation and upgrading of engineering infrastructure, cleaning and arrangement of the town's territory should continue. Coordination of this is of great importance for the further development of the Resort. We propose the establishment of an organization for this, involving the different stakeholders, and led by an external authority that is not politically or economically linked with Tskaltubo.
- The problem with the IDPs has to be resolved. There are different possibilities in town or more outside of the resort. We strongly recommend a re-integration program.

## 5. TOURISM STRATEGY OF TSKALTUBO

### 5.1. Introduction & Trends

#### 5.1.1. Understanding medical and wellness tourism

The term health tourism is very inconsistent and confusing: it is sometimes used as a substitute for medical tourism; sometimes it is used synonymously with wellness tourism; sometimes it is used to mean both; and sometimes it is used to refer to a subset of medical tourism or wellness tourism. Caution should be used with this term— especially in marketing and communicating to consumers.

The beginning of this section presented very basic definitions for both medical tourism and wellness tourism:

##### Medical tourism

Medical tourism involves people who travel to a different place to receive treatment for a disease, an ailment, or a condition, or to undergo a cosmetic procedure, and who are seeking lower cost of care, higher quality of care, better access to care or different care than what they could receive at home.

Medical tourist: Generally ill or seeking cosmetic/dental surgical procedures or enhancements.

##### Wellness tourism

Wellness tourism involves people who travel to a different place to proactively pursue activities that maintain or enhance their personal health and wellbeing, and who are seeking unique, authentic or location-based experiences / therapies not available at home.

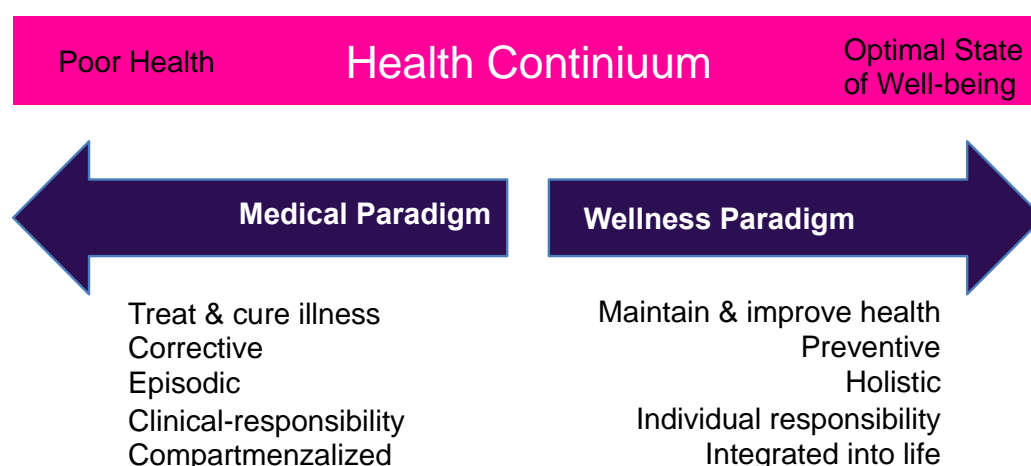
Wellness tourist: Generally seeking integrated wellness and prevention approaches to improve their health/quality of life.

### 5.1.2. Detailed description of Medical and Wellness Tourism

Medical Tourism		Wellness Tourism
Traveler Characteristics		
Sick person	Who is travelling?	Healthy or "well" person
Treat a specific disease, condition or ailment, and to access:	What is the person's motivation for travel?	Proactive interest in maintaining or enhancing health/wellness/well-being?
Lower cost medical care? Higher quality medical care? Different medical care?		Access to different, authentic, or location-based offerings not available at home?
Treatment may be medically required		Seeking to practice a certain lifestyle?
		Participation is voluntary
Destination Characteristics		
Within own country?	Where is the person travelling to?	Within own country?
Different country?		Different country?
Hospital? Clinic? Medical spa?	What specific places is the person visiting?	Spa? Resort? Wellness center?
Only site with a trained doctor or medical personnel?		Retreat? Ashram? Thermal/mineral bath? Cruise?
Surgery or medical intervention?	What activities, experiences, services, or products is the person interested in?	Wellness/health-enhancing treatments (e.g., massage)?
Elective surgery or treatment?		Fitness/exercise?
Cosmetic/plastic surgery?		Relaxation/retreat/rejuvenation?
Dentistry?		Pampering/beauty?
Fertility treatments?		Meditation, yoga, or other mind-body-spirit practices?
Other health-enhancing services (e.g., massage, acupuncture)?		Preventive care?
Other non-medical tourism experiences (e.g., spa, beach, safari, sightseeing)?		Traditional/culturally-based therapies and products?
		Water-based therapies?

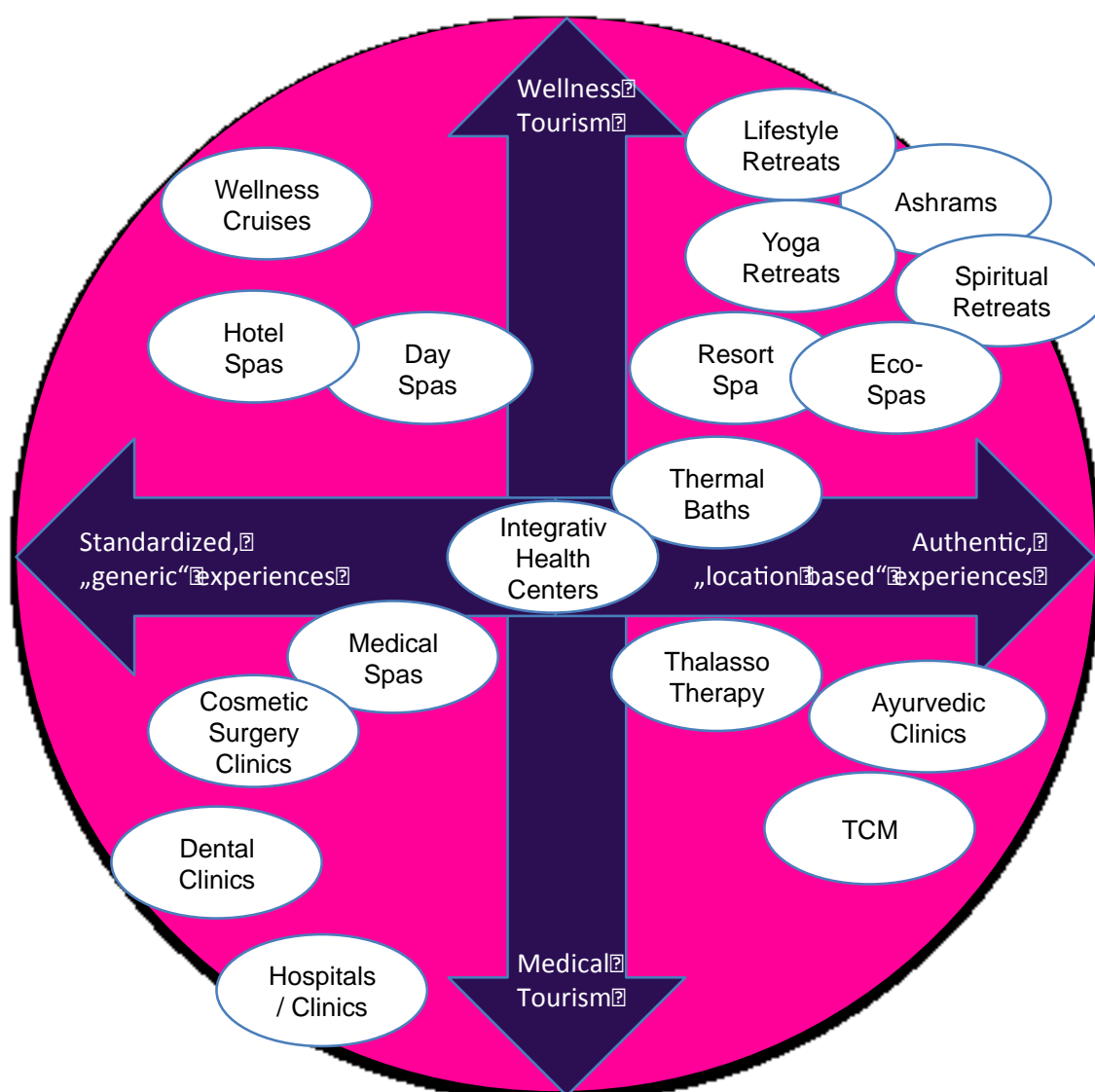
Created by Kohl & Partner; Source: The global wellness tourism economy 2013, Global Wellness Institute

Based on the definitions presented above, we present a richer description of what medical tourism and wellness tourism are all about.



Created by Kohl & Partner; Source: The global wellness tourism economy 2013, Global Wellness Institute

## 5.1.3. Wellness and Medical Tourism Market Spectrum

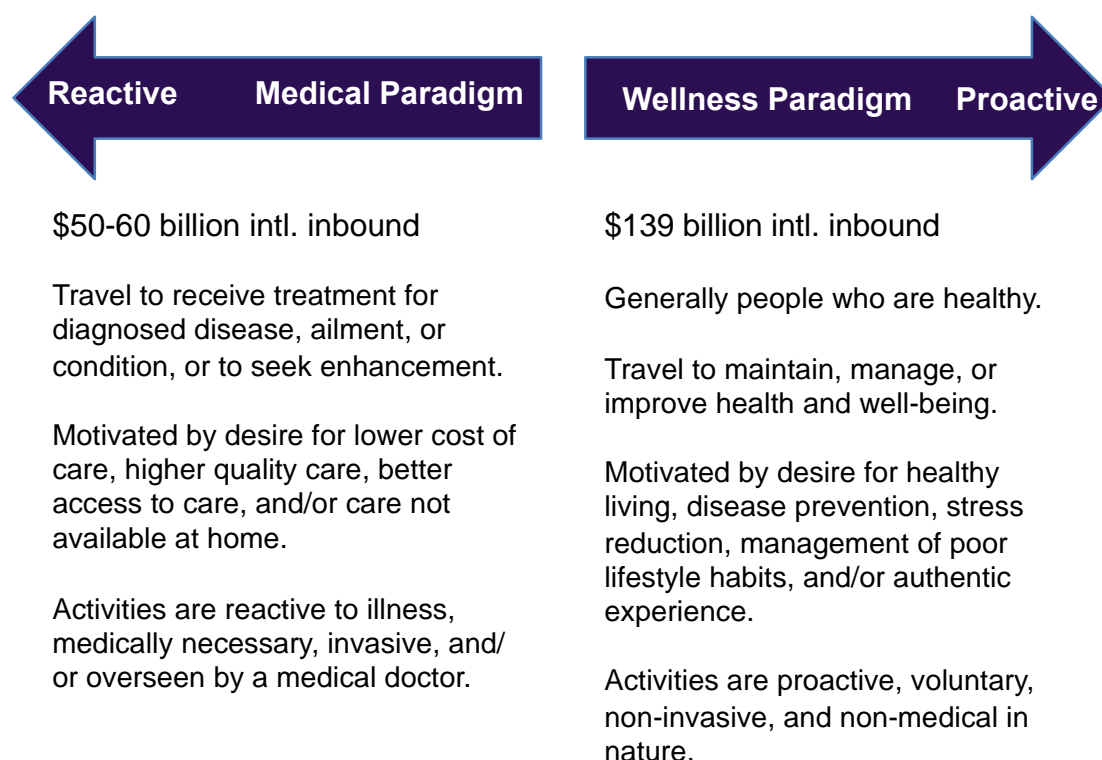


Created by Kohl & Partner; Source: *The global wellness tourism economy 2013*, Global Wellness Institute

The overlap between wellness tourism and medical tourism occurs around activities toward the middle of the health continuum, such as thalassotherapy, thermal baths, health resorts, sanatoria, medical spas, DNA testing, and executive check-ups—activities that can be both preventive and curative.

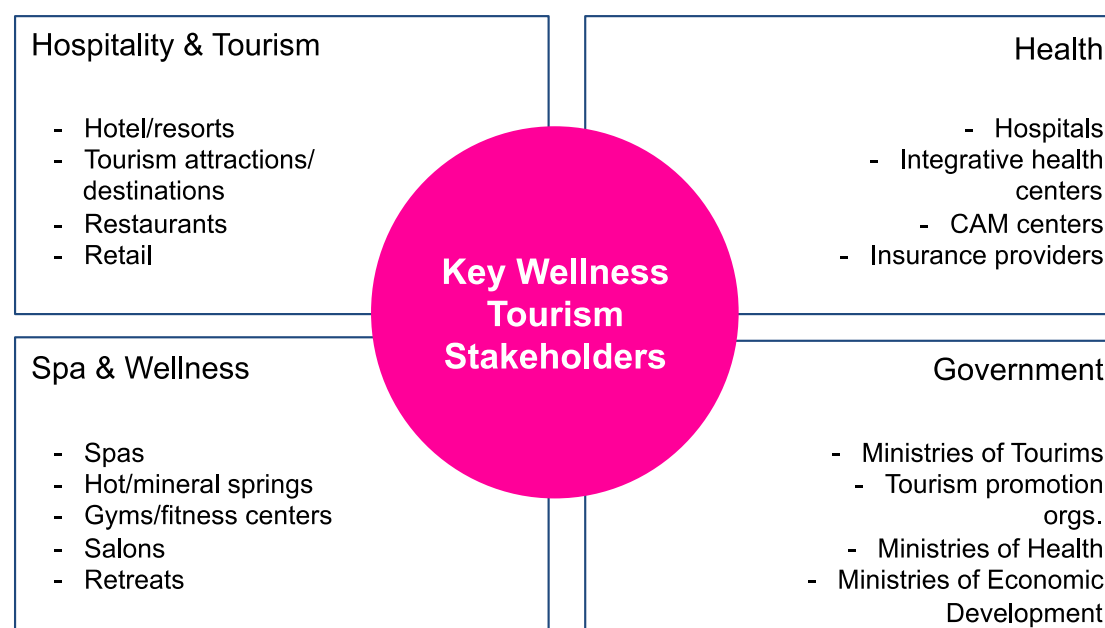
As the conventional medical industry increasingly turns toward preventive, alternative, and traditional approaches in order to deliver more effective care and improve costs – and as the scientific evidence base for alternative and wellness-oriented therapies grows – the lines between medical tourism and wellness tourism will in some instances blur.

Medical tourism and wellness tourism are fundamentally different activities that meet different traveller or patient needs. The conditions and factors that make a destination successful in either type of tourism are also very different.



Created by Kohl & Partner; Source: The global wellness tourism economy 2013, Global Wellness Institute

A wide variety of private and public sector entities have a stake in wellness tourism and can partner together to advance these opportunities.



Created by Kohl & Partner; Source: The global wellness tourism economy 2013, Global Wellness Institute



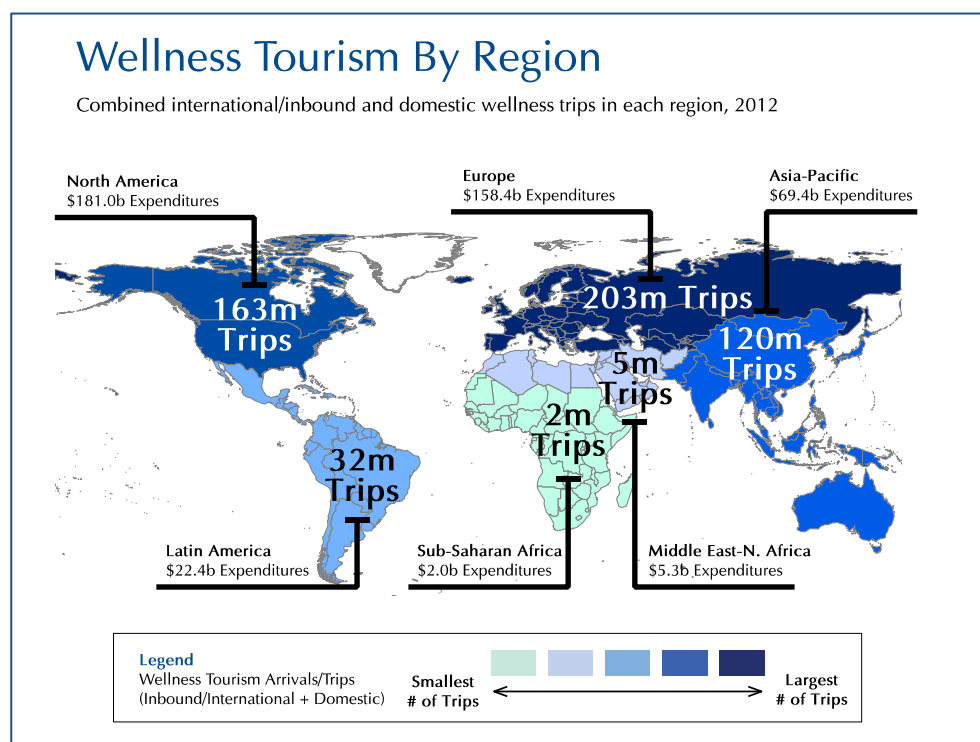
#### 5.1.4. The Wellness Tourism Economy

The wellness tourism economy consists of all expenditures made by tourists who seek to improve or maintain their well being during or as a result of their trip. It includes two types of expenditures:

1. International Wellness Tourism Receipts: All receipts earned by a country from inbound wellness tourists, with an overnight stay.
2. Domestic Wellness Tourism Expenditures: All expenditures in a country made by wellness tourists who are traveling within their own country of residence, with an overnight stay.

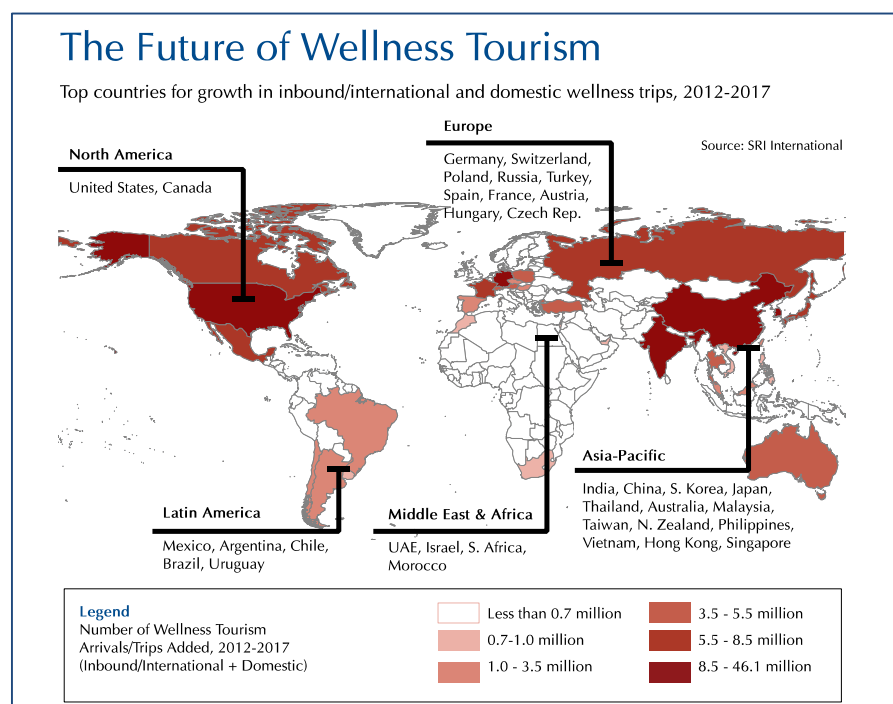
Below are key figures from the Wellness Tourism Economy:

- Wellness tourism represents about 6% (\$ 524.4 million) of all domestic and international trips.
- Wellness tourism accounts for about 14% (\$438.6 billion) of all domestic and international tourism expenditures.
- Domestic wellness tourism is much larger than international, representing 84% of wellness tourism trips and 68% of expenditures.
- Those who seek to maintain wellness while traveling (secondary-purpose wellness travellers) represent 87% of wellness tourism trips and 86% of expenditures.
- Wellness tourism is projected to grow by more than 9% per year through 2017, nearly 50% faster than overall global tourism.
- Wellness tourism generates 11.7 million direct jobs, delivering \$1.3 trillion of global economic impact (1.8% of global GDP in 2012).

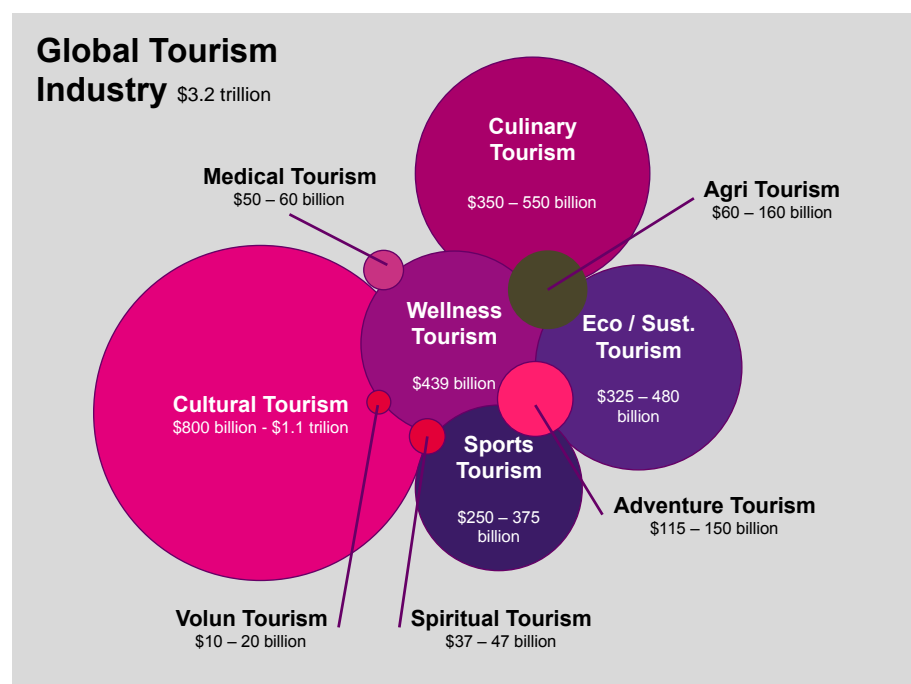


Source: *The global wellness tourism economy 2013*, Global Wellness Institute

- The top five countries (United States, Germany, Japan, France, Austria) account for over half of the market (63% of expenditures).
- Among the world's top twenty countries for inbound/international and domestic wellness tourism (in terms of combined market size), over half are in Europe.
- Countries that receive the most inbound international wellness tourism arrivals: United States, France, Austria, Germany, Switzerland.
- Countries that have the most domestic wellness tourism trips: United States, Germany, Japan, China, France.
- Fifteen countries account for 75-85% of outbound international wellness trips, led by Europe, North America, and wealthier/developed Asian countries.



Source: *The global wellness tourism economy 2013*, Global Wellness Institute



Created by Kohl & Partner; Source: *The global wellness tourism economy 2013*, Global Wellness Institute

#### 5.1.5. Sustainability tourism development

Sustainable Development is most often defined using the Brundtland Commission's definition coined in 1987: that development should "meet the needs of the present without compromising the ability of future generations to meet their own needs." Development of Tskaltubo as a health and wellness tourism resort

must be undertaken in a way that balances the social, cultural, economic and environmental needs of the current population and visiting tourists, and those anticipated to live in and visit Tskaltubo in the future.

This is important, and not just from a moral standpoint, or because the term 'Sustainable Development' continues to be popular or because other destinations are also focusing heavily on sustainable development. It is critical to the long-term success of Tskaltubo as a tourism destination since the tourism industry there directly depends on the quality of the environment, the character of the town and its culture, and the local people. Short-term gains must not take precedence over long-term objectives.

The UN World Tourism Organization and UN Environment Program, in 2005, devised 12 key principles for sustainable tourism development, outlined below, which also serve as suitable guidelines for Tskaltubo's long-term tourism development:

1. **Economic Viability** – to ensure the viability and competitiveness of tourism destinations and enterprises, so that they are able to continue to prosper and deliver benefits in the long term (understanding the market, delivering visitor satisfaction, maintaining good trading conditions, maintaining and projecting an attractive destination, delivering business support).
2. **Local Prosperity** – to maximize the contribution of tourism and economic prosperity of the host destination, including proportion of visitor spending locally (reducing leakages, strengthening links between business, influencing levels of visitor spending).
3. **Employment Quality** – to strengthen the number and quality of local jobs created and supported by tourism, including the level of pay, conditions of service and availability to all without discrimination by gender, race, disability or in other ways (increasing employment opportunities and the proportion of year-round jobs, ensuring and enforcing labor regulations, encouraging enterprises to provide skills training programs and career advancement, concerns for the wellbeing of workers).
4. **Social Equity** – to seek a widespread and fair distribution of economic and social benefits from tourism throughout the recipient community, including improving opportunities, income and services available to the poor (developing income earning opportunities for disadvantaged people, utilizing income from tourism to support social programs).
5. **Visitor Fulfilment** – to provide a safe, satisfying and fulfilling experience for visitors, available to all, without discrimination by gender, race, disability or in other ways (improving access for all, providing holiday opportunities for the

economically and socially disadvantaged, maintaining a duty of care to visitors, monitoring and addressing visitor satisfaction and quality of experience).

**6. Local Control** – to engage and empower local communities in planning and decision-making about the management and future development of tourism in their area, in WTO-UNEP, 2005, Making Tourism More Sustainable: A Guide for Policy Makers Consultation with other stakeholders (ensuring appropriate engagement and empowerment of local communities, improving the conditions for effective local decision- making).

**7. Community Wellbeing** – to maintain and strengthen the quality of life in local communities including social structures and access to resources, amenities and life- support systems avoiding any form of social degradation or exploitation (getting the balance right in the volume, timing and location of visits, reducing congestion, careful planning and management of tourism enterprises and infrastructure, promoting mutual use of facilities and services by residents and tourists, influencing behaviour of tourists towards local communities).

**8. Cultural Richness** – to respect and enhance the historic heritage, authentic culture, traditions and distinctiveness of host communities (ensuring effective management and conservation of cultural heritage sites, working with communities on the sensitive presentation and promotion of culture and predictions).

**9. Physical Integrity** – to maintain and enhance the quality of landscapes, both urban and rural, and avoid physical and visual degradation of the environment (ensuring that new tourism development is appropriate to local environment conditions, minimizing the physical impact of tourist activity, maintaining high quality rural and urban landscapes as a tourism resource).

**10. Biological Diversity** – to support the conservation of natural areas, habitats and wildlife and minimize damage to them (working with national parks and other protected areas, promoting development and management of ecotourism, using tourism to encourage landholders to practice sustainable land management, working with private parks and reserves, minimizing damage to natural heritage from tourism, raising visitor awareness of biodiversity, raising support for conservation from visitors and enterprises).

**11. Resource Efficiency** – to minimize the use of scarce and non-renewable resources in the development and operation of tourism facilities and services (taking account of resource supply in the planning of tourism development and vice versa, minimizing water consumption by the tourism sector, ensuring the efficient use of land and raw materials in tourism development, promoting a reduce, reuse, recycle mentality).

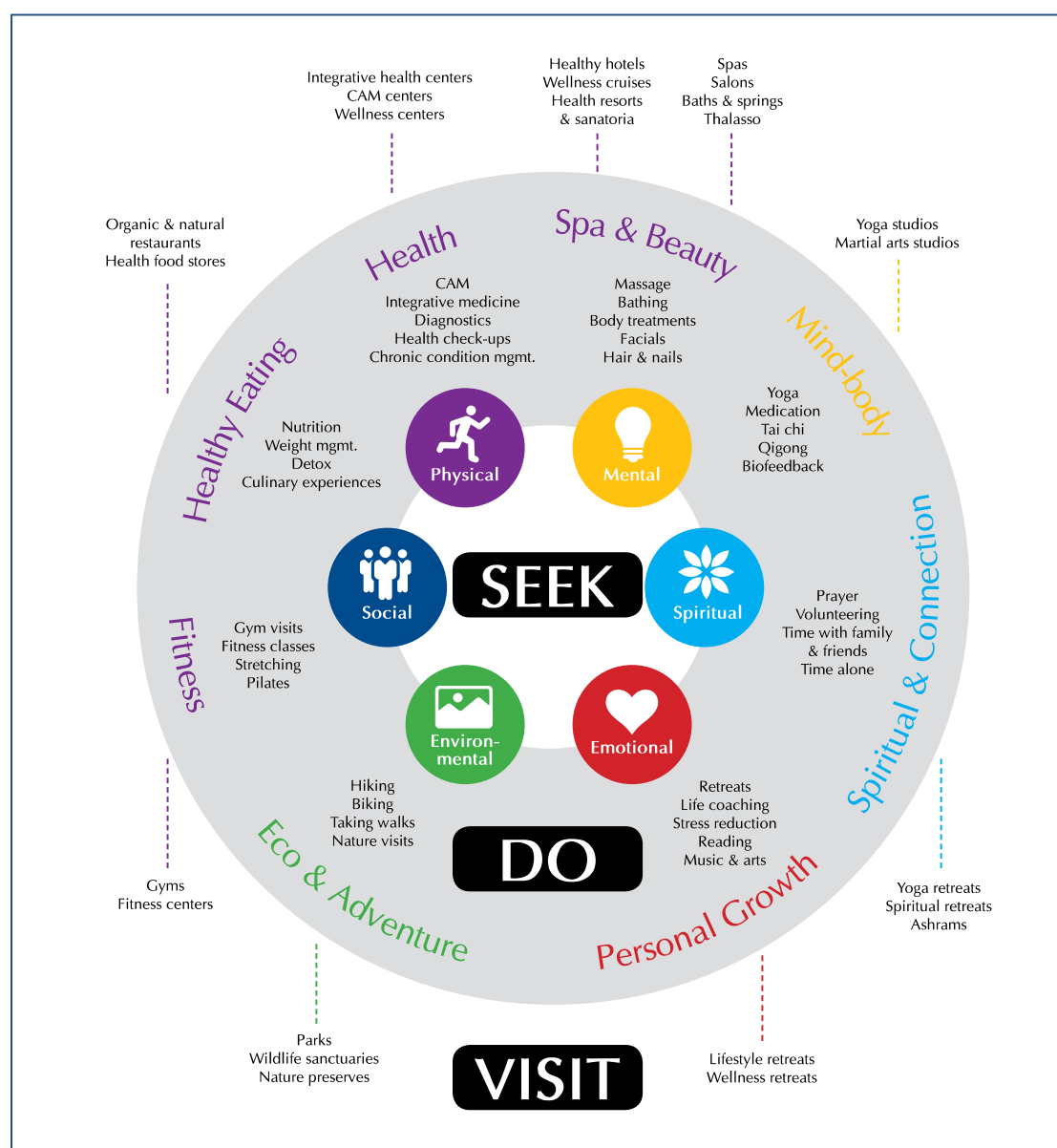
**12. Environmental Purity** – to minimize the pollution of the air, water and land and the generation of waste by tourism enterprises and visitors (promoting the use of more sustainable transport, reducing the use of environmentally damaging chemicals, avoiding the discharge of sewage to river environments, minimizing waste and where necessary disposing of it with care, influencing the development of new tourism facilities).

These principles should be taken into account with all development of Tskaltubo.

## 5.2. Needs of medical and wellness Travellers

Medical and wellness travellers who are searching for healthy treatments during their stay in a tourism destination are also looking for a wide variety of lifestyle and entertainment activities. Such additional activities enrich and sharpen the competitiveness of the tourism destination.

The following figure shows what medical and health tourists are seeking, what activities they normally do and what kinds of sites they typically visit during their stay.



Source: *The global wellness tourism economy 2013*, Global Wellness Institute

### 5.2.1. Medical Tourism in Tskaltubo, Today and Tomorrow

The existing medical practices used in the Tskaltubo resort (sanitary zone) are closely related and based on the achievements of the former USSR medical science and, in particular, on its balneotherapeutic, phsio-therapeutic and rehabilitation areas. In this sense, the accepted methods, regulations, procedures, as well as the criteria for evaluation of medical therapeutic procedures on patients, in some cases have significant differences in practice compared to most European medical centres. These differences should be carefully systematized and evaluated in a future study in order to develop the vision of Tskaltubo as an international balneotherapeutic destination. However, from now on, it could be said that a substantial part of the accepted balneotherapeutic model is unique and involves the positioning of the resort in the



highest possible luxury segment, not only in terms of natural conditions, such as climate, water quality, surrounding environment, but also in terms of its unique method of medical treatment.

Current practice in the organization of medical care is based on state-subsidized medical and profiled semi-hospital treatment facilities, called "sanatoriums", having the necessary medical staff and ensuring both the therapy and the accommodation of patients in a therapy regimes of healing similar to the hospitals.

Nowadays, this model has naturally evolved due to a reduction in sanatoriums, which have been replaced by hotels offering various medical services on a commercial basis. For this reason, we also recommend that the word 'sanatorium' is not used in the future.

We believe the following changes would have a positive effect on the medical product of the resort and Tskaltubo as a destination:

- Profiling and specialization of the services offered according to each area. In our opinion, the priority development of medical balneotherapy in the protected sanitary area must be coupled with the development of recreational activities in the hotel area. This requires a partnership with the existing license holder. If the partnership does not allow this, the concept would have to be changed.
- If we provisionally divide the medical activities into "therapeutic" and "recreational", the "therapeutic" activities should be developed mainly in the protected sanitary area. These include the procedures for the treatment of heart and blood circulation diseases, musculoskeletal system diseases, nervous system diseases, metabolic diseases, gynecological diseases and skin diseases, as well as a physiotherapy, laboratory and diagnostic unit. At the same time, some semi-medical or non-medical services for recreation, rehabilitation, prevention and also general recreation, nutrition, weight loss etc., could be mainly developed in the hotel area, as a part of the hotel infrastructure.
- Expanding the scope of the offered services to a wider range of recreational and rehabilitative medical services, such as sports medicine, anti-stress and similar therapies. Including in the scope of services some alternative medicine practices with a wide popularity
- Going beyond the image of Tskaltubo as a "hospital style health resort" through development of areas for general recreation. This measure would have a complex effect on the economics of the resort, as it will allow the attraction of visitors outside the medical contingent. That would solve the problem of the unused available water resources. The less aggressive mineral water of the resort also suggests such a possibility.

- Development and marketing of more flexible therapy programs. The current practice of 24-30 day therapy courses should be enriched with short and intensive programs with a wider range.
- Developing measures for reducing the seasonality in the occupancy of the resort and achieving an even occupancy of hotel infrastructure.
- Switching from the old model of medicaly specialized sanatoriums with more or less universal healthcare "baths", to the building of modern medical treatment centres with clinical profiles, for specialized groups of diseases, in place of the existing baths.
- Exploring the possibilities for wider exploitation of mud resources in the medical programs and for general recreation in the resort. Against the background of extensive experience in water healing therapies at the resort, the role of curative mud as a standalone healing factor seems to be highly undervalued.
- Expanding the range of services in the medical part could also be achieved through the establishment of a plastic surgery hospital. The combination of this with Spa & Wellness would be a huge advantage.

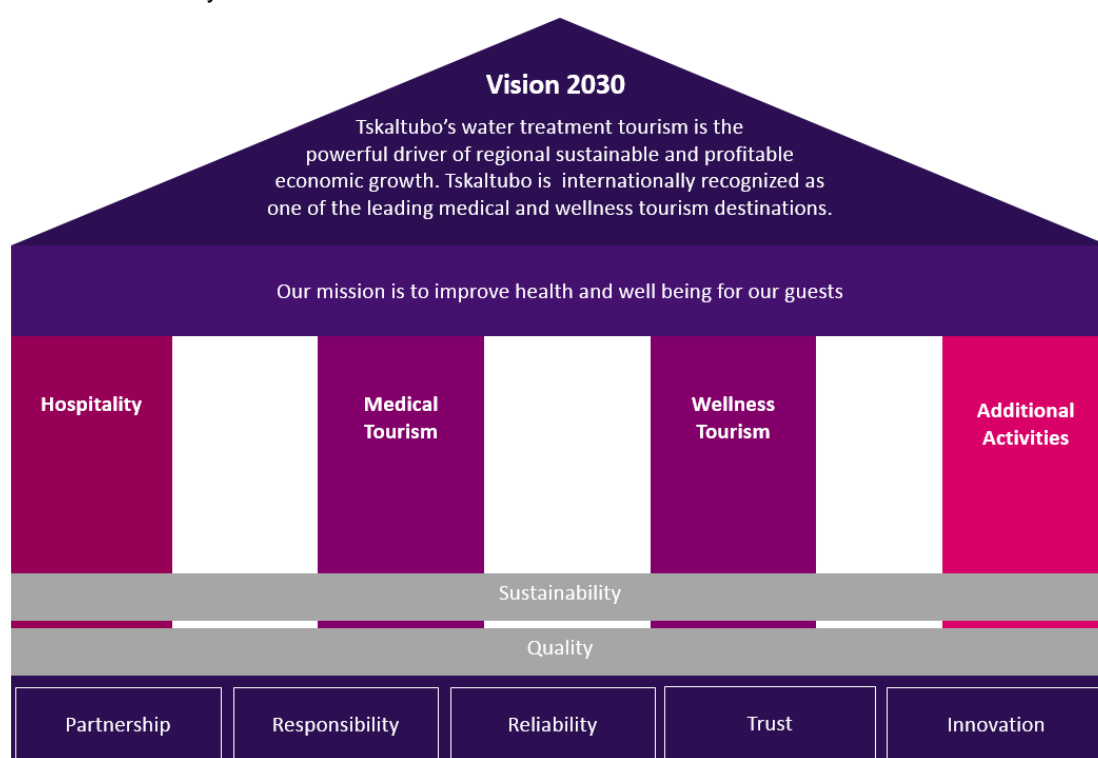
These measures would maintain the already achieved level of traditional treatments and practices in the resort and would facilitate the development of a variety of additional medical and non-medical rehabilitation activities and services. Spa and wellness and Eastern healing practices are just some of the options here. We have included these proposals in the following Tourism Strategy for Tskaltubo.

## 5.3. Superordinate tourism strategy of Tskaltubo

Based on Tskaltubo's strengths, the natural environment and the cultural value of the region as well as the international trends we formed the following Vision 2030 and will bring Tskaltubo to be the SPA Capital in Eastern Europe and compete with the big players in Central Europe.

### 5.3.1. Vision, Mission, Core Values

Source: Created by Kohl & Partner Switzerland



### 5.3.2. Description of Tskaltubo's Core Values

#### Partnership

Build partnerships that optimize Tskaltubo's collective capacity, provide unique value to all players (stakeholders, shareholders and employees), and help to generate solutions Tskaltubo could not arrive at on its own.

#### Responsibility

Responsible business reduces risks, increases efficiency and contributes to a good reputation, which enhances value creation in the longer term.

## Reliability

Reliability is an important commitment to Tskaltubo's customers and stakeholders. Tskaltubo's mission is to deliver value to its customers by providing efficient and reliable solutions for medical and health tourism.

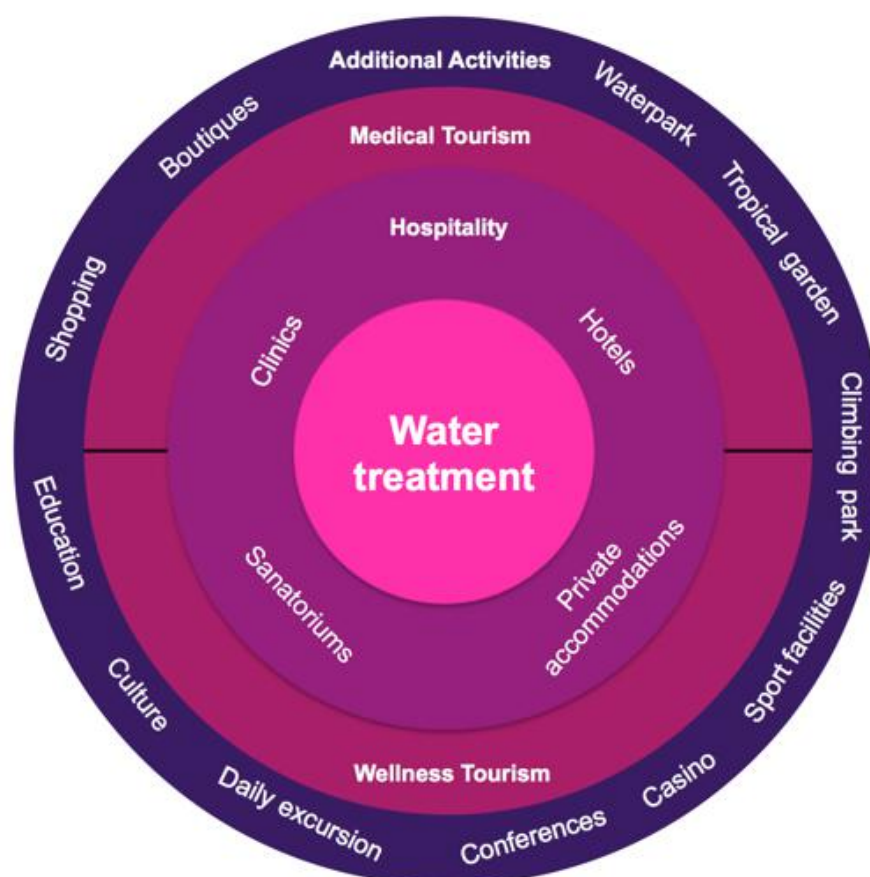
## Trust

Trust is one of the foundation stones of Tskaltubo. It begins with its employees and depends on the reliance, partnerships, and successes they share with its customers.

## Innovation

In the current medical and wellness market, innovative ideas, concepts, and processes are essential to the continued success of any company. Tskaltubo aims to be creative, effective, and efficient within its destination to help create inspired, visionary solutions for its business partners.

### 5.3.3. Tskaltubo's strategic circle



Source: Created by Kohl & Partner Switzerland

Tskaltubo water treatments	
Strategic business field 1	Hospitality
Strategic business field 2	Medical Tourism
Strategic business field 3	Wellness Tourism
Strategic business field 4	Additional Activities

Source: Created by Kohl & Partner Switzerland

#### 5.3.4. Strategic business field 1: Hospitality

##### Strategic orientation

Tskaltubo will be evolved into a regional destination with high quality hospitality facilities (hotels, clinics and sanatoriums and private accommodations) for middle and upper class tourists.

Strategic objectives		
#	Title	Description
1	Hospitality variety	Tskaltubo will be recognised as medical and wellness destination with a variety of different hospitality infrastructures (hotels, clinics and sanatoriums, private accommodation).
2	Service quality	Tskaltubo will be recognised as a tourism destination with high quality service and hospitality standards in accordance to medical and wellness tourism.
3	Economic growth	Good hospitality infrastructure and guest services supports the economic growth of Tskaltubo.

### 5.3.5. Strategic business field 2: Medical Tourism

#### Strategic orientation

Tskaltubo will be evolved into a regional destination with high quality medical tourism facilities and will attract national and international medical tourists to improve their health and wellbeing.

Strategic objectives		
#	Title	Description
1	Top ranking destination	Efforts will be pursued to make Tskaltubo one of the top-ranking European destinations for medical tourism.
2	Medical competence	Tskaltubo will be recognised as a high competence center for medical treatments using thermal water.
3	Economic growth	Medical tourism is the first and main driver of economic growth for Tskaltubo.

### 5.3.6. Strategic business field 3: Wellness Tourism

#### Strategic orientation

Tskaltubo will be evolved into a regional destination with high quality wellness tourism facilities and will attract national and international wellness tourists to improve their health and wellbeing.

Strategic objectives		
#	Title	Description
1	Top ranking destination	Efforts will be pursued to make Tskaltubo one of the top-ranking European destinations for wellness tourism.

2	Wellness competence	Tskaltubo will be recognised as a high competence center for wellness treatments.
3	Economic growth	Health tourism is the second driver of economic growth for Tskaltubo.

### 5.3.7. Strategic business field 4: Additional Activities

#### Strategic orientation

Tskaltubo will be evolved into a regional destination with a wide variety of high quality additional activities for tourists, students and trainees among the hospitality, medical and wellness tourism industry.

Strategic objectives		
#	Title	Description
1	Wide variety of activities	<p>Tskaltubo offers a wide variety of additional activities for tourists and students among the medical and wellness tourism industry, such as:</p> <p>Physical and sporting activities  Cultural activities  Social activities  Shopping attractions  Conferences  Casinos</p>
2	Education	Tskaltubo shall be recognised as a high competence center for medical & wellness treatments and for guest services.
3	Economic growth	The additional activities support the economic growth of Tskaltubo and generate employment.



### 5.3.8. Strategic positions of success

- Thermal sources in the center of Tskaltubo
- Bath infrastructure (medical and wellness) in the center of Tskaltubo
- Historical resort and tradition of medical tourism of Tskaltubo

The historical thermal sources with health qualities are the “heart” of Tskaltubo. We need to create the right environment – the baths – around this historical and natural resource. The 9 historical baths have to be redeveloped.

In order to again attract the necessary customers and to become an important, world-recognised medical and wellness destination, Tskaltubo also requires the extension of offered services, water treatments and, additionally, more fun and family-orientated products.

Therefore, we have created the following plan for future key customer segmentation, which can attract customers from all over the world. The advantage of Tskaltubo is that the natural and historical resources already exist, so the implementation and marketing strategy can just following the existing, current trends. Mainly we see:

- Focus on existing and historically proven “assets”;
- Creation of a water world, focusing on medical and well-being;
- Creation of new architectural monuments, with a mix between historical and futuristic buildings, yet always based on the natural and historical resources;
- Extension of the historical and existing services with modern treatments, international standards and more entertainment.

With these options we could attract the following future key customers:

## 5.3.9. Key customer segmentation

Market	Medical tourism			Wellness tourism			
Target customer	Plastic Surgery	Cure illness	Rehabilitation	Relaxation & well being	Health prevention	Beauty & Care	Body & Sports
<b>Promise of performance</b>	Medical specialty concerned with the "correction" or restoration of form and function through cosmetic or aesthetic surgery.	Cure of sickness and rehabilitation through thermal water, medical treatments, tailor-made health improvement activities, and additional activities of Tskaltubo		Relaxation & well being for body, soul and spirit through thermal water, wellness treatment, sport facilities, tailor-made wellness activities and additional activities of Tskaltubo			
<b>Socio-demographic characteristics</b>	Mainly women	Men and woman	Men and woman	Men and woman	Men and women	Mostly woman	Men and woman
	Upper-class	Still working or retired	Still working or retired	Still working	Still working	Still working	Still working
	High Income - International	Reduced mobility	Reduced mobility	Good mobility	Good mobility	Good mobility	Very good mobility
	Mostly 30 years and older	All age groups within medical process exception babies and childrens	All age groups within medical process exception babies and childrens	Mostly 30 - 50 years old.	Mostly 40 - 60 years old.	Mostly 45 - 65 years old.	Mostly 25- 55 years old.
		Middle and upper-class	Middle and upper-class	Middle and upper-class	Middle and upper-class	Middle and upper-class	Middle and upper-class
<b>Visiting motive</b>	Correction of aesthetic "problems"	Healing of illness	Rehabilitation	Physical and mental balance	Improvement of health status	Physical and mental beauty	Active relaxation
	Recovery of life quality	Recovery of life quality	Recovery of life quality	Relaxation and fun	Prevention of illness	Vitalisation of skin	Fitness
	Staying away from home (inkognito)	Physical activity	Physical activity	Ambiance, silence	Improvement of life quality	Life quality	Mental balance
	Medical cure	Medical cure	Medical cure	Stress reduction	Physical and mental fitness	Pampering	Sport activities

Source: Kohl &amp; Partner Switzerland

### 5.3.10. Primary geographic target markets

In the following section, we give a preview of the potential geographic target markets. We are sure that Tskaltubo needs 3-5 years in order to attract more than the neighbouring countries. Certain products, like plastic surgery, will probably need more time. This also depends on the partner we can find on the market. The basic product for many services (especially around water) is offered by the baths in the sanitary zone, but many additional products and services around these treatments will be offered in the buildings around.

Market	Medical tourism			Wellness tourism			
Target customer	Plastic Surgery	Cure illness	Rehabilitation	Relaxation & well being	Health prevention	Beauty & Care	Body & Sports
Place of origin within the first 3 to 5 years		Georgia	Georgia	Georgia	Georgia	Georgia	Georgia
		Neighbouring countries	Neighbouring countries	Neighbouring countries	Neighbouring countries	Neighbouring countries	Neighbouring countries
				Eastern Europe			
Place of origin after 5 years	Georgia	Georgia	Georgia	Georgia	Georgia	Georgia	Georgia
	Neighbouring countries	Neighbouring countries	Neighbouring countries	Neighbouring countries	Neighbouring countries	Neighbouring countries	Neighbouring countries
	Eastern Europe	Eastern Europe	Eastern Europe	Eastern Europe	Eastern Europe	Eastern Europe	Eastern Europe
		West european countries	West european countries	West european countries	West european countries	West european countries	West european countries
Place of origin after 10 years	Georgia	Georgia	Georgia	Georgia	Georgia	Georgia	Georgia
	Neighbouring countries	Neighbouring countries	Neighbouring countries	Neighbouring countries	Neighbouring countries	Neighbouring countries	Neighbouring countries
	Eastern Europe	Eastern Europe	Eastern Europe	Eastern Europe	Eastern Europe	Eastern Europe	Eastern Europe
	The World	The World	The World	The World	The World	The World	The World

Source: Kohl & Partner Switzerland

## 5.3.11. Product-Segmentation-Matrix

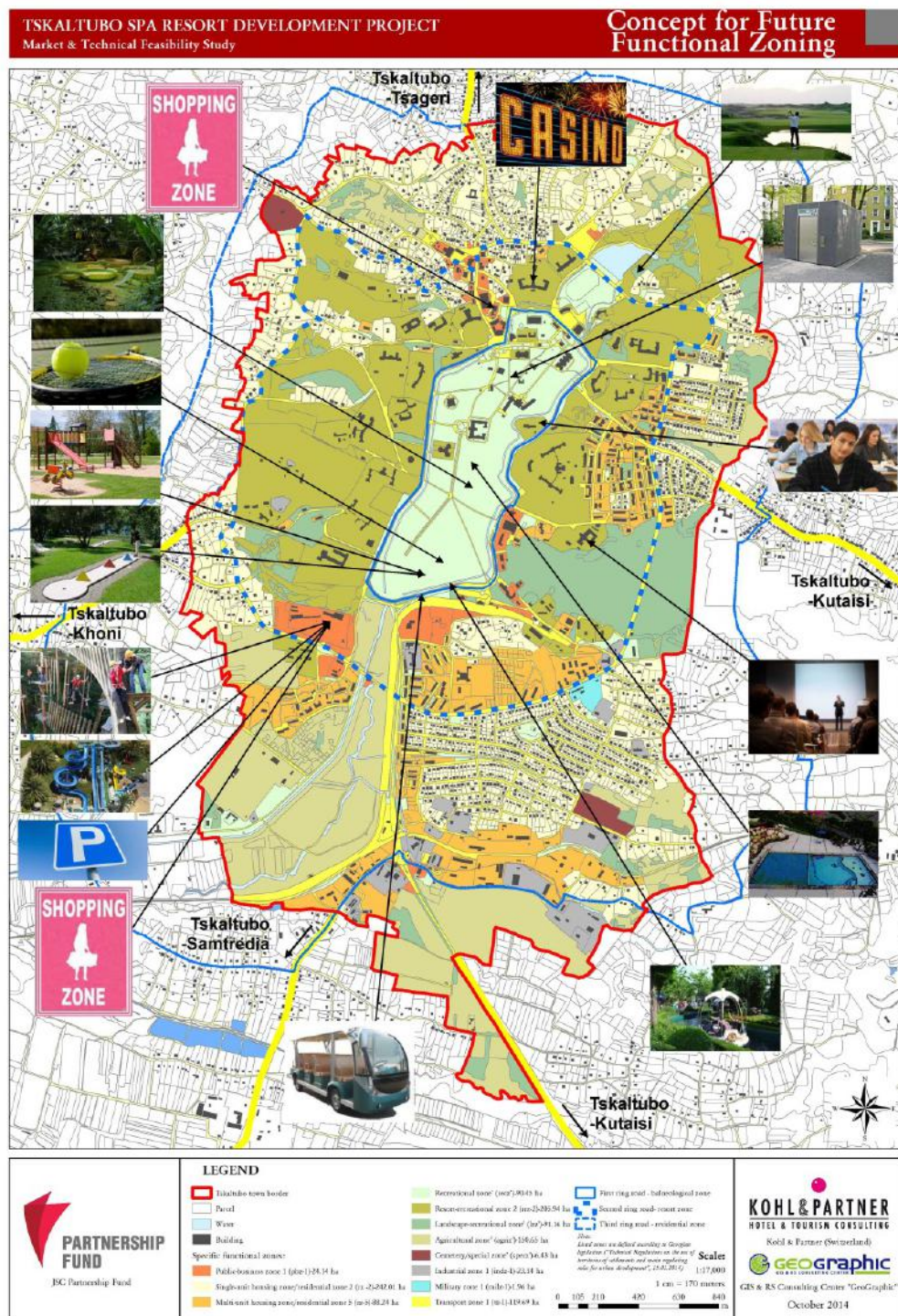
Market	Medical tourism		Wellness tourism			
Target customer	Cure illness	Rehabilitation	Relaxation & well being	Health prevention	Beauty & Care	Body & Sports
<b>Medical products &amp; services</b>						
Medical thermal bathing treatments	+++	+++		+		
Medical treatment	+++	+++		+		
<b>Wellness products &amp; services</b>						
Thermal bathing			+++	+++	+++	+++
Day spas			+++	+	+++	+
Sauna, steam bath, ....		+++	+++	+++	+++	+++
Body treatments (massage,...)		+++	+++	+++	+++	+++
Beauty treatments (facials, hair & nail, cosmetics,...)			+		+++	
Yoga, Meditation, Qigong, Spiritual retreats,...		+++	+++	+++		+
Stress reduction activities		+++	+++	+++		
Fitness (Gym, Stretching, Pilates,...)			+++	+++	+	+++
Cosmetic surgery	+++	+				
<b>Hospitality products &amp; services</b>						
Hotels	+	+++	+++	+++	+++	+++
Private accomodation	+	+	+	+	+	+
Clinics	+++	+++				
Sanatorium	+++	+++				
Restaurants		+	+++	+++	+++	+++
Bar		+	+++	+++	+++	+++
Healthy eating (Nutrition, weight management,...)	+++	+++	+	+	+	+
<b>Additional activities products &amp; services</b>						
Waterpark			+	+	+	+++
Tropical garden	+++	+++	+++	+++	+++	+++
Climbing park						+++
Casino			+++	+++	+++	+++
Conferences & meetings			+	+	+	+
Cultural education		+++	+	+	+	+
Shopping	+++	+++	+++	+++	+++	+++
Boutiques		+++	+	+	+++	+
Daily excursions		+	+++	+++	+++	+++

+++ great demand  
+ demand

Created by Kohl & Partner

## 5.4. Product description

In the following section, we describe some of our ideas for products to be offered in Tskaltubo. These are only ideas, and depending on the contacts and investors, additional attractive products could be found that will contribute to the overall development of Tskaltubo.





#### 5.4.1. The world of Baths - First Product Concept Vision



The baths in the park are the most important products and economic drivers of tourism in Tskaltubo. In the first development phase, 3 to 4 baths have to be expanded, renovated and properly established to provide a good, modern and innovative infrastructure for medical and wellness clients. The strategic alignment, products and services of the baths will influence the future target groups, hospitality infrastructure and additional activities. The baths are the main strategic “key” for the future tourism development of Tskaltubo. At present, a focussed and controlled, goal orientated and coordinated strategy is missing. Therefore, an additional master plan/bath concept must be established and be aligned with the subordinated tourism strategy of Tskaltubo.

Most of the baths are owned and managed by the license holder of the sanitary zone. The license holder is responsible for the establishment of the products and the coordinated development of the baths zone (sanitary zone) and the hospitality zones is a real must.

The following vision conceptualizes how the sanitary zone could be developed in the near future. While this was not in our scope of work, in order to underline the importance of the central product of Tskaltubo, we have developed the following vision, which should lead to a full feasibility study, including a financial study.

Scope of the Core Medical Product in the sanitary zone:

##### 1. Preventive therapies

Preventative medicine is a series of measures aimed at preventing the occurrence of disease or injury. It does not cover their treatment. The main goal of preventive medicine is to identify risk factors for individuals and to reduce or eliminate them, in an attempt to prevent the disease. The prevention has three main phases. The primary prevention represents behaviour directed against risk factors to prevent the development of a disease. The secondary prevention includes early diagnosis of the disease or its symptoms, in order to stop its development. The tertiary prevention attempts to stop or reduce the spread of the disease, i.e. the occurrence of complications of concurrent disease.

Various traditional and non-traditional alternative approaches fall into this sector, as well as part of balneotherapy and wellness services, such as steam baths, Finnish

saunas, infrared saunas, Russian baths, shock buckets, ice rooms, etc., which toughen the body and improve its protective functions. The full range of preventive therapies would also apply in the hotel's area.

## 2. Specialized therapies

When preventive measures are not taken, this leads to deterioration of the body's health condition, which in turn requires certain treatment. This sector covers all medical therapies associated with the specified type of treatment - cardiovascular therapies, therapies for the musculoskeletal system, endocrine system therapies, skin treatments, gynaecological therapies, peripheral and central nervous system therapies, etc.

Specialized medical equipment related to the needs of the disease, including various types of bathtubs, swimming pools for exercises, etc. are used.

We would pay special attention to the Sports medical therapies as a profitable and fastest growing segment.

This is part of the medicine oriented to sports injuries and recovery of the body. This sector includes all conventional and alternative methods of therapies. Specialized equipment is used, related to the needs of the disease, including various types of baths, swimming pools for exercises, tempering procedures, cryo-chamber, etc.

There is specificity in the development and organization of sports and recreation complexes. The full range of specialized therapies would apply in the sanitary area mainly, under strict medical control.

## 3. Physiotherapy and Rehabilitation

In most cases, after basic medical treatment for the disease, it is necessary to apply additional remedial treatments. This sector includes all conventional and alternative therapies. Specialized equipment is used, such as "Box of Roche," Couch type "LIMBURG K" for Roche cells, different devices such as neck rolls, rolls for knees, moving wedges, cushions, rubber bands, balls, physio rolls, reflexballs, mechanical devices for limbering up fingers, mechanical devices for limbering up the shoulder, wrist, ankle, knee, etc.

Some physiotherapy and rehabilitation activities would also apply in the hotel's area.



## **Supplementary Medical & Recreation Products**

Procedures offered in this segment are becoming more and more popular and their application, in most cases, are not tied to specific natural resources, such as the presence of mineral water, for example, which makes them widely applicable. At the same time, they are sought in addition to traditional and alternative medical therapies. These services could be offered by in the different type of hotels around the park.

### **1. Anti age treatment**

These are all approaches and therapies oriented toward combating aging. This is a relatively new and promising medical field with a high value product. Specialized equipment and cosmetics are used.

### **2. Beauty & Weight loss treatment**

This section includes all beauty/cosmetic and dietary procedures, as well as those for body shaping (outside the scope of plastic surgery). Along with various programs and diets for sculpting the figure, narrowly specialized equipment is used here, such as: Celutron, Laser, PTF epilation, Multifunction ultrasound, ART RF - radio frequency etc. Typically the results are visible at the end of treatment.

### **3. General recreation and relaxation**



These kinds of services do not require prior prescription for treatment or recovery. They do not require supervision by medical staff and any user of the service alone decides and is responsible for its implementation.



This includes various types of water therapies – hydro-massage, swimming, water aerobics, water fitness, but also various types of aroma and chromo-therapy, some reflexology, relaxing massages, thermal treatments (heating and

cooling), and sun and air baths. Pools with low mineralized or non-mineralized water, facilities of the "Balneotherapy & Wellness" type and fitness facilities are used for this purpose.

These are all therapies and procedures that enable the body to naturally restore and relax.

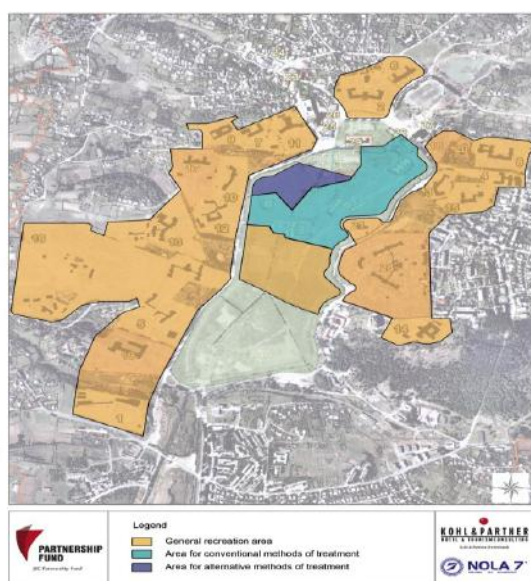
We suggest the development of a wide variety of recreational services in all areas and especially in the hotel's zone.

### **Functional zoning of the baths area – Our point of view**

We recommend the three following areas in the sanitary zone, all controlled by the license holder. The details of the following ideas would be clarified in a details master plan for the sanitary zone.

1. An area for **conventional** (light blue on the following map) methods of treatment - these are the traditional and well-established, methods of therapies using different equipment and medications.

This area includes all balneotherapy centers (Baths No. 2, 3, 4, 5, 6, 7, 8, 9), where patients will be treated according to the currently established methods of treatment and physiotherapy.



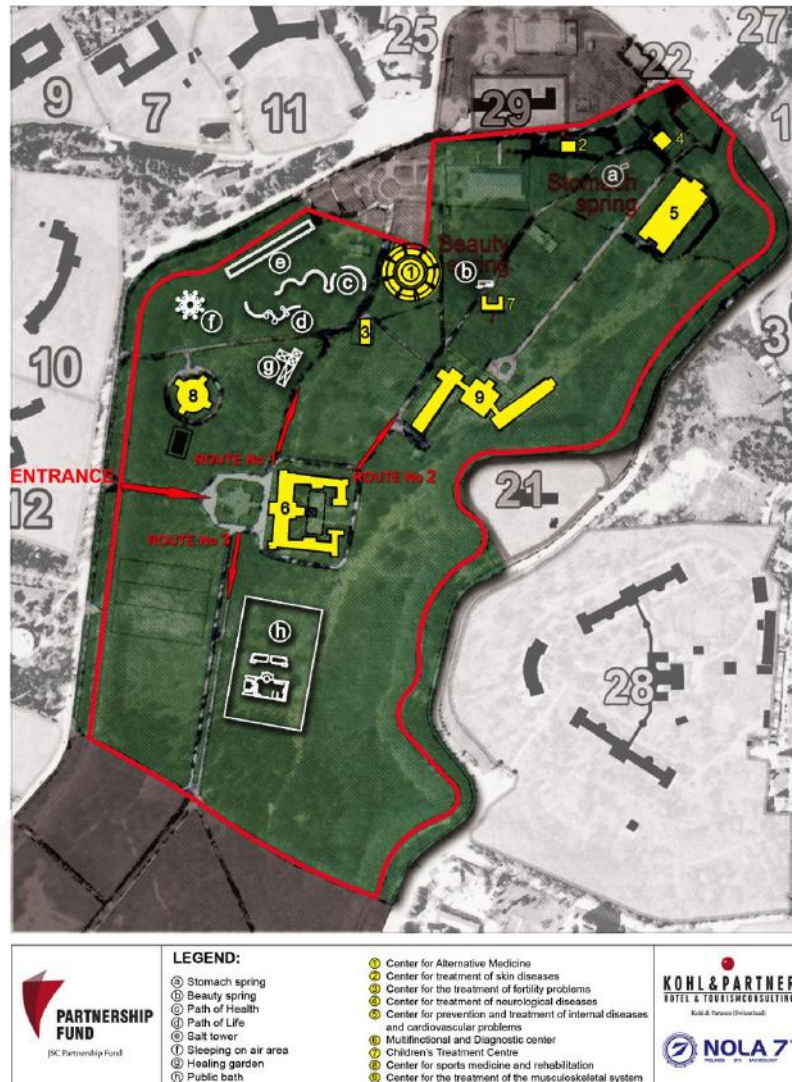
Source: Map Geographic, presentation Nola7

2. An area for **alternative** (dark blue) methods of treatment – this is an area where various centers for non traditional – holistic, homeopathic etc. – methods of treatment are situated.

This area includes Bath No.1, which is specified as a Center for Alternative Medicine.

3. A general **recreation** (yellow) area – public recreational area that is available and used without prescription. The purpose of this zone is to complement and diversify the medical product offered.

## Organization of the Balneotherapeutic Complex in the Sanitary area



Source: Map Geographic, presentation Nola7

When building the overall vision of the balneotherapy complex, any available existing facilities were taken into account, as well as the rehabilitated and currently operational Bath No. 6.

The main point of the organization is the availability of a reception registration center for the diagnosis and initiation of therapy, which would distribute and control the whole process of treatment. We believe that Bath No. 6 could perform these functions, after the appropriate retrofit, once it is in possession of the physico-chemical and radiological laboratory and experimental department for research activities. This bath is one of the largest; it is located in a strategic position, with a very impressive and iconic fountain, which is a symbol of the resort and close to the main road. All of this facilitates the assignment of its additional function.

The main entrance to the complex will be from the west side of the roundabout, which appears to lead away in front of Bath No. 6.

Bath No. 6 will be for diagnostic and distribution purposes, together with the existing multifunctional bath treatments. From Bath No. 6, to the north, there are two routes:

- Route No.1, which could emerge as an alternative route to the alternative (holistic) treatment area, and also to Bath No. 8, which is designed for sports and recreation activities. Given the nature of this Bath and the type of users, it has a direct approach from the main road running around the park, making it easy to use.
- Route No.2, which leads to the zone with conventional methods of treatment i.e., to Baths No. 9, 3, 7, 5, 4, 2 and Stomach spring.
- From Bath No. 6 to the south, Route No.3 is located, which leads to the public bath.

This area is completely separated from the other therapy areas and it can be reached by other approaches to the park. When choosing its location, it was taken into account the distance and other therapeutic areas, given that it would be noisy. Furthermore, the satellite images show that this is an area where there is not much vegetation, which means that valuable plant species would not be destroyed.

### **Profiling the Balneotherapeutic Complex**

The new model of operation suggests that a profile of each treatment center should be built up, i.e., every Bath should be profiled according to the type and kind of treatment. Thus each treatment centers would acquire its own identity, which over time will become an autonomous medical unit with a clinical profile.

In addition to every bath, it is necessary to build restaurants, consistent with the profile of the treatment center.

Following what was described in the functional zoning item and in compliance with the existing architecture, we have created a profile for each bath as follows:



<b>BATH No.1</b> <b>Centre for Alternative Medicine</b>	
Diganostic Rooms	<ul style="list-style-type: none"> <li>• Iridology</li> <li>• Alternative types of diagnostic</li> <li>• Bio-resonance diagnostics</li> <li>• Ultrasound treatment room</li> <li>• Homeopathy treatment room</li> <li>• Nutrition office</li> </ul>
Caminets and baths for Detocification	<ul style="list-style-type: none"> <li>• Hydrotherapy treatment room</li> <li>• Phyto-therapy treatment room</li> <li>• Bio-resonance therapy room</li> <li>• Colon Hydrotherapy treatment room</li> <li>• Ozone therapy treatment room</li> <li>• Litho-therapy treatment room</li> </ul>
Aromatherapiy	<ul style="list-style-type: none"> <li>• Inhalation with herbs and essences (see also the “Healing garden” below)</li> <li>• Bach therapy</li> </ul>
Reflexotherapy	<ul style="list-style-type: none"> <li>• Room with massage appliances</li> <li>• Appliances and paths with outdoor facilities (see also “Path of life” below)</li> </ul>
Manual Therapy	<ul style="list-style-type: none"> <li>• Relaxing massage</li> <li>• Ayurveda massage</li> <li>• Shiatsu massage</li> <li>• Gouashe massage</li> <li>• Sayonji – Eastern special divine massage</li> <li>• Outdoor areas for relaxing massages</li> <li>• Acupuncture and auriculotherapy</li> <li>• Neural therapy</li> </ul>
Psychotherapy	<ul style="list-style-type: none"> <li>• Psychoanalysis</li> <li>• Sound therapy through music treatment</li> <li>• Relax and recreation rooms</li> </ul>
Relax and recreation Area	<ul style="list-style-type: none"> <li>• Rooms with heated beds</li> <li>• Vitamin- bar with water and refreshing drinks</li> <li>• Outdoor areas with sun loungers</li> </ul>

The holistic approach in medicine implies unity of the physical, mental and emotional, and the human spiritual principle. Diseases are associated with an imbalance of these beginnings and energies. It is not the symptoms of the disease that are treated, but deep inner reasons.

This understanding of the genesis of diseases and related methods of treatment has gained immense popularity in recent years and today it is a complete, and in many

cases, a promising alternative to traditional medicine. Therapies of this kind are designed to assist with the discovery of the root cause of the disease by encouraging the achievement of therapeutic effects through the mobilization of the internal forces of the body.

A “Healing garden” is situated around this Bath, where separate sectors with healing herbs and flowers are located, the aroma of which are healing when breathed in. Aromatherapy is a modern and effective method for the treatment of various neurological and psychiatric disorders.

Located next door is the "Path of Life", a long water path at the bottom of which there are various areas with specially selected stones according to type and impact on humans. The combined impact of various minerals having different energies and the achievements of modern reflexology are the basis of the medical impact of this facility.

“Salt tower” provides an innovative approach, using deferred mineral salts and their vapors for prevention and therapy through inhalation.

<b>BATH No.2</b> <b>Center for treatment of skin diseases</b>	
Physiotherapy	<ul style="list-style-type: none"> <li>• Electric and light therapy treatment</li> <li>• Magnet therapy treatment room</li> </ul>
Balneology	<ul style="list-style-type: none"> <li>• Baths – classical treatment</li> <li>• Baths underwater – intestinal treatment</li> <li>• Baths – for upper and lower limbs treatment</li> </ul>
Relax and Recreation Area	<ul style="list-style-type: none"> <li>• Rooms with heated beds</li> <li>• Vitamin- bar with water and refreshing drinks</li> <li>• Outdoor areas with sun loungers</li> </ul>

The treatment is carried out using the methods of conventional medicine, such as the use of specific mineral water for the treatment of a variety of skin diseases.

<b>BATH No.3</b> <b>Center for the treatment of fertility problems and gynaecological diseases</b>	
Physiotherapy	<ul style="list-style-type: none"> <li>• Electric and light therapy treatment</li> <li>• Magnet therapy treatment</li> </ul>
Kinesitherapy	<ul style="list-style-type: none"> <li>• Swedish wall, training, fitness equipment hall</li> <li>• Therapeutic massage rooms</li> </ul>
Thermotherapy	<ul style="list-style-type: none"> <li>• Sauna, steam bath</li> <li>• Applications with paraffin and mud</li> </ul>
Balenology	<ul style="list-style-type: none"> <li>• Baths – classical</li> <li>• Baths seating</li> <li>• Contrast showers</li> </ul>
Manuel Therapy	<ul style="list-style-type: none"> <li>• Massage rooms</li> <li>• Outdoor areas for massages</li> </ul>
Relaxation	<ul style="list-style-type: none"> <li>• Rooms with heated beds</li> <li>• Vitamin- bar with water and refreshing drinks</li> <li>• Outdoor areas with sun loungers</li> </ul>

The treatment is carried out according to the methods of conventional medicine, which focuses on balneotherapy treatment of gynaecological diseases and infertility.



<b>BATH No.4</b> <b>Centre for treatment of neurological diseases</b>	
Physiotherapy	<ul style="list-style-type: none"> <li>• Electric and light therapy</li> <li>• Magnet therapy</li> <li>• Acupuncture</li> </ul>
Kinesitherapy	<ul style="list-style-type: none"> <li>• Swedish wall, training equipment</li> <li>• Therapeutic massage</li> <li>• Physical therapy and functional reduction treatment</li> <li>• Occupational therapy treatment</li> </ul>
Thermotherapy	<ul style="list-style-type: none"> <li>• Paraffin treatment, Mud treatment</li> </ul>
Reflexotherapy	<ul style="list-style-type: none"> <li>• Room with massage appliances</li> <li>• Appliances and outdoor facilities</li> </ul>
Aerosol-Therapy	<ul style="list-style-type: none"> <li>• Inhalers</li> <li>• Aromatherapy</li> <li>• Salt room</li> </ul>
Balneology	<ul style="list-style-type: none"> <li>• Baths – classical, partial- for upper and lower limbs</li> <li>• Swimming pools for underwater gymnastics, with dry corridor for staff access</li> <li>• Shower cabins – Charcot, Vichy, contrast showers</li> </ul>
Psychotherapy	<ul style="list-style-type: none"> <li>• Music sound therapy</li> <li>• Relaxation and recreation</li> </ul>
Manual Therapy	<ul style="list-style-type: none"> <li>• Massage rooms</li> <li>• Outdoor area for relaxing massages</li> </ul>
Relaxation an Recreation	<ul style="list-style-type: none"> <li>• Rooms with heated beds</li> <li>• Vitamin- bar with water and refreshing drinks</li> <li>• Outdoor areas with sun loungers</li> </ul>

The treatment is carried out according to the methods of conventional medicine, which focuses primarily on the treatment of the central and peripheral nervous system.

<b>BATH No.5</b> <b>Center for prevention and treatment of internal diseases and cardiovascular problems</b>	
Kinesitherapy	<ul style="list-style-type: none"> <li>• Passive or active kinesitherapy</li> <li>• Breathing exercises</li> <li>• Passive or active rehabilitation</li> <li>• Work and Occupational Therapy</li> <li>• Swimming pools for underwater gymnastics, with dry corridor for staff access</li> </ul>
Manual Therapy	<ul style="list-style-type: none"> <li>• Classical massage</li> <li>• Outdoor areas for relaxing massage</li> </ul>
Physiotherapy	<ul style="list-style-type: none"> <li>• Magnet therapy</li> <li>• Laser therapy</li> </ul>
Aerosol Therapy	<ul style="list-style-type: none"> <li>• Inhalers</li> <li>• Aromatherapy</li> </ul>
Balneotherapy	<ul style="list-style-type: none"> <li>• Baths – classical</li> <li>• Baths underwater - intestinal</li> <li>• Swimming pools for underwater gymnastics, with dry corridor for staff access</li> <li>• Underwater shower massage</li> <li>• Therapeutic showers</li> </ul>
Reflexotherapy	<ul style="list-style-type: none"> <li>• Room with massage appliances</li> <li>• Appliances and outdoor facilities</li> </ul>
Dieting	<ul style="list-style-type: none"> <li>• Consulting office</li> </ul>
Relax and recreation Area	<ul style="list-style-type: none"> <li>• Rooms with heated beds</li> <li>• Vitamin- bar with water and refreshing drinks</li> <li>• Outdoor areas with sun loungers</li> </ul>

The treatments are carried out according to the methods of conventional medicine.

<b>BATH No.6</b> <b>Multifunctional and diagnostic center</b>	
Doctor's Offices	<ul style="list-style-type: none"> <li>• Testing laboratory</li> <li>• Manipulation room</li> <li>• Examinations and diagnosis rooms</li> <li>• Consulting rooms</li> <li>• Medical emergency office</li> </ul>
Thermal Water Testing Laboratory	<ul style="list-style-type: none"> <li>• Laboratories</li> </ul>
Thermotherapy	<ul style="list-style-type: none"> <li>• Consulting offices for thermotherapy with peloids and paraffin therapy</li> </ul>
Aerosol Therapy	<ul style="list-style-type: none"> <li>• Cabins for inhalations</li> </ul>
Hydrotherapy	<ul style="list-style-type: none"> <li>• Various types of baths and pools, showers</li> </ul>
Physiotherapy	<ul style="list-style-type: none"> <li>• Electric and light therapy rooms</li> <li>• Reflexotherapy rooms with electric acupuncture devices</li> <li>• Rooms and outdoor areas for manual therapies</li> <li>• Laser therapy rooms</li> <li>• Magnet therapy</li> </ul>
Cryotherapy	<ul style="list-style-type: none"> <li>• Ice room</li> </ul>
Kinesitherapy	<ul style="list-style-type: none"> <li>• Room for active kinesitherapy</li> </ul>
Manual Therapy	<ul style="list-style-type: none"> <li>• Therapeutic massage cabins</li> <li>• Outdoor areas for relaxing massages</li> </ul>
Relax and Recreation Area	<ul style="list-style-type: none"> <li>• Rooms with heated beds</li> <li>• Vitamin- bar with water and refreshing drinks</li> <li>• Outdoor areas with sun loungers</li> </ul>

This Bath operates as a diagnostic center, in addition to functioning as a universal center for prevention and treatment.

<b>BATH No.7</b> <b>Children's Treatment Center</b>	
Pyhsiotherapy	<ul style="list-style-type: none"> <li>• Electric and light therapy cabins</li> <li>• Magnet therapy cabins</li> </ul>
Balneology	<ul style="list-style-type: none"> <li>• Bubble baths</li> <li>• Baths - classical and underwater jet massage, and specially designed for upper or lower limbs,</li> <li>• Hauff bath</li> <li>• Swimming pools underwater kinesitherapy equipped with lifting devices and dry corridor access for staff</li> <li>• Medical and contrast showers</li> <li>• Hydro galvanic baths</li> <li>• Apparatus for passive movement knee or ankle joint</li> <li>• Apparatus for segmental / whole body magnet therapy</li> <li>• Apparatus for lymph drainage</li> </ul>
Paraffin or mud Therapy	<ul style="list-style-type: none"> <li>• Local or general applications ┘</li> <li>• Mud baths</li> </ul>
Cryotherapy	<ul style="list-style-type: none"> <li>• Packs freezing chamber</li> <li>• Packages with hydro collator</li> </ul>
Manual Therapy	<ul style="list-style-type: none"> <li>• Room for therapeutic massage</li> <li>• Cabin for whole body and local recreation massage</li> </ul>
Refelxotherapy	<ul style="list-style-type: none"> <li>• Room with massage appliances</li> <li>• Outdoor appliances and facilities</li> </ul>
Kinesitherapy	<ul style="list-style-type: none"> <li>• Room for active kinesitherapy</li> <li>• Room for physical therapy and functional reduction</li> <li>• Office of Labor and occupational therapy</li> </ul>
Relax and recreational Area	<ul style="list-style-type: none"> <li>• Rooms with heated beds</li> <li>• Vitamin- bar with water and refreshing drinks</li> <li>• Outdoor areas with sun loungers</li> </ul>

The treatment is carried out according to the methods of conventional medicine, which is entirely devoted to the treatment of children.

<b>BATH No.8</b> <b>Center for sports medicine and rehabilitation</b>	
Physiotherapy	<ul style="list-style-type: none"> <li>• Electric and light therapy cabins</li> <li>• Magnet therapy cabins</li> <li>• Reflexotherapy cabins with electric acupuncture devices</li> </ul>
Balnelogy	<ul style="list-style-type: none"> <li>• Baths – all types</li> <li>• Bubble baths</li> <li>• Pools – indoor and outdoor</li> <li>• Hot and cold water pools</li> <li>• Shock pool</li> <li>• Charcot, Vichy, contrast showers</li> </ul>
Kinesitherapy	<ul style="list-style-type: none"> <li>• Pool for medical gymnastics and underwater fitness</li> <li>• Room for active kinesitherapy</li> <li>• Room for physical therapy and functional reduction</li> </ul>
Manual Therapy	<ul style="list-style-type: none"> <li>• Rooms for massages</li> <li>• Sports and recreation massages</li> <li>• Training massage</li> <li>• Outdoor areas for massages</li> </ul>
Thermotherapy	<ul style="list-style-type: none"> <li>• Sauna, steam bath</li> <li>• Ice fountain, shock bucket</li> <li>• Ice room</li> <li>• Cryotherapy</li> </ul>
Mud Therapy	<ul style="list-style-type: none"> <li>• Application and wrapping</li> <li>• Mud baths</li> <li>• Egypt Bath</li> </ul>
Relax and recreational Area	<ul style="list-style-type: none"> <li>• Salt room</li> <li>• Rooms with heated beds</li> <li>• Vitamin- bar with water and refreshing drinks</li> <li>• Outdoor areas with sun loungers</li> </ul>

The sports and recreation complex has a more specific profile. Its organization is more specific, since primarily athletes will use it. The procedures are aimed at restoring and tempering the organism. Different types of baths and massage, and various thermal treatments (heating and cooling) are used. This center also provides cryotherapy.

<b>BATH No.9</b> <b>Center for the Musculoskeletal System Treatment</b>	
Physiotherapy	<ul style="list-style-type: none"> <li>• Electric and light therapy cabins</li> <li>• Magnet therapy cabins</li> </ul>
Balneology	<ul style="list-style-type: none"> <li>• Bubble baths</li> <li>• Baths - classical and underwater jet massage and specially designed for upper and lower limbs</li> <li>• Seating bath</li> <li>• Hauff bath</li> <li>• Artificial gas bath</li> <li>• Swimming pools underwater</li> <li>• kinesitherapy equipped with lifting devices and dry corridor access for staff</li> <li>• Medical and contrast showers</li> <li>• Hydro galvanic baths - total or partial</li> <li>• Apparatus for passive movement - knee or ankle joint</li> <li>• Apparatus for segmental / whole body magnet therapy</li> <li>• Apparatus for lymph drainage</li> </ul>
Cryotherapy	<ul style="list-style-type: none"> <li>• Packs freezing chamber</li> <li>• Packages with hydro collator</li> <li>• Cryo-chamber</li> </ul>
Paraffin and mud Therapy	<ul style="list-style-type: none"> <li>• Local or general applications</li> <li>• Mud baths</li> </ul>
Reflexotherapy	<ul style="list-style-type: none"> <li>• Room with massage appliances</li> <li>• Outdoor appliances and facilities</li> </ul>
Kinesitherapy	<ul style="list-style-type: none"> <li>• Active kinesitherapy room</li> <li>• Therapeutic massage room</li> <li>• Physical therapy and functional reduction room</li> <li>• Office of Labor and Occupational Therapy</li> </ul>
Relax and recreational Area	<ul style="list-style-type: none"> <li>• Rooms with heated beds</li> <li>• Vitamin- bar with water and refreshing drinks</li> <li>• Outdoor areas with sun loungers</li> </ul>

The treatment is carried out according to the methods of conventional medicine. Since the healing properties of water are primarily focused on joints and rheumatic

fever, which are the most affected by water treatment, the largest Bath was chosen on purpose precisely to treat these types of diseases. High-tech devices for mechanical therapy and underwater extension, and various types of manual therapies are used here.

### **The Phases of the Baths Rehabilitation**

Since simultaneous rehabilitation of all existing baths and construction of new facilities will be difficult to justify from an economic standpoint, it probably requires the elaboration of a plan for the phased construction of facilities provided.

There are various criteria that are not only financial in determining these stages. Based on the general logic for development of the area, we propose the first phase to include construction of facilities and equipment with the provision of balneotherapy services within the core medicine products (Baths No.2, 3, 4, 5, 7, 8, 9 and diagnostic block in Bath No.6), which form the basis of medical activity in the resort according to their existing operation model. The rapid increase of the capacity of these services would be a prerequisite for the rapid development of the hotel zone and a general catalyst for economic growth in the resort. We propose that at least 3-4 baths have to be developed in the first stage. At the same time, it should be noted that this step involves rehabilitation of the therapy centers with the highest volume of investment.

We would suggest that this first stage also should include the general-recreation zone (Public bath), which would dramatically increase interest in the resort from people outside the traditional patient contingent.

The second stage would basically involve the remaining facilities and services in the resort that are for non-traditional practice (Bath No.1 and all accompanying alternative areas for treatment).

The completion of this stage would confirm the change in Tskaltubo`s image as a destination for traditional medical procedures. This would give the resort a far more contemporary look and would substantially expand its profile for visitors.

### **Perspectives and Threats**

#### **Possible Threats**

Global – There has recently been an internationally expanded discussion about the harmful effects of uncontrolled radon on human health. According to a report by the EPA (US Environmental Protection Agency) dated 2003, the radon is surprisingly labelled as the second highest cause of death due to lung cancer among Americans, after smoking.



As a result, many national and European healthcare institutions are in the process of re-evaluating (in the direction of descent) the accepted standards for safe exposure to radon for human health. For example, recently Canada reduced the perceived safe dose limit for radon exposure from 800 to 200 Bq / m<sup>3</sup>.

Without any direct relation to the mineral resources of Tskaltubo, in the long term plan, this discussion could lead to a new meaning of the benefits of radon therapy in general and reduce the attractiveness of and demand for the underlying asset of the resort - its mineral water.

Local – Firstly, there is uncertainty about the current state of the spring's water supplies, chemical and physical composition, radiology and bio-chemistry. Studies of this kind have been made long ago and without their presence, the qualitative assessment of balneotherapeutic potential sources is impossible, as well as a relevant investment strategy. The scope of such a study should include an evaluation of the resources of healing mud in Tskaltubo, an under-explored medical resource.

The lack of a plan and a system for utilization of water as a whole and, in particular, the lack of a system for waste water treatment, before returning it back to nature, may compromise its capacity as a healing asset in the future, especially in a significant expansion of the resort.

The same negative effect would occur due to poorly managed access to the sanitary area: the anthropogenic pressure on it could reduce the quality of the mineral springs over time.

The threat, in this sense, would be a significant change in direction or deterioration in the quantity and / or quality of the healing water.

#### 5.4.2. The world of Baths - First Architectural Concept Vision

Within a certain period of time (5-10 years), depending on the success of tourism development in Tskaltubo, all 9 baths will be restored. We intend to retain most of the historical architecture of the old buildings, but also recommend working with new architecture and creating some futuristic monuments, which will become recognizable landmarks. In the following section we offer some brief ideas of such a development through the example of bath number 8. This large, relatively new building could be transformed into a modern, high-tech bath with new standards and new, world-class attractions. In order to get the necessary interest on a global level, it needs some “craziness” to make it unique. The following illustrations are sample studies.

NOLA 7®

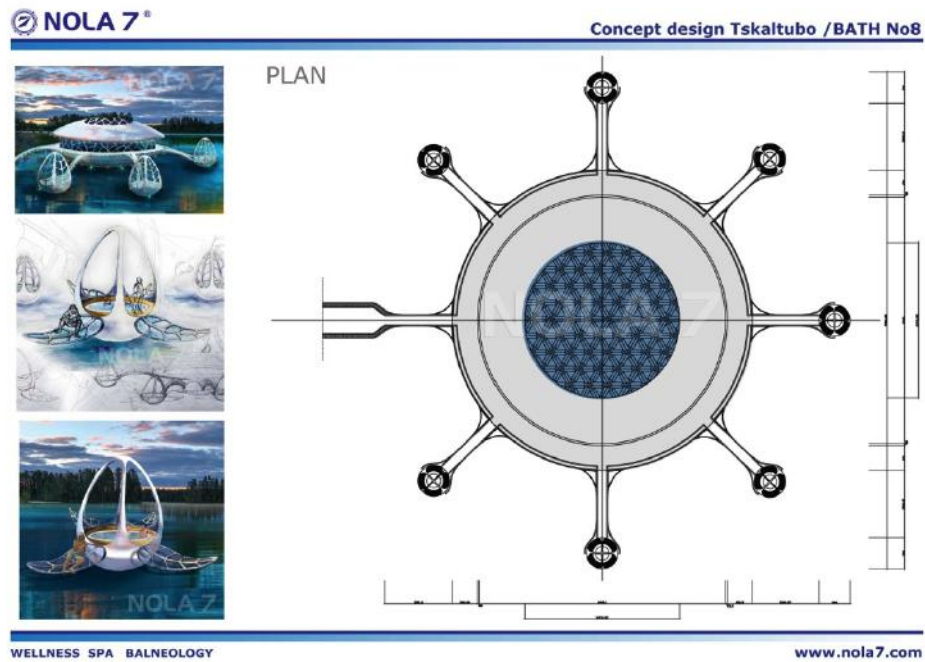
Concept design Tskaltubo /BATH No8



3D visualization / hand drawing/

WELLNESS SPA BALNEOLOGY

[www.nola7.com](http://www.nola7.com)



The main objectives are the retention of the existing architecture and the purpose of the building while adding additional areas with new functions. The bath facilities must meet the local and European requirements for access for disabled persons to public buildings and institutions.

For the proper functioning of the building, several areas and levels for distribution of the human flow are created.

#### First level

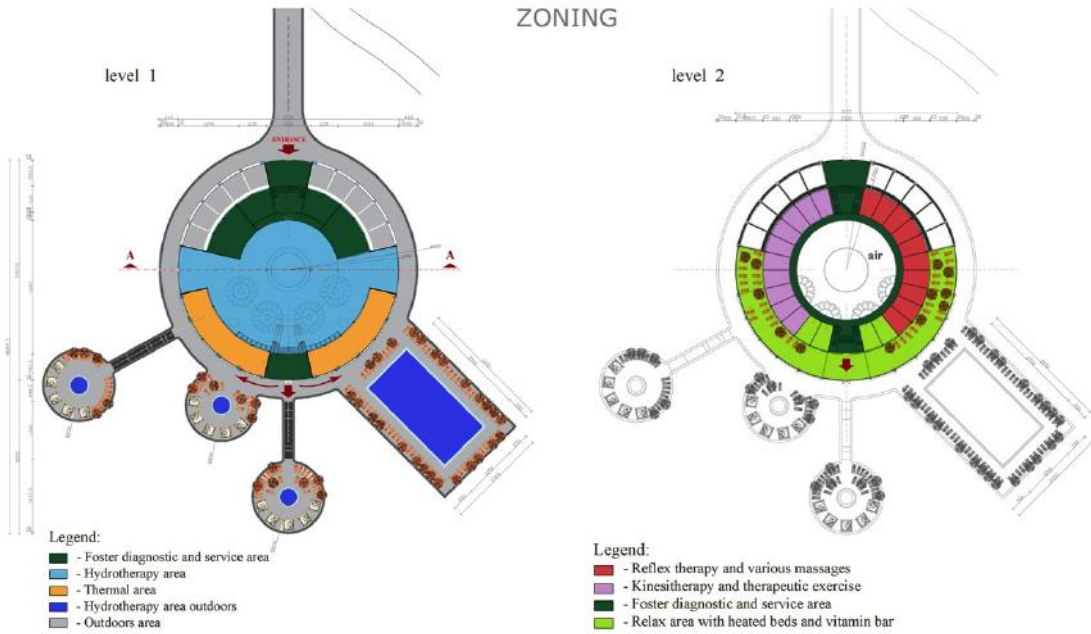
A foster diagnostic and service area will created, which includes reception, diagnostic rooms and instrumental physiotherapy, locker rooms and other auxiliary facilities. Also a hydrotherapy area with pool and various baths will be established, including a general and local thermal area with sauna, steam room, showers, cold pool and a cryo-chamber for hot and cold procedures. A new outdoor hydrotherapy area will be created, with an integrated connection to the existing building.

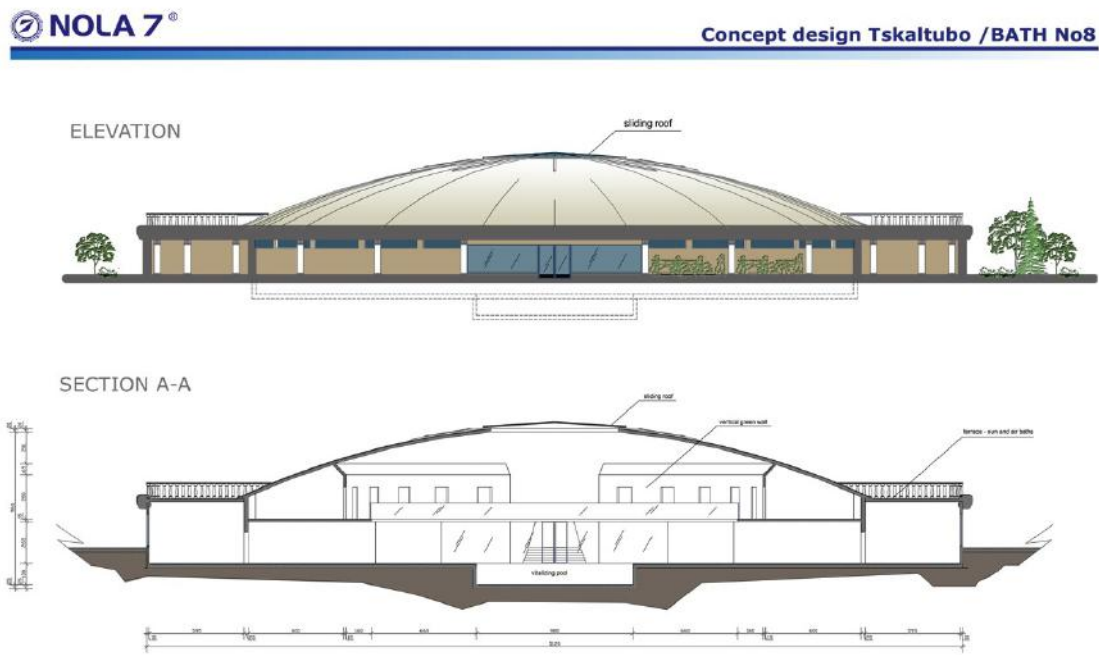
#### Second level

This level will have rooms for reflex therapy and various massages, complete and partial. There will also be an area for kinesitherapy and therapeutic exercise, and relaxation areas with heated beds and a vitamin bar.



3D visualization / hand drawing/



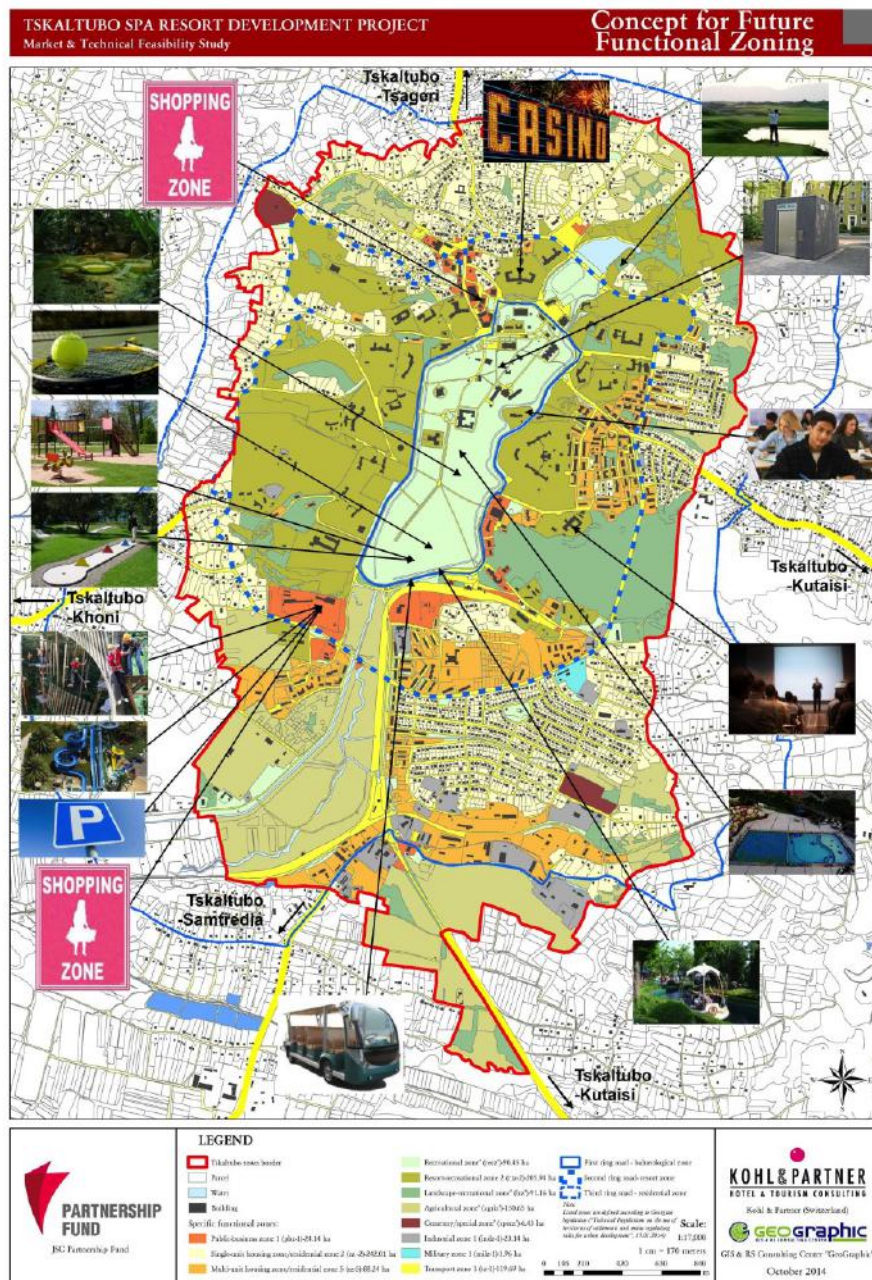


Sources: Nola7, Sofia-Bulgaria, made all concept designs



### 5.4.3. Sanatorium / Hotels

The strategic alignment, products and infrastructure of the baths in the sanitary zone will influence the hospitality infrastructure. Each investor who invests in an existing building (with no restriction) will be free to decide if they use it as a midscale, medical oriented, wellness or family orientated hotel, as long as it makes sense to the subordinated tourism strategy of Tskaltubo. To attract medical and wellness clients, it should be taken into consideration that a well balanced medical and wellness product-mix will be established.



#### 5.4.4. Hotel with conference and meeting facilities



The hotel, with its conference and meeting facilities, will be within walking distance of the park and will be easily reached by car or public transport. (Hotel 14, “Aia”) It will be situated outside the car free zone along the 2<sup>nd</sup> ring road and near to the park entrance of Tskaltubo. The hotel will offer flexible and multi-purpose meeting spaces for business, incentive and private events. For this purpose, we have foreseen the use of hotel “Aia”, which was already built as a conference hotel.

#### 5.4.5. Casino



We recommend integrating a casino in the first 5 star hotel in Tskaltubo. We have foreseen hotel Meshakhte as the 5 star hotel (hotel no.2). As shown in other famous health and wellness cities, the implementation of a casino in the resort makes the destination attractive and can bring additional, different visitors.

Georgia legalized gaming in 1992, whereas neighbours banned or tightly controlled gaming throughout the 1990s. Over 400 million people live within a few hours flight away from Georgia and the results in Batumi and Tbilisi show the success of incorporating gaming into the approach. We are sure that this, combined with Medical and Wellness, will open new doors and possibilities for new product packages.

Most of the casinos in Georgia are located in Batumi and Tbilisi.





Source: MESO, BoG Research

#### 5.4.6. Education



Tskaltubo's should have an education center, which offers medical, wellness, hospitality-orientated and language courses to develop professional competences and high service quality within the local tourism industry. The education center could also be used to reintegrate IDP's (Internally displaced people) into the labour market. We could see building 18 as an education center. The building is the only building in the park. Cooperation with an International education organisation would be a favourable solution. We can only underline that the increase of the service level in Georgia is a requirement in order to attract foreign markets.

Additional investors have to be found for the education center.

#### 5.4.7. Tropical garden



We recommend adding certain attractions to the resort in order to increase its uniqueness and to provide a USP (unique selling proposition). We see the development of a tropical garden and house, using the energy of the natural hot water. The energy of the hot water can be transformed into heating energy for growing tropical fruit. The tropical garden and house would be situated in the park and open to the public. It should have a small restaurant and shop. This tropical nature attraction provides the opportunity to cultivate different tropical plants and fruit. According to availability, the fruits grown will be offered, freshly prepared, in the restaurant in the tropical house, and also in the hotels.

#### 5.4.8. Water transport system



Around the park, in the existing canal system, small boats will float and transport visitors to their destination or allow them to just enjoy the marvellous scenery in an innovative way. The small boats will function without a “Captain”, instead being self-guided and powered by the water system. Several small landing stages will allow a convenient ‘hop-off-hop-on’ service around the park.

#### 5.4.9. Car free zone



The area around the park (1st ring road) will be a car-free zone to ensure tranquillity and relaxation in the center of Tskaltubo. Those who walk will have a true sense of



being on holiday. If guests do not want to walk, there are convenient eTaxis, e-Buses, e-trains, bicycles or horse-drawn carriages. The development of this product will only be possible in the second phase, when the basic infrastructure is already established.

#### 5.4.10. Waterpark at the entrance of the park



Waterslides, laughs and thrills galore! As an additional activity in Tskaltubo, a water park at the entrance of the park will attract families with children. It will feature water play areas, such as water slides, splash pads, water playgrounds, and swimming environments.

#### 5.4.11. Climbing Park



Close to the waterpark, a fantastic climbing park with lianas, networks, cable cars and small bridge elements from one platform to another will provide children, teenagers and adults sporting and adventurous fun. The climbing park will be a indoor climbing park in the shopping area in order to increase the attractions in bad weather periods.

#### 5.4.12. Children playground



Inside the park, a modern children's playground with recreational equipment such as seesaws, swing sets, slides, chin-up bars, sandboxes and playhouses will help children to develop physical coordination, strength and flexibility, as well as providing recreation and enjoyment.

#### 5.4.13. Shopping & Boutiques



Shopping has become an increasingly relevant draw card for tourists. Through the development of authentic and unique shopping experiences, such as health and wellness stores, boutiques, souvenir shops, food and wine stores, Tskaltubo has an immense opportunity to bring added value to tourists, and to generate local income and economic growth.

#### 5.4.14. Golf



Located in the beautiful landscape of Tskaltubo, the golf resort offers a full service restaurant, a driving range, practice facility, and a golf shop stocking golf equipment and apparel. The Golf Course is built on a variety of terrains. Holes are constructed over a base of adobe clay, rock, sand, or a combination of all three.

The development of the Golf resort will be in the 2<sup>nd</sup> development phase, after a high-quality medical, wellness, bath and hospitality standard has been reached.

#### 5.4.15. Tennis



Several tennis courts and practise walls will be available inside the park. The tennis courts can be rented for hours to practice or for special events such as hotel tennis tournaments and tennis courses.

The tennis courts have already been constructed within the World Bank project.

#### 5.4.16. Minigolf



Fun is the keyword with this sport, which is suitable for all ages and fun for all the family. There are mini-golf facilities already established by the World Bank inside the park, to test visitor's skills and for friendly competitions. The Minigolf course fits perfectly into the recreational zone concept of Tskaltubo and is a great attraction for local residents and tourists.

## 6. ZONING PLAN PROPOSAL

### 6.1. Introduction / Vision

The redevelopment of Tskaltubo will be based upon the previous zoning plan (1983) with adaptations to today's habits of travelling, as well as expanding the offered products in the sanitary zone to include modern medical and wellness treatments. The future oriented attractions in the hotels and around Tskaltubo will attract local and, increasingly, national and international clients too. The nearby airport in Kutaisi makes this step much easier. Therefore, a new zone plan will become valid, which will protect the future development of Tskaltubo. The organizational structure for transforming it into a modern destination for the future will be initiated. The slogan for the future will be:

**Be a part of the redevelopment of Tskaltubo – the Medical and Wellness SPA Capital!**

In order to achieve this goal a detailed legal proposal for the new zoning has to be established. The following section provides some ideas that should be considered when working on the legal realisation of the new zoning plan.

The zoning plan is based on the old zoning plan and creates some changes in zones, which will ensure that Tskaltubo can realize the Tourism product that future markets will require. The extension of the services will use more and different resources and the resort will also try to “catch” the transfer community (East – West and the traffic from Kutaisi Airport). Therefore more activities around the sanitary zone are needed to attract more guests and also day visitors.

### 6.2. Overall Concept

The future functional zoning of Tskaltubo resort should constitute an integral part of the future General Land Use Plan of the town of Tskaltubo. Here we see some general principles of zoning in the framework of the Zoning plan concept paper. At the same time, future functional zoning should be in line with the current legislation, in particular, technical regulations on the use of territories of settlements and main regulating rules for urban development. And most importantly, the Zoning plan should be the basis for the implementation of the strategic Tourism strategy for Tskaltubo.

The main zoning principles of the mentioned Zoning plan concept paper are:



- Some mosaic leveling and expansion of functional zones will be made, and the heterogeneous character of existing zoning should be replaced by homogeneity to the greatest possible extent;
- Land-plots to be auctioned in the existing zones should have a clear and relevant functional purpose;
- In the process of defining specific functional zones in the future functional zoning, development, development intensity and greening coefficients should be differentiated in full accordance with the resort's parameters;
- Optimization of railway lines and the public transport overall. In the first stage, we foresee visitors will mainly arrive by car, therefore the formation of the parking area is an important first step;
- Re-cultivation of the territories of dysfunctional industrial objects and their fully pledged integration into the town's planning structure is a priority task in view of the resort's future development;
- Efficient use of reserve territories with full consideration of the resort's urban context is also important;
- We believe that step-by-step connection of the second and third transportation circles and strengthening of radial directions is a strategic goal of future development;
- Elaboration of the Town's Historic and Cultural Base Map, with general protection zones' borders, list of historical buildings, their types and individual protection zones is a leading issue in the process of the resort's development and future zoning;
- Establishment of three sanitary protection zones for the mineral springs, their borders and relevant regimes is the key issue of general and specific zoning;
- It is advisable to draw an administrative line of the town along the third circle road and elaborate the town's zoning plan within these borders;
- The resort's future expansion and directions should be accounted for in the future functional zoning directions, first of all near the sanitary zone, in the circle of resort objects, via intensification of free lands and also of existing resort objects (see map 32).

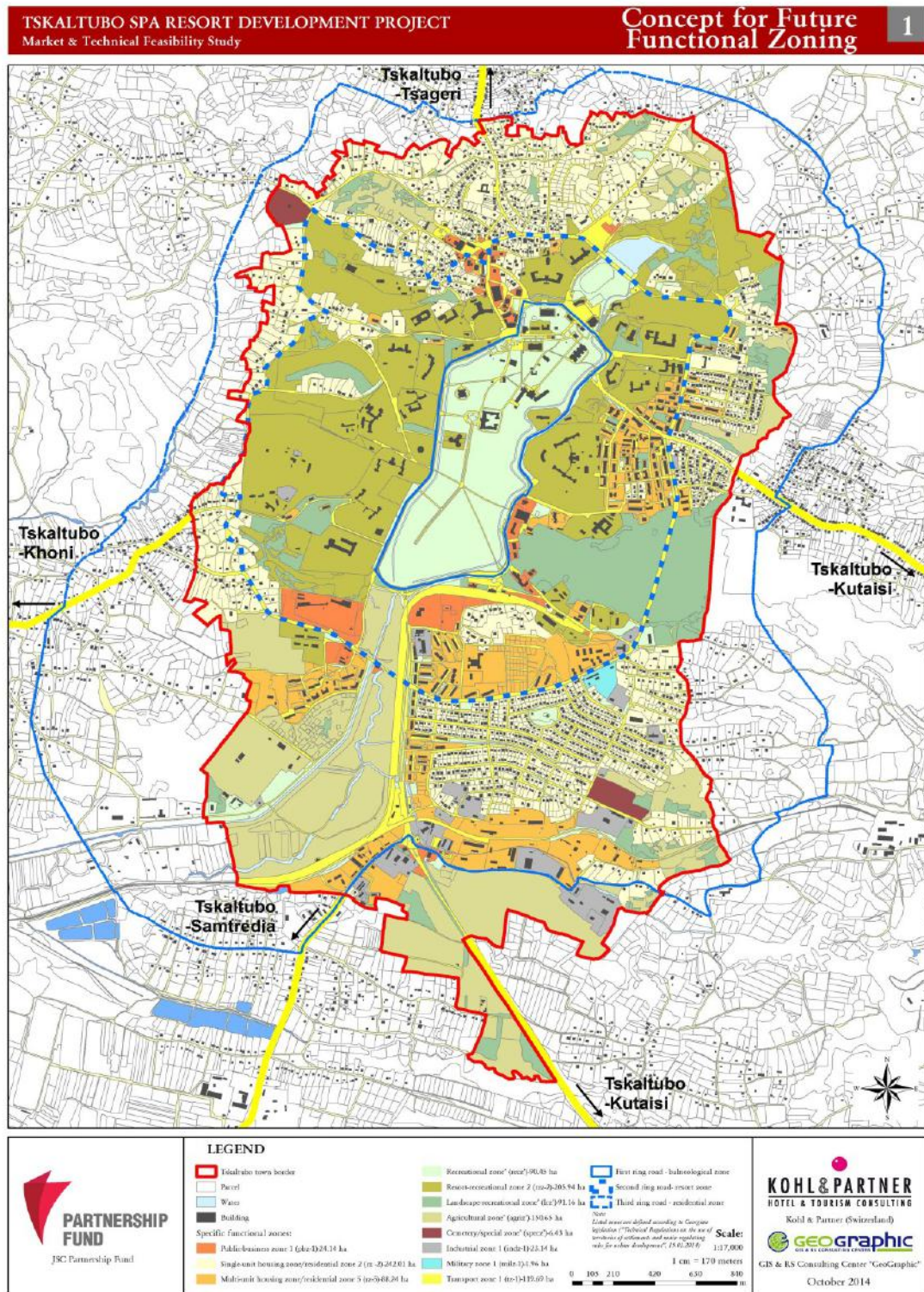


### 6.3. Specific zoning changes and restrictions

We propose the following main specific changes for the new Zoning Plan beside the described overall rules in the previous section:

- **New Parking** at the resort entrance, in order to realize a car free zone for ring road 1 in the near future (Step 2 of the redevelopment plan). The parking would be on the area of today's sanatorium Tskaltubo I, which will be transformed in a public zone. Besides the parking, additional activities for families and children, such as Water Park and a climbing park can be realised on this plot.
- **Shopping**, right at the entrance has to be developed. Because all traffic (including cars, buses and railway) will stop there, it is the perfect place to create a new shopping and restaurant zone for Tskaltubo (outside the park). Certain state owned land has to be transferred in a public business zone. A second shopping zone is in today's center.
- The process for **future development** has to be maintained so that certain zones for the creation of additional attractions such as golf, horseback riding etc. can be realized. Also the integration of the IDP's is part of this process and needs attention. These processes are described more detailed in chapter 6.4.
- The 1.96 hectare **military zone**, in use as a driving school for military vehicles, should be changed into a residential-recreational zone and probably been transferred from the ministry of defense to another ministry. In the map it is still military zone, but we highly recommend changing this.
- For the right development of the **recreational zone and the sanitary zone** we propose so rules which will assure the sustainable development of the resort. These rules we mention in chapter 6.5.

It is important to note that these are just initial ideas and we are sure that, when going on the market, many other opportunities will arise. For now it is important that these ideas can communicate our vision and gain the trust of investors.



## 6.4. Territorial Reserves

The Tskaltubo resort incorporates quite a significant territorial reserve. These reserves were created due to the following factors:

- Most of the state owned sanatoriums and hotels stopped operating;
- Many state owned industrial objects stopped working;
- Most of objects intended for public use and services stopped functioning.

Taking into account the above, we can define the reserve territories. Herein, we have to mention that the purpose of defining the reserve territories is to develop recreational, leisure, entertaining and sports objects. At the same time, the settlement of the IDP's has to be defined. There are enough housing reserve areas (State owned) in Tskaltubo.

In order to define reserves, we first need to exclude private lands: individual property, Home Owners Association (HOA) and apartment block land parcels, their separately built garages and lands belonging to the Patriarchy of Georgia (see map 21).

Private and state lands also include agricultural areas; their structures and location is important if we want to draw a comprehensive picture. Agricultural lands include: arable land, pasture, hay-fields, perennial plants and also homestead land plots (see map 22).

The next step in defining territorial reserves to map water objects, including: rivers, lakes, ravines, springs, drainages, canals, swamps and flooding zones (see map 23).

In order to define reserves, we also must exclude lands under transport and communication. This category includes: roads, streets, bridges, sidewalks, stairs, automobile parking, bus station, railways, special car park, transformer vaults and high voltage poles (see map 24).

Regardless of the form of ownership, we have to exclude natural and artificially arranged green areas. This category includes: forests, forest-parks, greening line, lawns, bushes, parks, gardens, boulevards, artificial landscapes and graveyards. These objects are shown on map 25.

The next objects that have to be excluded to define territorial reserves are the sanatoriums and hotels under state-ownership (see map 26).

In order to achieve this goal we have to define territories belonging to the social objects. This category includes: education, culture and sports objects (see map 27),



household, trade and public catering facilities (see map 28), and administrative, healthcare and religious objects (see map 29).

The majority of the remaining land is of an industrial or an unidentified purpose. Industrial lands are divided into two categories: functioning enterprises (including timber and stone processing workshops and bakeries) and non-functional enterprises (see map 30).

The issue of non-functional enterprises has to be resolved by the state.

Based on the given analysis, we can suggest the following structure of territorial reserves (see map 31):

**I category reserves** – comparatively large, unused state land-plots that sporadically might be used as agricultural land without permission;

**II category reserves** – comparatively large state owned lands under industrial use; if re-cultivated could be transferred to the recreational category;

**III category reserves** – comparatively small-unused land-plots or lands of industrial purpose where small sized recreational objects could be arranged (parks, gardens, playgrounds, sports stadiums, etc.).

With regards to comparatively large sized plots, we can consider locating recreational and entertainment objects, botanical gardens, zoo, attractions, sports grounds, tennis courts, golf, decorative pools and other recreational objects in these areas.

There is also enough land to solve the problem with the IDPs (Internally displaced people). The responsible ministry has a huge opportunity to implement a reintegration program. If there is not such a program (with hard conditions for the involved IDPs), we recommend they be hosted outside of Tskaltubo.

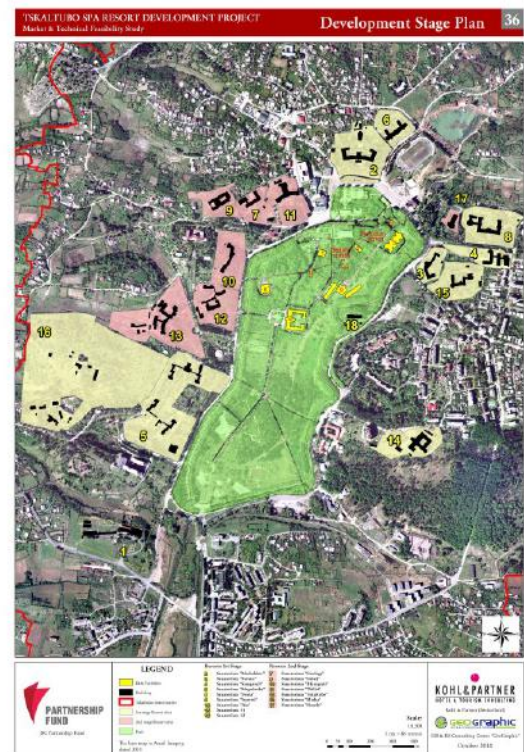
## 6.5. Development Rules for the Recreational / Hotel Zone

The redevelopment of the recreational zone is one of the main goals. Therefore the legal permissions have to be clear and consistent for all. The calculation of the potential built-



up area over ground for all hotels/sanatoriums in the recreational zone is based on the following rules, which we recommend to implement in the new zoning law:

- **Buildings with historical background**, based on our recommendation in our detailed inventory of all the sanatoriums and buildings, cannot be changed, which means the facade and historical architecture in the building have to be restored. Totally we propose to put different buildings on such restrictions (12 from 16 plots).
- All **other buildings** with no historical value or bad construction substance can be used or destroyed by the investor. New buildings have to be accepted by the State authority (control of the overall picture of Tskaltubo) and can never been built higher than before.
- In recreational zone (former sanatoriums) only minimum 3 star hotels (mid and up scale) are allowed to be developed.
- The **built – up area** of additional buildings (not main-buildings, based on the detailed inventory) can be used for construction to double the built-up area. This way, existing additional buildings can be more useful for the investor's future concept (swimming pools etc.)
- When the **built up** area (over ground) is under 30% of the plot, the investor has the right to use up to 30%. This is important for building numbers 15, 13, 12, 5 and 1 and will provide an additional built-up area. Hotel 16 gets a restriction to a maximum 5% of the built up area and gets the restriction to build an alternative form of accommodation (chalet/cottage concept).
- The hotels are free to built **underground area** (parking) as long the access for the parking is coming from the 2<sup>nd</sup> ring road.
- All this regulations must also be **valid for any other buildings** in the recreational zone.
- Hotel number 15 (“Aia”) has to be a **convention center** (nearest to the entrance, access by ring road 2, already existing underground parking).
- Hotel Number 2 (Meshakhte) has to be a **5 star hotel** with a integrated **Casino**



- Hotel Tskaltubo 1 is new a **public zone** (parking, shopping and leisure activities)
- The development of the hotels takes place in a certain structure (see map)

In the following we describe the hotels, which will come on the market in the first implementation phase and their foreseen use or restrictions of use. We haven't done this for the 2<sup>nd</sup> implementation phase because we think it is better to reevaluate the needs after the first phase.

House	Land area m2	Possible built up over ground m2	Special / Restrictions
House 2 "Meshakhte"	55,976	16,793	<ul style="list-style-type: none"> <li>• Casino</li> <li>• Maybe together with Iveria</li> <li>• 5 * (Iveria 4 *)</li> <li>• Buildings and architecture with historical value</li> </ul>
House 3 "Savane"	14,440	8,713	<ul style="list-style-type: none"> <li>• Buildings and architecture with historical value</li> <li>• Best location for Clinic, hospital, plastic surgery</li> </ul>
House 4 "Samgurali"	18,360	5,508	No restrictions
House 5 "Megobroba"	106,486	31,945	<ul style="list-style-type: none"> <li>• Buildings and architecture with historical value</li> <li>• Location more for family orientated concept</li> </ul>
House 6 "Iveria"	20,956	11,144	<ul style="list-style-type: none"> <li>• Buildings and architecture with historical value</li> <li>• Would be perfect as additional 4 * hotel with no. 2 "Meshakhte"</li> </ul>
House 8 "Imereti"	41,268	13,859	<ul style="list-style-type: none"> <li>• Buildings and architecture with historical value</li> </ul>
House 14 "Aia"	34,445	18,990	<ul style="list-style-type: none"> <li>• With Parking – access from 2<sup>nd</sup> ring road – only for convention hotel</li> </ul>
House 15 "Sanatorium 1"	34,023	10,207	<ul style="list-style-type: none"> <li>• Buildings and architecture with historical value</li> </ul>
House 16 "Sanatorium 2"	250,609	12,530	<ul style="list-style-type: none"> <li>• Buildings and architecture with historical value</li> <li>• Family orientated</li> </ul>



			<ul style="list-style-type: none"><li>• 300 cottages</li><li>• Lowest built up area in % plot</li></ul>
<b>TOTAL</b>	<b>576,563</b>	<b>129,689</b>	
<b>IN% TOTAL</b>	<b>72%</b>	<b>58%</b>	

Following these zoning rules, the situation over the State owned buildings is as follows:

No	Name	Construction	Total Land	Total land used for buildings	Total built up main buildings	Total built up other buildings	Total built up	Total built up overground	Total possible to built - up overground	Additional possible 30% rule	Total possible to built - up overground	Total land use in % total land	Total built up (over-ground) in % plot size
		Years	m2	m2	m2	m2	m2	m2	I		II	%	%
1	Hotel "Tskaltubo"	1968-76	50'000	5'522	9'292	3'051	12'343	11'164	14'215	785	15'000	11.04%	30.00%
2	Sanatorium "Meshakhte"	1952	55'976	6'701	18'305	1'459	19'764	19'085	20'544		20'544	11.97%	36.70%
3	Sanatorium "Savane"	1947-1975	14'440	2'660	8'977	75	9'052	8'638	8'713		8'713	18.42%	60.34%
4	Sanatorium "Samguruli"	1977-1987	18'360	3'830	15'815	0	15'815	15'815	15'815		15'815	20.86%	86.14%
5	Sanatorium "Megobroba"	1937-1940	106'486	7'459	18'904	1'261	20'165	15'783	17'044	14'901	31'945	7.00%	30.00%
6	Sanatorium "Iveria"	1952-1962	20'956	3'136	11'057	29	11'086	11'086	11'115		11'115	14.96%	53.04%
7	Sanatorium "Geologi"	1966-1976	20'929	2'738	11'786	131	11'917	10'232	10'363		10'363	13.08%	49.52%
8	Sanatorium "Imereti"	1950-1961	41'268	5'088	17'388	65	17'453	13'794	13'859		13'859	12.33%	33.58%
9	Sanatorium "Gelati"	1953-1964	22'428	3'600	11'736	0	11'736	9'468	9'468		9'468	16.05%	42.22%
10	Sanatorium "Rkinigzeli"	1948-1954	34'839	2'450	10'449	67	10'516	10'516	10'583		10'583	7.03%	30.38%
11	Sanatorium "Tbilisi"	6656	30'246	3'963	11'720	443	12'163	12'163	12'606		12'606	13.10%	41.68%
12	Sanatorium "Tskaltubo"	1931	35'990	4'260	8'951	677	9'628	9'628	10'305	1'169	11'474	11.84%	31.88%
13	Sanatorium "Medea"	1954-1962	74'291	6'656	18'801	1'463	20'264	17'235	18'698	3'590	22'288	8.96%	30.00%
14	Sanatorium "Aia"	1970-1985	34'445	5'699	16'588	1'201	17'789	17'789	18'990		18'990	16.55%	55.13%
15	Sanatorium #1	1963	34'023	2'853	7'676	436	8'112	5'853	6'289	3'918	10'207	8.39%	30.00%
16	Sanatorium #2	1940-1970	250'609	4'730	5'479	2'303	7'782	6'876	9'179	3'351	12'530	1.89%	5.00%
	<b>TOTAL</b>		<b>845'286</b>	<b>71'345</b>	<b>202'924</b>	<b>12'661</b>	<b>215'585</b>	<b>195'125</b>	<b>207'786</b>	<b>27'714</b>	<b>235'500</b>	<b>8.44%</b>	<b>27.86%</b>

The investments and estimated details of the different phases are *(based on the assumptions of Kohl & Partner)*:

**Expected Hotel Investments Phase 1**

No	Name	Construction	Total Land	Total possible to built - up overground	Total built up (over-ground) in % plot size	Calculation Concept	Estimated Rooms	Average Investment per Room	Estimated Investment Volume
		Years	m2		%		No.	\$	in \$ Tsd
2	Sanatorium "Meshakhte"	1952	55'976	20'544	36.70%	Luxury	228	183'098	41'795
3	Sanatorium "Savane"	1947-1975	14'440	8'713	60.34%	Midscale	124	98'350	12'242
4	Sanatorium "Samgurali"	1977-1987	18'360	15'815	86.14%	Midscale	226	93'022	21'016
5	Sanatorium "Megobrobaz"	1937-1940	106'486	31'945	30.00%	Midscale	456	84'250	38'448
6	Sanatorium "Iveria"	1952-1962	20'956	11'115	53.04%	Midscale	159	110'103	17'483
8	Sanatorium "Imereti"	1950-1961	41'268	13'859	33.58%	Budget	277	62'440	17'307
14	Sanatorium "Aia"	1970-1985	34'445	18'990	55.13%	Midscale	271	100'078	27'150
15	Sanatorium #1	1963	34'023	10'207	30.00%	Midscale	146	94'109	13'722
16	Sanatorium #2	1940-1970	250'609	12'530	5.00%	Midscale/Cottage	1061	50'726	22'066
<b>TOTAL</b>			<b>576'563</b>	<b>143'718</b>			<b>2949</b>		<b>211'229</b>

**Expected Hotel Investments Phase 2**

No	Name	Construction	Total Land	Total possible to built - up overground	Total built up (over-ground) in % plot size	Calculation Concept	Estimated Rooms	Average Investment per Room	Estimated Investment Volume
		Years	m2		%		No.	\$	in \$ Tsd
7	Sanatorium "Geologi"	1966-1976	20'929	10'363	49.52%	Midscale	148	84'754	12'547
9	Sanatorium "Gelati"	1953-1964	22'428	9'468	42.22%	Budget	189	68'078	12'891
10	Sanatorium "Rkinigzeli"	1948-1954	34'839	10'583	30.38%	Midscale	151	98'326	14'866
11	Sanatorium "Tbilisi"	1950-1951	30'246	12'606	41.68%	Midscale	180	116'755	21'026
12	Sanatorium "Tskaltubo"	1931	35'990	11'474	31.88%	Midscale	164	92'942	15'234
13	Sanatorium "Medea"	1954-1962	74'291	22'288	30.00%	Luxury	248	173'772	43'034
<b>TOTAL</b>			<b>218'723</b>	<b>76'782</b>			<b>1080</b>	<b>634'627</b>	<b>119'598</b>
<b>TOTAL Phase 1 and 2</b>			<b>795'286</b>	<b>220'500</b>			<b>4'029</b>		<b>330'827</b>

The detailed assumptions, sample of investment assesment and business model for the each building discussed in the table above are presented in the inventory report for each particular building.

## 6.6. Tourism potential of Tskaltubo

Based on above rules, we have calculated the following potential built up area for today's State owned sanatoriums/hotels in the recreational – hotel zone:

Total possible built up area (over ground) based on above calculation	207,786
Conversion Hotel 1 (Tskaltubo) in public zone	-12,530
Additional possible extension hotel 5	+14,901
Additional possible extension hotel 12	+1,169
Additional possible extension hotel 13	+3,590
Additional possible extension hotel 15	+3,918
Additional possible extension hotel 16	+3,351

<b>TOTAL possible built up area for the 15 hotels (Without Tskaltubo 1)</b>	<b>222,185</b>
Approximately possible rooms (average size of 70m2 (*) gross)	3,150
Beds	6,300
Already existing beds approximately	1,000
Additional bed supply by private hosting and new private hotels	2,200
<b>TOTAL possible bed supply</b>	<b>9,500</b>

(\*) Without under ground area

Within the next 10-15 years, the bed supply could increase to 9,000–10,000 beds, as indicated in the table above.

Depending on the occupancy, this would create the following possible numbers of overnights (calculated with 9,500 beds / all year open):

Occupancy 40%	1,387,000
Occupancy 45%	1,560,375
Occupancy 50%	1,733,750
Occupancy 55%	1,907,125

Based on current tourism statistics, Tskaltubo could increase today's visitors (2013) by more than 25% and will significantly contribute to the tourism development and the tourism added value of Georgia.

## 6.7. Restrictions for buildings with historical value

Tskaltubo has a rich cultural heritage. It is not only the historical buildings of Tskaltubo, but also its whole urban structure, along with its unique natural complex, mineral waters and diverse green plantations. The physical spaces of the resort (ambient air, water bodies, soil), its environmental balance and cleanness are unique and historical.

Our team of experts recommends:

- To put restrictions in Zoning plan stipulating all defined buildings with Zone (the building as well as any monuments around the building)
- The historical and unique special planning (zoning planning) of the resort with 3 ring roads should be kept as the main idea of the resort.

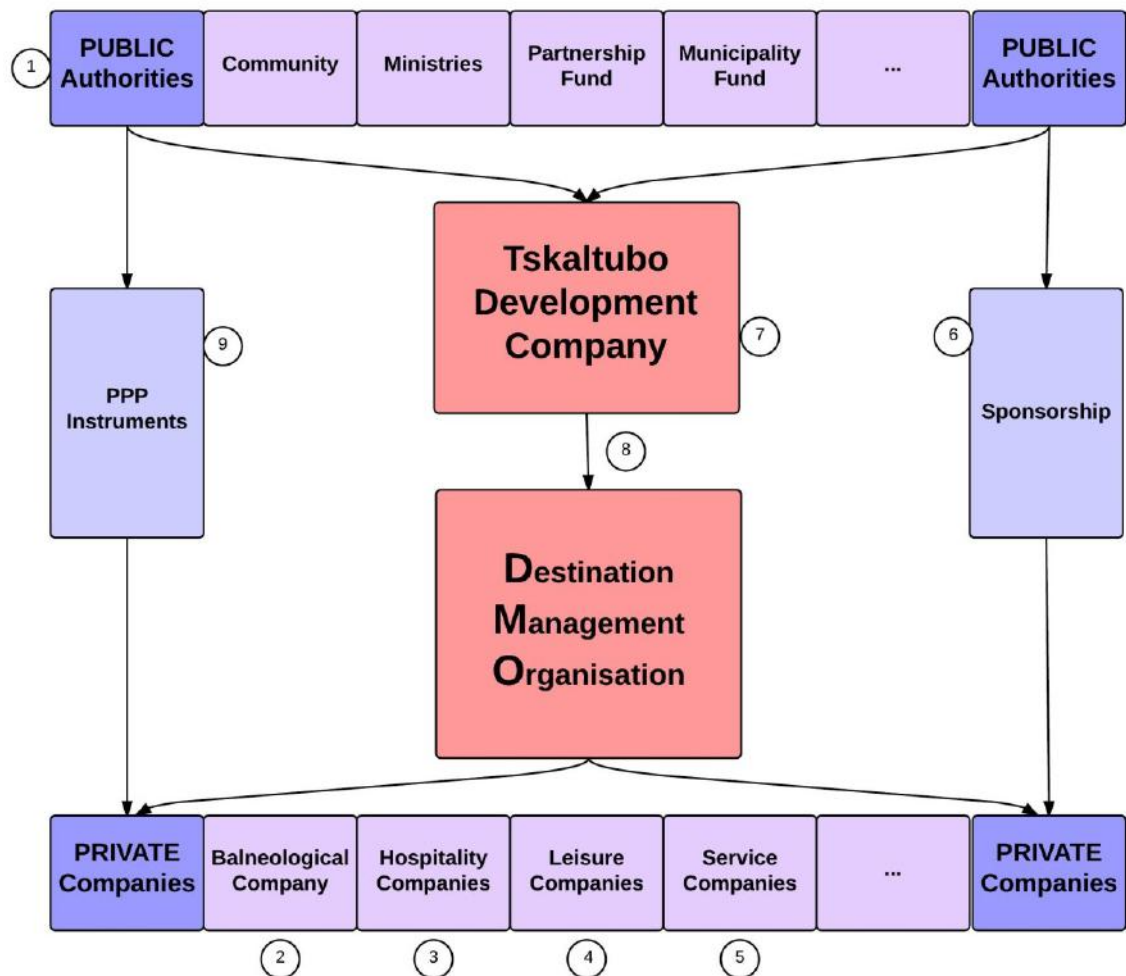
Therefore, the ministry and officials have to decide if the zoning plan protection is good enough. We assume that with the right legal protection in the zoning plan, we can achieve the desired outcome in an informal way that will be much faster and

less administrative. Also investors prefer to have clear rules, rather than dealing with different ministries and officials.

## 7. TSKALTUBO ORGANISATIONAL DEVELOPMENT CONCEPT

### 7.1. Organisational Overview

The coordination of the destination Tskaltubo has to be done by a Tskaltubo Development Company, surrounded by the different stakeholders.



Source: Created by Kohl & Partner

In the following we describe the different stakeholders:

(1) The different **public authorities** play different roles in the destination development and have to create a perfect investment environment. The most important challenges in Tskaltubo are:

- Creation of the legal environment (sanitary zone / Geo hydrological survey)
- Implementation of the Zoning Plan
- Building and maintaining infrastructure



- IDP Re-Integration program
- Creating PPP (private public partnership) products
- Attracting sponsorship projects (World Bank, EBRD etc.)
- Further infrastructure Development

(2) The **Balneological Company** is the license holder of most of the wells. The company has to form the “medical USP” for Tskaltubo and protect and maintain the water quality. The development of the baths has to follow these steps and use an appropriate mix of historical and modern architecture. This project has to lead the development of Tskaltubo and should always be one step ahead!

(3) The **Hospitality Companies** are mainly hotels, which offer accommodation. Besides medical treatments, they can offer specialized products for different target groups of clients. They can offer wellness or more family orientated services and ideally they will have success with different potential client markets.

(4) The **Leisure Companies** are different companies that will invest in leisure activities in or around Tskaltubo (the waterpark and climbing park, but also restaurants, bars, etc.) Smaller activities and public services may also be created and organized by the DMO (Destination Management Company).

(5) Under **Service Companies** we mainly list the shopping areas with different stores. This part will grow itself, as the number of visitors will increase.

(6) Under **Sponsorship** we include the activities of the non-profit organizations that help to develop the region. So far this is The World Bank, but it could also be EBRD etc.

(7) The coordination of the proposed development concept for Tskaltubo has to be coordinated on the political and the marketing site. In cooperation with the authorities, we propose the formation of a **Tskaltubo Development Company**, owned by the State (or State and Partnership Fund), which coordinates all public authority responsibilities and activities, including the privatisation of the buildings and all related financial aspects. The responsible persons in this company have the necessary power and network to create decisions and coordinate between all parties involved, mainly government related companies. The main activities would be:

- Represent the States Interest
- Coordinate IDP solutions
- Convert military zone into a public zone
- Legalize Zoning plan

- Registration of the State owned buildings
- Start cooperation with the current license holder
- Coordinate and support the DMO
- Coordinate Sponsor activities of non profit organisations as well as leading activities in the PPP sector.

(8) The **DMO (Destination Management Company)** will be the coordinator and promoter of the destination. The fact that the destination starts more or less at zero means that it is very important that an organization that can handle the development is created. In the following section, we offer some more details and ideas.

(9) **PPP Private Public Partnership** models, will support the investors in anyway. Actually each investor will be part of a PPP contract – as they receive the land and buildings under certain conditions (investment, signing contract with DMO etc.). In order to attract investors, it would also be possible to create even more involvement of the Public sector (Partnership Fund). This could be through financial involvement in a sub-project, especially in the infrastructure parts, like Tropical Garden, Transport System and Water Park etc. We don't see the involvement from the State in individual hotels.

EBRD, with their program for SME (small and middle sized enterprises), could help with sponsoring of certain interest rates. The State could reduce or disclaim for a certain time the invoicing of property taxes. This would be very helpful for the investors, especially in the first years.

## 7.2. DMO (Destination Management Company)

### 7.2.1. Ownership

We recommend that the State or a State owned company/fund creates the DMO as a legal entity depending on a first budget.

In a second step (after 5 years), the system could be changed and the members can become part of the company.

### 7.2.2. Management

A key part of any successful company is the Management. The role and duties of a management company are always related to local activities and contacts. Therefore it is important to have a management team that does not have any personal interests locally. In order to control this, we recommend creating a strong, professional and

international board that will control the local management. Some organizational ideas about the Management:

For the time of the implementation (first 5 -10 years), we strongly recommend an external consulting team with a clear scope of work, which is responsible for the success of the implementation and the supervising of its realization. This should be a small executive Board that has to report quarterly/annually to the stakeholders. The board has several representatives from all different stakeholders, which will ideally organize themselves in the different branches after a certain amount of time.

**Executive Board:**

- International Consultant
- National Consultant
- Responsible Person from the State

**Board:**

- Representative of the State
- Representative of the Partnership Fund
- Representative of the Hotels (maybe they can form a hotel association)
- Representative of the Balneological Company
- Representative of the Leisure Industry
- Representative of Imereti Tourism
- ...

**Management Team**

- Operative Manager (Georgian, but not local)
- Management Team (local and national)

7.2.3. Duties of the DMO

The main duties of the DMO are as follows:

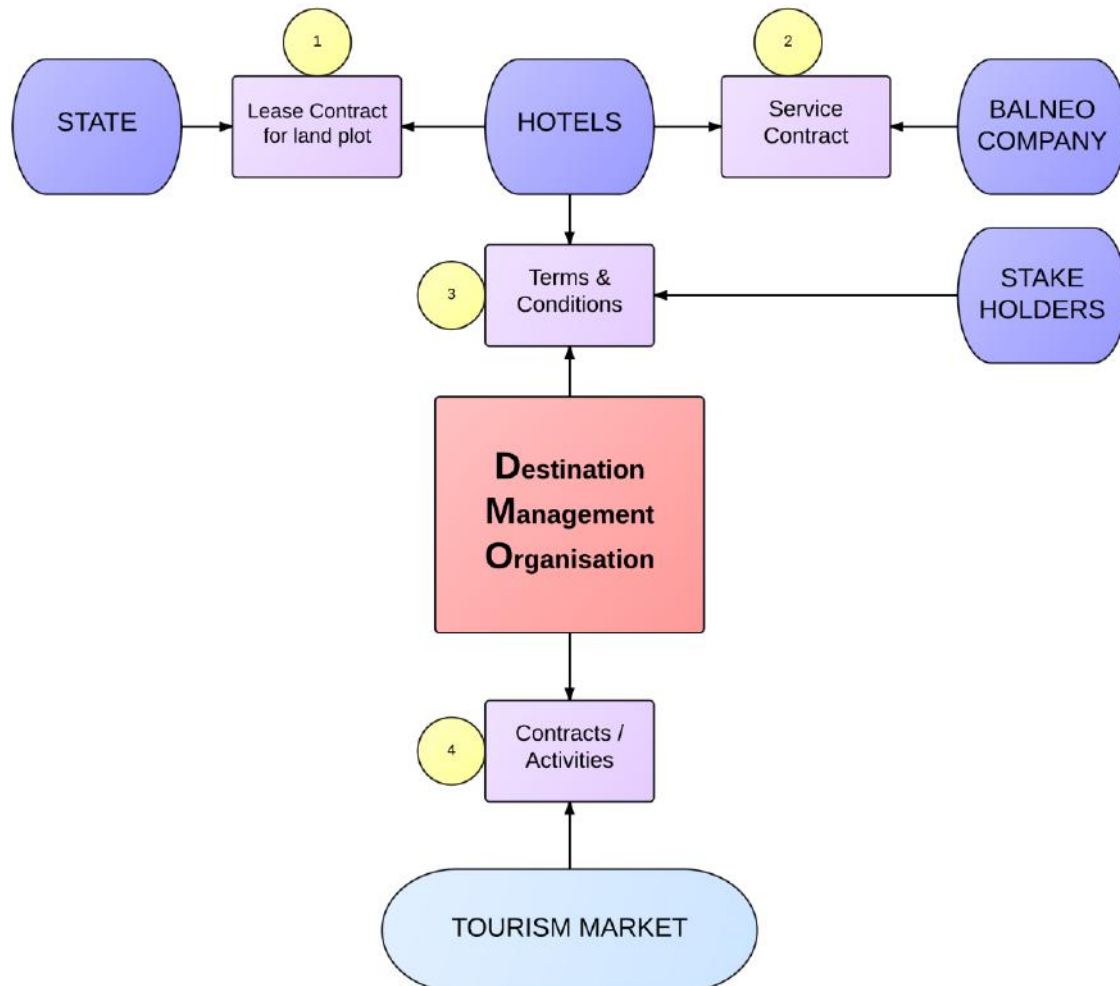
- Mission Statement and vision of the destination
- Representing the Interest of the destinations stakeholder
- Coordination of the sustainable development of Tskaltubo
- Coordination and developing of products
- Marketing strategy
- Brand management
- Guest Information
- Representing tourism request in politic and economy
- Collection of the tourism “tax / fee”

- Running from certain infrastructure services / companies (for example: tourist card, bus company, parking, children play ground, transport system, taxis, etc.).

Certain duties can easily be outsourced to specialized companies or the national tourism marketing company. There are international specialized companies that could especially take care of the marketing.

#### 7.2.4. Legal Organisation of the DMO

We recommend the implementation of the following legal structure in Tskaltubo:



Source: Created by Kohl & Partner

(1) The future hotels lease the plot and building under the conditions of the Tskaltubo zoning plan and their regulations for a certain period. The establishment of such a detailed contract is a separate work and very important in attracting foreign investors. We recommend that:

- These lease contracts be signed for a period of at least 50 years;
- When hotels sign a lease contract they have to start construction within 2 years, otherwise the building goes back to the State and a penalty is due.
- The lease in % is based on when the company invests. It should be more attractive to invest in an early stage as the risk is higher and in a later stage the investors will already profit from the brand image. We recommend the following lease structure in % of the realised turnover excluding VAT, realized on the territory for all kind of services. Charged expenses from other resort companies can be deducted (for example when the balneological company

charges their services to the hotel). The lease is defined in the following structure (start = when the States or the Tskaltubo Development Company start signing contracts:

- 
- Year 1-2 after start, the lease is 0.25% for the rest of the contract period  
Year 3-4 after start, the lease is 0.5% for the rest of the contract period  
Year 5-6 after start, the lease is 0.75% for the rest of the contract period  
Year 7- after start, the lease is 1% for the rest of the contract period

This way the State could get back some money but the investors at the beginning profit and have some compensation for their risk.

We recommend implementing this lease system for all upcoming contracts between the State and any investors (also for Parking, Waterpark etc.). The current license holder of the sanitary zone and any other already existing contracts with investors would not be changed. They have a certain compensation for the early step-in.

- After 50 years the land and building becomes the ownership of the leaser! The leaser no longer has to pay any fees to the State.

But besides the scheme proposed above, we also see the following alternative options:

- Investors receives the land but with a predefined investment obligations for a certain period of time
- Lease for certain period of time (50 years) - Define a lease (very small in the beginning) and legally define the method how to calculate the salvage value of the building at the end of the contract period. (Model in Switzerland). This way the investor doesn't stop investing in the last years and the State can take over and either find a new investor or release it to the existing one. The salvage value is usually a good price for the buyer.

(2) A service contract should be signed between the hotels (all hotels) and the **Balneological licensed company**, under the coordination of the DMO. The hotels should be interested in selling the services of the sanitary zone and should make a certain commission on their procured turnover. On the other side, it should be legally protected, so the balneological company will not be able to increase the prices without good reason.

It is worth mentioning, that license holder company and state should form new proactive form of cooperation, which will benefit the both parties. The new form of cooperation should pay attention to the following issues:



- Cost sharing of the costs for the Hydro – geological assessment
- Future legal framework between the licence-holder and the hotels
- Contract with DMO
- Commitment for the investment in 3-4 baths and the public bath (or external)

(3) The terms and conditions – actually the duties of the DMO – should be signed in a service contract with all other **stakeholders** (new and existing restaurants, shops etc.). It has to be clear what the DMO has to offer, what the DMO can ask for and, in particular, the financial issues must be clear.

All hotels and new stakeholders have to sign this agreement with the DMO – the State only leases plots under this condition. In order to attract or even force the existing stakeholders into these service contracts, the DMO has to create services that are only available for DMO members. In a completely newly built destination like Tskaltubo, there are possibilities to create some clever products during the concept implementation in order to ensure that the other stakeholders will also take part in the system.

(4) Orders and activities between the DMO and the **tourism market** be made. This part of the duties is mainly sales and marketing.

#### 7.2.5. Financial Organisation of the DMO

The formation of the organisation will need an investment, which has to be advanced by the State. On the other side, the State will have the right and the will to get this money back after a successful implementation of the Tourism strategy.

The profit and loss statement of the DMO will be as follows:

<b>Direct Costs Profit Centers</b>	<b>Income Profit Centers</b>
<b>Staff Costs</b>	
<b>Marketing &amp; Sales</b>	<b>Income "Members"</b>
<b>Other Costs / Administration</b>	<b>Income Donations (State)</b>

Source: Created by Kohl & Partner

As a **profit center**, we see the DMO overseeing the activities for the entire destination, in particular: transport services, Information desk, tropical garden, maybe some park restaurants, the children's playground, the artificial lake with leisure activities etc. Some of these could be financially profitable, while others may exist more as a service to the destination.

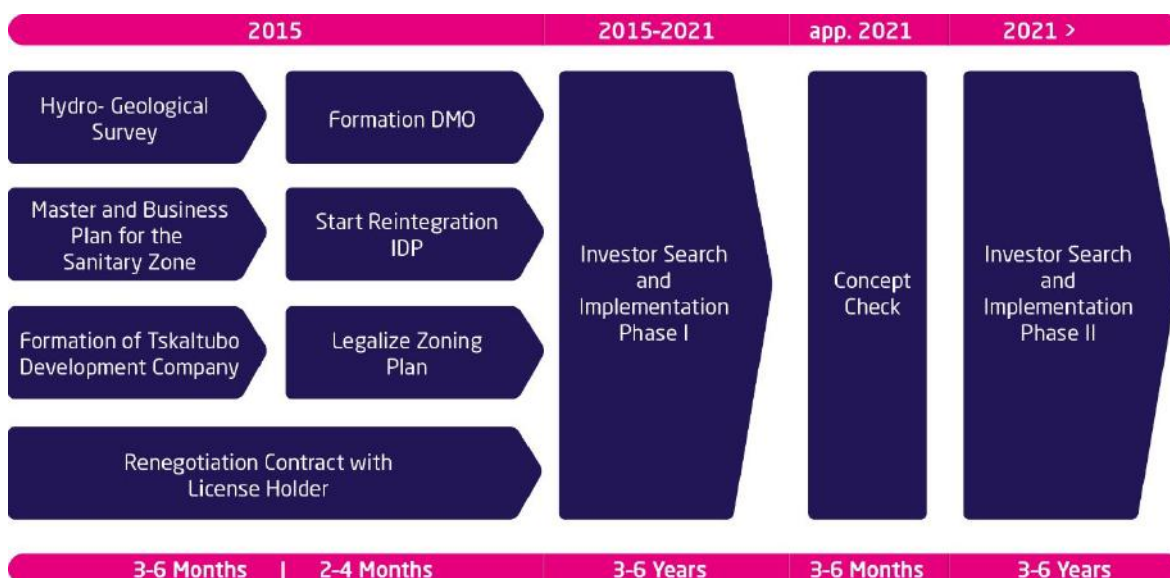
The income of the **members** is what all stakeholders (hotels, restaurants, shops, leisure companies, balneological company) will pay in % of their realised turnover. The % can be defined by the DMO based on their budget and expectations. The members itself have an impact on the DMO with the board they elect.

Especially at the beginning, the investment for the future will have to be paid for by donations. We strongly recommend coordinating the goals of the Fund with the goals of the World Bank/DMO project. As mentioned in their project, there is a position in the budget for the establishment of such a tourism organisation and the first marketing activities.

The expenses include staff expenses, administration and mainly coordinated marketing activities.

#### 7.2.6. Implementation Steps / Activities to do

The redevelopment of Tskaltubo will proceed over time as follows:



Source: Created by Kohl & Partner

The different steps include the following main objects of work:

### **Managing the legal and financial requirement (3-6 months)**

- Ordering a hydro geological survey.
  - Preparing and finalizing the master/zoning (\*) plan for the sanitary zone and coordinating it with the resort master/zoning (\*) plan.
  - Coordinating the future funding (project DMO) between State and World Bank /MDF.
  - Informing the region's community and the habitants of the region (communications strategy).
  - Finishing World Bank / MDF project.
  - Formation of the Tskaltubo Development Company
  - Starting cooperation with the license holder in the sanitary zone
- (\*) Master Plan is including infrastructure planning which was not part of our contract

### **Formation / Organisation of the Structure (2-4 months)**

- Forming and establishing the legal form of the DMO.
- Recruiting the executive board, board and management.
- Preparing and signing the contracts between the DMO / Balneological Company as well as the first stakeholders.
- Detailing the concept and funding for the transport infrastructure, parking concept etc.
- Detailing the concept for the tropical garden (maybe co-investor)
- Starting the reconstruction of 2-3 baths.
- Establishing some co-investment funds for small/middle sized enterprises or additional PPP projects offered by the JSC Partnership Fund.
- Legalising the new zoning plan.
- Defining the conditions of the lease contract. We recommend a system that has advantages for the first companies, which take most risks. (see 7.2.3)
- Defining some additional investment friendly advantages for start-up investors, like reduction or relinquishing of property taxes for a certain period of time.
- Start Re-integration program for the IDP's

### **Investor Search Phase 1**

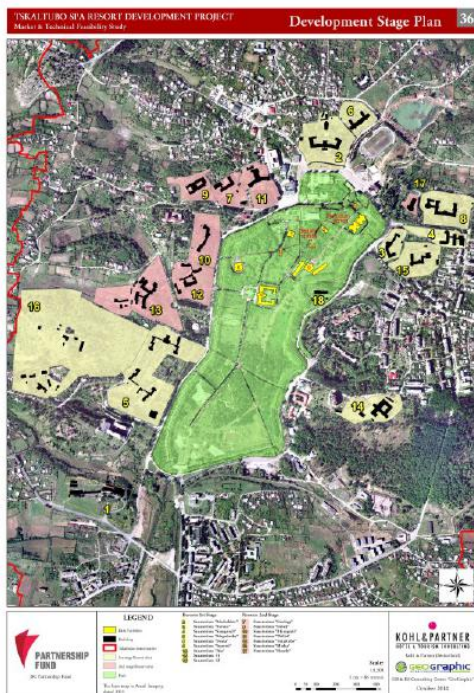
In order to grow in a controlled way (infrastructure), we propose the creation of 2 phases and also the concentration of the area of development. This way, one side of the park will be developed earlier than the other. This has a lot of logistical and infrastructural advantages. In the first part, we would search for the following investors (see the following map):

- Investors for 9 plots (hotels, casino, conference, cottages...)

House	Land area m2	Possible built up over ground m2
House 2 "Meshakhte"	55,976	16,793
House 3 "Savane"	14,440	8,713
House 4 "Samgurali"	18,360	5,508
House 5 "Megobroba"	106,486	31,945
House 6 "Iveria"	20,956	11,144
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<b>TOTAL</b>	<b>576,563</b>	<b>129,689</b>
<b>IN% TOTAL (without Tskaltubo 2)</b>	<b>72%</b>	<b>58%</b>

Based on our estimation, the development of the first stage would be a room supply of approximately 1400 rooms and 300 cottages, so including the existing hotels; Tskaltubo could easily host 5,000 guests per day. Additionally we would need the following investors in additional products:

- Investor for shopping center (at the entrance)
- Investor for climbing park
- Investor for water park
- Investor for a tropical garden
- Investors for shopping area
- Individual investors



### Implementation Phase 1

In this phase, most hotels will start reconstruction. The DMO will organise the first products. It is clear that not all the hotels will start construction at the same time. The goal should be to sell the above 9 hotels during this first implementation and permanently increase the number of visitors after the opening of the new baths.

### Implementation Phase 2

After the successful implementation of phase 1, new investors have to be found. In this step the focus would be more on European branded hotels.



## 8. ANNEX – PHOTOS OF THE BATHS

### Bath #1



Bath #1 - Outside



Bath #1 - Inside



Bath #1 - Inside



Bath #1 - Inside



Bath #1 - Old photo



Bath #1 - Old photo

### Bath #2



Bath #2 - Outside (renovated 2010-2011)

Bath #3



Bath #3

საბანო N 3 SOURCE			
საბანოს ტემპერატურა - 34,6°C Temperature დანიშნული 605280 ს.ს. Debit ნარეკად ნივთიერება 4,9 აწმ/წმ PH 7,4 Radio-activity			
შეიცავს იონებს 4,6 გ/ლიტრაში Contains Ions in the water			
კატიონები Kations	გრამ Gram	მგ/ლიტრა mg/l	მგ/სმ <sup>3</sup> mg/cm <sup>3</sup>
Na+K	0.0936	2.33	20.38
Ca	0.0338	2.80	24.50
Fe	0.1280	8.30	55.12
Mn	0.0014	0.0004	
ჯამი Sum	0.25434	11.43	100
ანიონები Anions			
Cl <sup>-</sup>	0.1027	2.93	25.63
SO <sub>4</sub>	0.2225	4.63	40.51
HCO <sub>3</sub>	0.2364	3.90	33.86
ჯამი Sum	0.5622	11.46	100
SO <sub>4</sub> და Fe საბანოს მინერალიზაცია General Mineralisation	0.222		
შეშვითი ნივთიერება Dry Residue	0.0024		
ბალნეოლოგიური ფორმულა Balneological Formula	0.5		
ბალნეოლოგიური ფორმულა Balneological Formula	1.7428		
ბალნეოლოგიური ფორმულა Balneological Formula			
SO <sub>4</sub> 41100 ს.ს. 0.025 Ca 55 1124 (0.025) 21			

Bath #3 - Chemical composition



## Bath #4



Bath #4 - Old photos

## Bath #5



Bath #5 - Old photos

Bath #6



## Bath #7



Bath#7 - Current condition



Bath#7 - Old Photo



# Bath #8



Bath #8 - Outside



Bath #8 - Inside



Bath #8 - Inside



Bath #8 - Entrance



Bath #8 - In the center of Bath



Bath #8 - Old photo



Bath #8 - Old photo



# Bath #9

