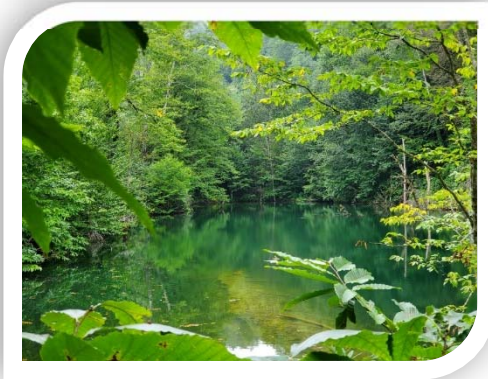


Final report

Tender for Ecotourism Expertise

Contract number BSB/79 - FCE 17



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Table of content

1. Introduction and background	3
2. Methodology.....	5
3. Analysis of selected ecotourism locations	8
3.1 Hiking trails	8
3.1.1 Oniore Waterfall hiking trail / bird watching tower	8
3.1.2 Tsachkhuri waterfall and lake trail.....	16
3.2 Bicycle trails	19
3.2.1 Martvili center – Martvili canyon bicycle trail	20
3.2.2 Martvili canyon – Kaghu waterfall bicycle trail.....	21
3.3 Eco-educational trails.....	21
3.3.1 Balda Monastery – Kaghu Waterfall eco-educational trail	22
3.3.2 Tsachkhuri Monastery – Tsachkhuri (Khirzeni) Waterfall eco-educational trail.....	24
4. Signage of trails.....	26
5. Oral history in Samegrelo.....	27
6. Annexes.....	36
Annex 1: Oniore Waterfall hiking trail / bird watching tower	36
Annex 2: Tsachkhuri trail	40
Annex 3: Bicycle trail, Martvili center – Martvili Canyon.....	45
Annex 4: Bicycle trail, Martvili Canyon – Kaghu Waterfall	48
Annex 5: Balda Monastery – Kaghu Waterfall eco-educational trail.....	51
Annex 6: Tsachkhuri eco-educational trail.....	56
Annex 7: Recreational area # 1	60
Annex 8: Recreational area # 2	62
Annex 9: Recreational area # 3	63
Annex 10: Recreational area # 4	65
Annex 11: Recreational area # 5	66
Annex 12: Bird-watching tower	68
Annex 13: Directions	69

1. Introduction and background

Ecotourism and related activities have gained popularity across the world in recent years. This was preconditioned by the large-scale anthropogenic impact on the environment and the scarcity of pristine areas, making wildlife more attractive. According to the International Union for Conservation of Nature (IUCN), ecotourism is defined as the "Environmentally responsible visiting of relatively unspoilt natural areas, in order to enjoy and appreciate nature (and any accompanying cultural features - both past and present), that promotes conservation, has low negative visitor impact, and provides for beneficially active socio-economic involvement of local populations". Consequently, ecotourism differs from conventional tourism and this report will adhere to the concept of ecotourism. In addition, the requirements and standards of the Technical Regulation N475 of the Government of Georgia of October 19, 2016 on Planning and Marking Hiking Trails will be taken into consideration.

Considering vast ecotourism potential, the project targeted Martvili municipality, where ecotourism can be developed. Martvili municipality is located in Samegrelo-Zemo Svaneti region and is situated on the Odishi plain, on the foothills and southern slopes of the Egrisi range, in the northeast Georgia. It is bordered by the municipalities of Lentekhi in the north, Tsageri and Khoni in the east, Abasha and Senaki in the south, Chkhorotsku in the west. According to the Public Registry, the area of the municipality is 930 km².

The municipality has beautiful nature, with characteristic karst terrain, caves, waterfalls and unique biodiversity. The area features seven protected areas with the status of natural monuments (III IUCN category). These include Martvili Canyon Natural monument, Balda Canyon Natural monument, Tobi Waterfall Natural Monument, Oniore Waterfall Natural Monument, Ochkhamuri Waterfall Natural Monument, Abasha Waterfall Natural Monument and Jortsku Cave. The role of natural monument is to protect relatively small, but unique natural areas and rare natural and natural-cultural formations of national importance. Martvili municipality is also covered by the areas of Samegrelo Planning National Park and emerald network sites. All of the above indicate the high conservation value of nature in Martvili municipality, as well as high potential of ecotourism development.

Protected areas are one of the major factors contributing to the development of ecotourism. One of the noticeable examples of ecotourism development in Martvili municipality is Martvili Canyon, which has won the Landscape Convention competition under the Council of Europe due to its successful management and contribution to municipal development. The number of visitors to the canyon increases every year, which has a positive impact on the socio-economic development of the municipality population. On the other hand, large number of visitors is beneficial for the country as well. If we look at the Martvili Canyon visitation statistics over the last 3 years, it is noticeable how well ecotourism is developing in Martvili Municipality.

Martvili Canyon visitation statistics for 2016-2018.

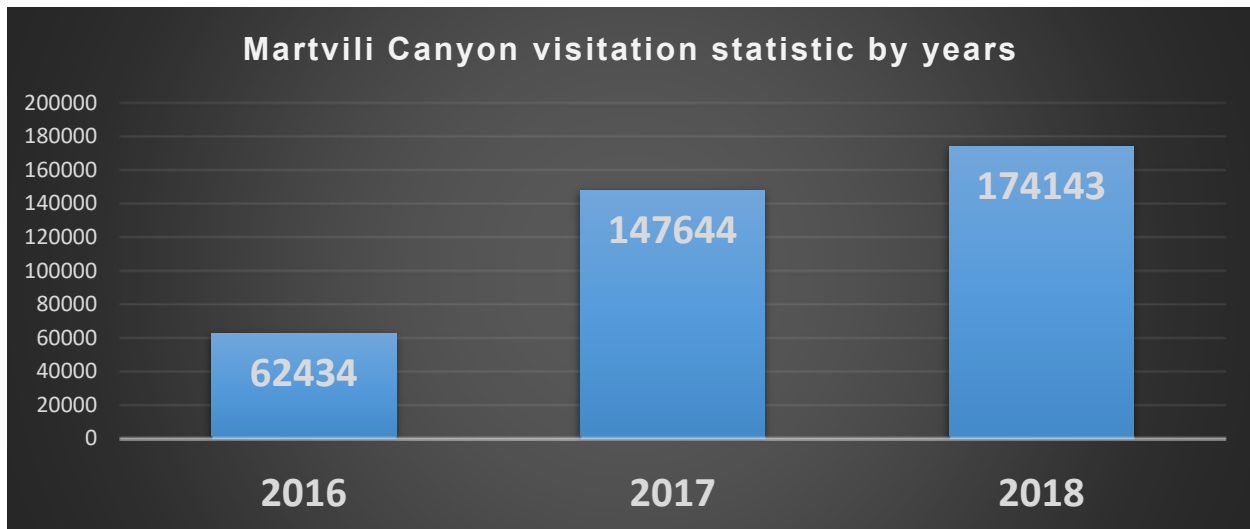


Chart 1: Martvili Canyon visitation statistic by years.

Visitors of the municipality can enjoy other sightseeing as well, including those parts that do not have status of protected areas. However, the number of visitors in those parts, compared to the Martvili Canyon, is significantly smaller.

From the analysis of the data we can say that the majority of tourists in Martvili municipality are, in most cases, only a one-day visitors, who visit the Martvili Monastery, the canyon and leave the municipality on the arrival day. Only a very small percentage of tourists stay overnight in different types of hotels. One of the reasons for this is that most of the tourists arriving in the municipality do not have complete information on the sightseeing they can visit. In addition, various ecotourism areas are not well equipped, there are no marked tourist trails and in most cases it is impossible for the visitors to travel without the guides.

The Caucasus Development Fund implemented the Developing Ecotourism Net in Black Sea Region Project (BSB79) for the above reasons. The project aims at attracting more visitors to the territory of the Martvili municipality through developing ecotourism infrastructure, contributing to sustainable tourism development in an eco-friendly environment, extending the time spent in municipality by the visitors, improving socio-economic conditions of the local population and leading to other positive results, both within the municipality and throughout Georgia.

Two hiking, two educational and two bicycle trails are planned to be developed in Martvili municipality within the framework of this project. In addition, recreation areas and a bird watching tower will be arranged. For this purpose, the locations were identified as a result of field and cameral work, as described in this report. This will serve as a basis for developing infrastructure in the future.

During the research many areas have been identified in the Martvili municipality, where the hiking trails can be arranged. Each of the alternatives that differ in complexity, distance, route type (transverse, one-sided, circular) as well as biodiversity and terrain adjacent to trails were analyzed, among other important factors. When selecting hiking trails in Martvili Municipality, presence of many alternative routes have led to the identification of the best areas. Along the selected trails there are several places, where

development of recreational areas – picnic spots is needed. The area for the bird watching tower, requested by the project was also selected. Considering that the Martvili municipality is not a bird migration corridor and is not distinguished by the diversity of ornamental fauna, attention has been paid to the area where birds of prey, including vultures, have been observed. The focus was also on positioning the platform to ensure better views, which would be attractive and interesting for the visitors.

The report includes detailed descriptions of each selected area, photographs, spatial data and all the information necessary for implementation of the project in the future.

2. Methodology

The initial works for the development of the ecotourism network in Martvili Municipality were carried out in August and September, 2019. Prior to selecting the exact location of trails, consultations were held with both Martvili municipality officials and tourism specialists.

Information on the ecotourism needs and current challenges in the municipality was collected as a result of consultations, especially with the representatives of Martvili Municipality and Legal Entity of Public Law (LEPL) Administration of Martvili and Okatse Natural Monuments.

During the meeting with the local representatives in the Martvili municipality several factors were outlined – the tourist trails are not marked, the infrastructure is not arranged along the trails and in many cases it is impossible to travel without guides. These are the major problem for visitors, especially for foreigners, who want to travel safely in the wilderness and not just visit the Martvili center and Martvili Canyon.

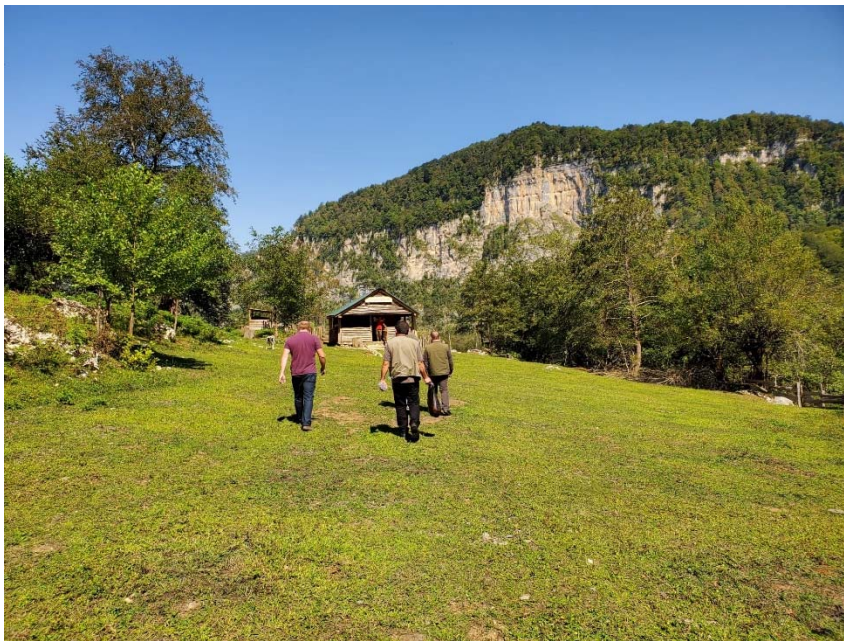
The local population, especially small hotel owners highlighted similar problems during meetings. According to their observations, there is no need for tourists to stay overnight, as their majority arrive in Martvili for one day, visit all destinations and return back on the same day. However, it was emphasized during the meetings that there will be a greater demand to visit some of the sites if the visitors will be informed about them. When seeing interesting interpretive boards, markers, and marked trails, most visitors will be eager to visit the trails, which will result in their longer stay in the municipality.

The aforementioned facts informed the planning of trail locations, with the view to make them easily accessible to visitors of the municipality. Anyone, who wants to visit the trails, must have access to information about them. The location of trails will also be conducive to improving the socio-economic conditions of the local population, which will include increased visitation of small hotels and guesthouses, sales of local products and other factors, which will be influenced by increasing number of visitors.

In addition to meeting and gathering information from local representatives of the Martvili Municipality, literature analysis played a key role in planning the trails. Various materials were analyzed, including data from the Georgian National Tourism Agency and information published by the Agency of Protected Areas. Information from various literary sources was also analyzed.

Geo-information systems (ArcMap 10.7) played a major role in selecting trails and sites for ecotourism infrastructure in Martvili municipality, with some routes being designed with the help of high resolution orthographic photos as well as digital elevation maps (DEMs), topographic maps and other basic maps and geospatial data. Literature analysis, data from the National Tourism Administration, the Agency of Protected Areas, Martvili Municipality and other organizations also played a key role in the research process. It was important to gather information from local population and experts. Subsequently, the analysis of the above information revealed key areas that were inspected during the field visits. During field trips, new factors were systematically identified, refining the location selection process and, as a result, the best areas were selected.

Martvili municipality is in about 300 kilometers from the capital of Georgia – Tbilisi. Although field visits to alternatives of each tourist trail were planned in advance and all the necessary materials were prepared (printed maps, electronic maps on smartphones, gpx files in GPS, etc.), unforeseen factors, including climate factors, emerged. Regardless of the weather forecasts, unexpected rains were frequent, which made full field surveys impossible to conduct. Given the timing of transportation from Tbilisi, such factors were a major setback during the planning of the trails.



Picture 1: Visiting a guesthouse near the selected trail.



Picture 2: Meeting with representatives of the Administration of Martvili and Okatse Natural Monuments.



Picture 3: Vako Hut, located near the selected trail.

After analysis of the obtained information several alternatives of hiking trails were identified. However, on-site visits revealed that some of them did not have the tourism potential due to the lack of drinking water along the trails, steep slopes, overgrown bushes, lack of panoramic views, the monotonous landscape and other factors. Therefore, they were not attractive for tourists and were not selected for marking. This issue was one of the most important difficulties faced by the experts during selecting and preparing the trail designs.

The final locations of trails were identified after analyzing the alternative routes. They are the best suited for developing ecotourism trails and infrastructure that will contribute to sustainable development of tourism in Martvili Municipality.

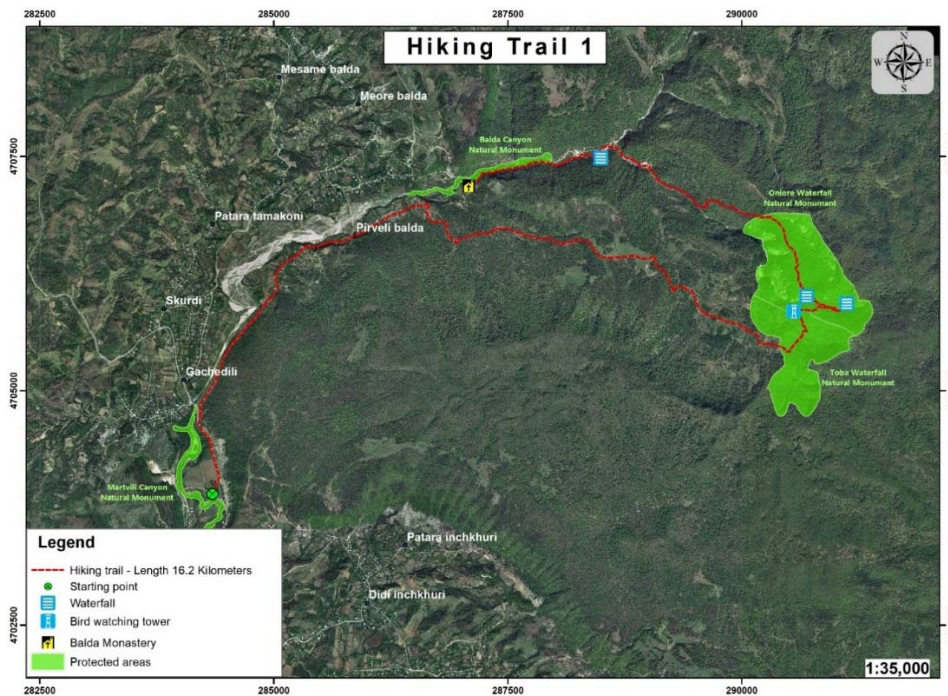
3. Analysis of selected ecotourism locations

3.1 Hiking trails

As mentioned in the introduction, the report adheres to the requirements and standards of the Technical Regulation on Planning and Marking of Hiking Trails. When setting up a hiking trail, the provisions of Article 4, paragraph 4.1 shall be taken into account, which states: “Hiking trail – a stepped or unpaved hiking trail in the natural environment, which may run through the various forms of terrain. The trail should have distanced from the motorways and densely populated areas as far as possible, except where they represent a destination. The hiking trail is of varying difficulty and is divided into easy, medium and difficult categories.”

3.1.1 Oniore Waterfall hiking trail / bird watching tower

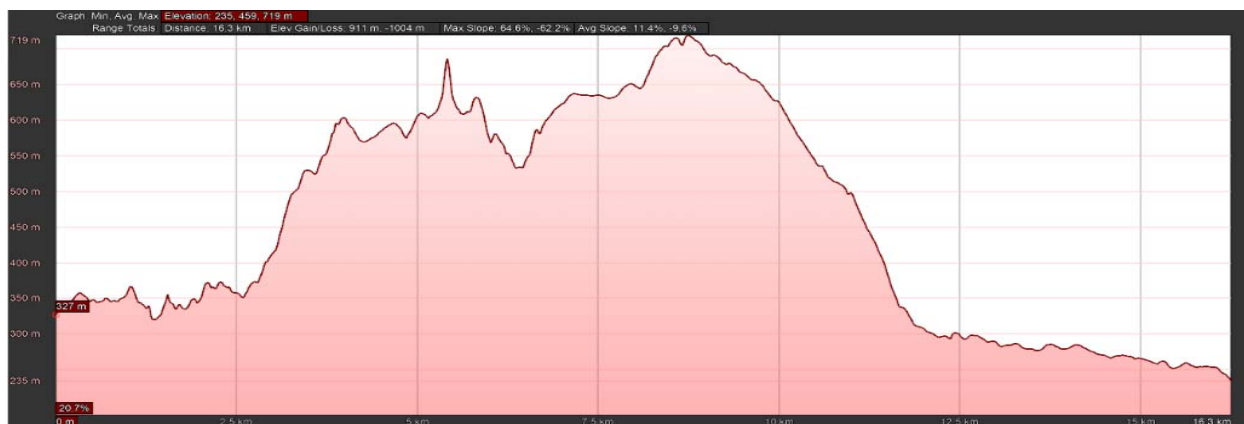
One of the most important issues in planning a hiking trail is to make it attractive in the future, so that the infrastructure and costs incurred are not wasted. One of the reasons for selecting the first hiking trail is that the starting point of the trail is a very active tourist destination – Martvili Canyon. Visitors to the canyon will have information about the route, signs and information boards. It is 5.5 km from Martvili Center to Martvili Canyon, which is 10 minutes’ drive. Therefore, the hikers can easily reach the starting point of the trail.



Map 1: Situational map of trail leading to Oniore Waterfall.

The first selected hiking trail starts from Martvili Canyon and ends near the Balda Monastery. The planned trail is 16.2 kilometers long, which takes approximately 10 hours to complete. It is a transverse route, starting and ending in two different destinations, and can be started at either ends. The trail is of medium complexity and is characterized by relatively uneven landscape, paved or unpaved sections, small slopes where it may be necessary to use hands or hiking stick to maintain balance. The trail requires basic hiking equipment and hiking skills. It is also recommended to use protective hiking boots for ankles.

The minimum altitude of the trail is 235 meters above sea level, while the maximum height is 720 meters. An average height is 459 meters. The maximum inclination is 64.6%, while the average inclination is 11.4%.



Elevation profile 1: Height profile of the hiking trail.

As mentioned, the starting point of the trail is located near the Martvili Canyon and continues northwest of the canyon. Initially it follows the 810 meters of asphalted road. From the village Balda the trail follows an unpaved road, along the left bank of Abasha River, totaling 3,500 meters. At the end of the village Balda, to the west of the trail, a relatively untouched nature begins. The next section of the trail becomes relatively difficult and inclination increases along the hillside, over the distance of 3,215 meters. On this section, from the village Balda that is located at the 550 meters above the sea level, we reach 719 meters with a beautiful panoramic view.



Picture 4: One of the highest points of the trail (719 meters above sea level).

After this location a slope starts with an average inclination of 11.2%. The slope leads to Toba and the Oniore waterfall Natural Monuments. The downhill slope is 2,050 meters long and ends in the Toba river canyon, which originates from the Toba waterfall. The Toba River is small in size, not exceeding three meters in width and 30 centimeters in depth. Crossing the river is easily possible with the help of stones, as well as with cut trees, without getting the feet wet.

At the location adjacent to the river a recreational area was selected, where the picnic spot will be arranged and the existing camping area will be repaired.



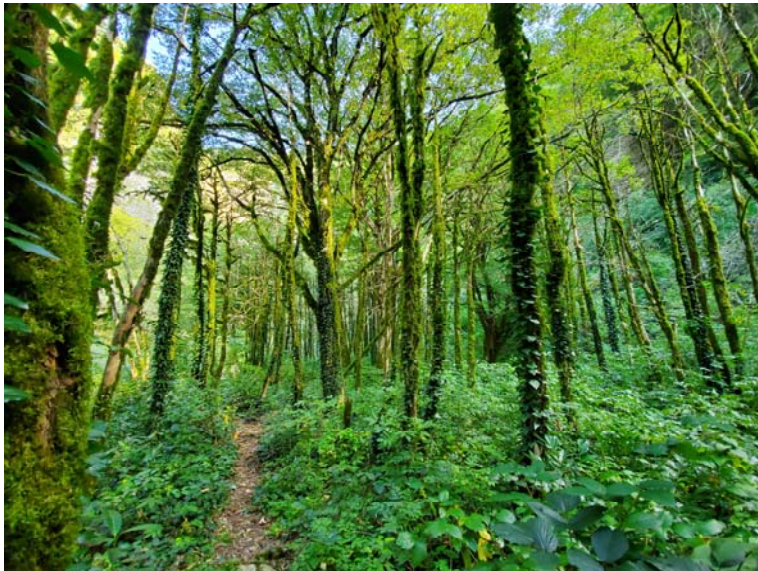
Picture 5: The alder tree pass on river Toba.

After crossing the river, the hiking trail follows an uphill with an average of 26% inclination. On this section there is a turn to the Toba waterfall. In 580 meters from the river an elevated area was selected as a bird watching tower construction area, which is mainly intended for watching birds of prey. One of the important nesting species in the area is a vulture that was observed during each visit to the area. The birdwatching platform is also very good for viewing adjacent areas. From the tower the Toba waterfall will be visible, which flows out of the rock cave. The visitors will be able to other the spectacular views from the birdwatching tower. From the tower only 600 meters remain to one of the main sights of the hiking trail – the Oniore waterfall. In about 200 meters from the waterfall a recreational area was selected, with two picnic spots and a toilet will be constructed. The simple infrastructure in the area in the form of fireplace and logs already exists. Therefore, this is one of the best recreational areas on the trail, which is already frequently visited and further development of infrastructure can make it more attractive for visitors.



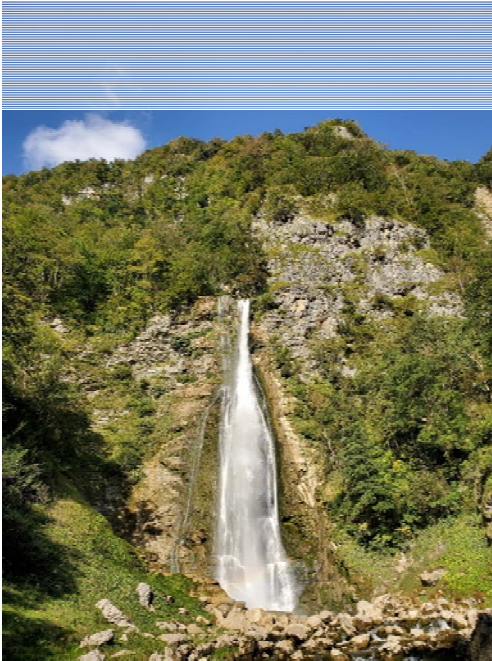
Picture 6: The current picnic area near the Oniore waterfall.

The trail to the waterfall goes through the typical Colchian forest, with a Colchian boxwood and blackberry bushes. Unfortunately, because of the fungi and pests the perennial trees are virtually desiccated and are covered with shrub cover and large biomass of lichens and moss. An excess of moss is one of the best indicators of the clean air on this section. The vegetation also has a vast impression on the visitors.



Picture 7: Unique vegetation of the trail leading to the Oniore waterfall.

After crossing this section, the visitors will be able to see the Oniore waterfall, which flows out of the cave and is 67 meters high.



Picture 8: Oniore waterfall.

After visiting the waterfall, the visitors will need to cross the right bank of the river to continue on the trail. This can be done by walking over the stones and without getting wet. After crossing the Oniore waterfall, the trail follows the right bank of the Toba river. In about 500 meters from the Oniore waterfall there is a second waterfall, which can be seen from three different angles.



Picture 9: The second waterfall in 500 meters from Oniore waterfall.

From Oniore waterfall an altitude starts to decrease. In about 3,750 meters a Kaghu waterfall is located. There is a unique biodiversity on this section, both on the slopes and in the Toba River. There are panoramic views along the trail, from which the Toba waterfall can be seen.



Picture 10: View from Toba waterfall.

In 150 meters before reaching the Kaghu waterfall, it is necessary to cross the river Abasha. In most cases the depth of the water does not exceed 50 centimeters and is easy to cross, although it is necessary for the visitors to have the information before starting the route, to avoid unexpected problems.

After crossing the river Abasha, the visitors reach Kaghu (Zhuzhgha) waterfall, which is of exceptional beauty. The Kaghu waterfall is a frequently visited place in summer, especially for locals. With recreational areas adjacent to the waterfall the visitors can enjoy picnic and taste local dishes.



Picture 11: Kaghu waterfall.

From the Kaghu waterfall to the end of the trail, which ends with the Balda Monastery, there is an easy, 1500-meter-long road. To the right of the Balda Canyon Natural Monument is located and the visitors can see the canyon. The final stop of the hiking trail are the Balda Monastery and the Virgin Mary Church sites, which were selected based on their historical and cultural importance. The monastery can be reached through a highway with asphalt pavement, which will make it easier for trail visitors to return to their desired locations by car. It is also possible to visit return to Martvili canyon by the road through the village Pirveli Balda. In this case the visitors will travel along an easy road which is 5,250 meters long, which can be covered in 1.5 hours.



Picture 12: Balda Monastery and Virgin Mary Church (photo retrieved from the National Tourism Administration website).

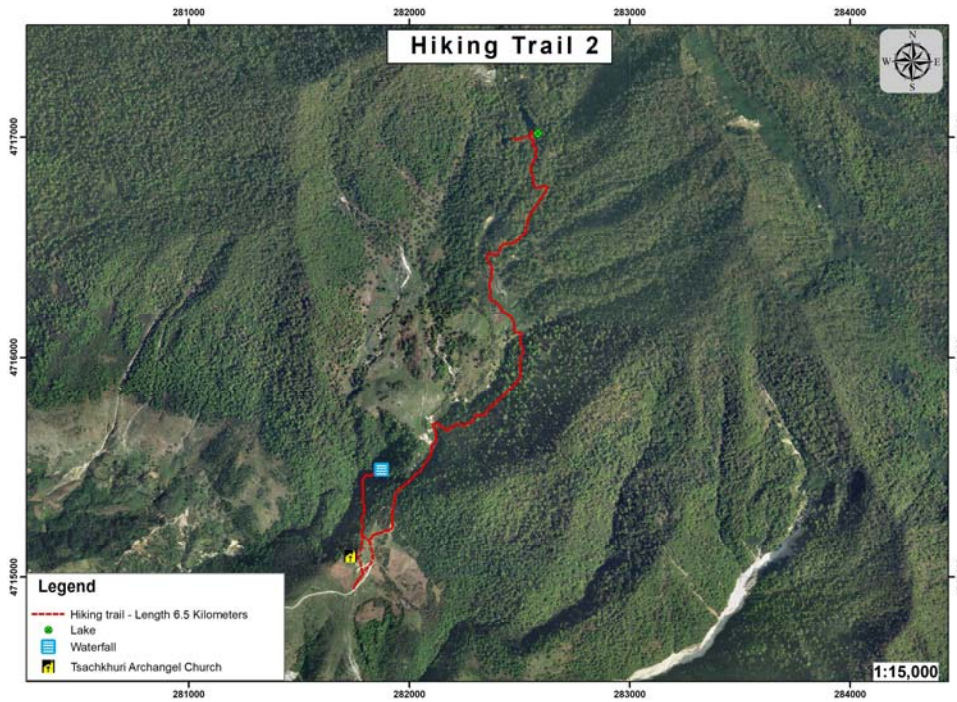
3.1.2 Tsachkhuri waterfall and lake trail

Tsachkhuri (Khirzeni) hiking trail was selected in the village of Tsachkhuri, Salkhino community of Martvili municipality. It is located on the slope of Khirzeni, where the Tsachkhuri Archangel Church and Monastery are located. The starting point of the trail is the area adjacent to the church.



Picture 13: Tsachkhuri Archangel Church (photo retrieved from the National Tourism Administration website).

It is 22 kilometers from Martvili center to Tsachkhuri Archangel Church. The road is well asphalted and it takes 30 minutes to reach the destination. The road passes through Martvili Canyon, then village Zhinota and Salkhino, after which the visitors will reach Tsachkhuri. Originally built in the 7th century, the church was renovated in the 18th century and is preserved to this day. Throughout the year the tourists and pilgrims visit the church, as well as Tsachkhuri waterfall, which is located in 500 meters from the courtyard of the church. It originates from the Tkhopra River. A lake, which is a source of the river is the final destination of the selected trail.



Map 2: Situational map of Tsachkhuri trail.



Picture 14: Tsachkhuri waterfall.

Near the monastery and the waterfall, a recreational area for arranging two picnic spots was selected. At present there is a fireplace arranged at the spot. In the future the visitors will be able to enjoy a well-equipped picnic spots.



Picture 15: Selected site, where recreational area will be arranged.

The selected trail is a one-way route, starting and returning to the same destination, which in most cases crosses the same path. The round trip, full length of the trail is 6.5 kilometers, which takes about 3 hours to complete. The Tsachkhuri trail, like the Oniore Trail, is a medium difficulty trail. Even though the distance of the Tsachkhuri trail compared to Oniore is relatively short, the trail goes through relatively steep slopes. It also is located higher above the sea level. The minimum elevation of the trail is 580 meters, while an average elevation is 790 meters and the highest point is 1,037 meters above the sea level. In some areas the trail has 38% inclination, with an average inclination of the trail being 17%.



Elevation profile 2: Height profile of the hiking trail.

From the starting point – the church – to the final section it is necessary to walk 3 kilometers. The trail to the lake is of medium difficulty. The hiking path is mainly the limestone and ground road. The areas adjacent to the trail are rich in biodiversity. The area is mainly represented by beech and hornbeam, as well as typical trees characteristic to Colchian forest with sugarcane and blackberry cover. Of particular note is the final location of the trail, a lake that is located directly in the forest, which begins immediately after the shoreline. Such a lake is extremely rare and is an important ecotourism site. The surface of the lake is about 5,000 square meters. Two small lakes adjacent to the lake, which are also unique in terms of biodiversity and beauty, are also noteworthy locations.



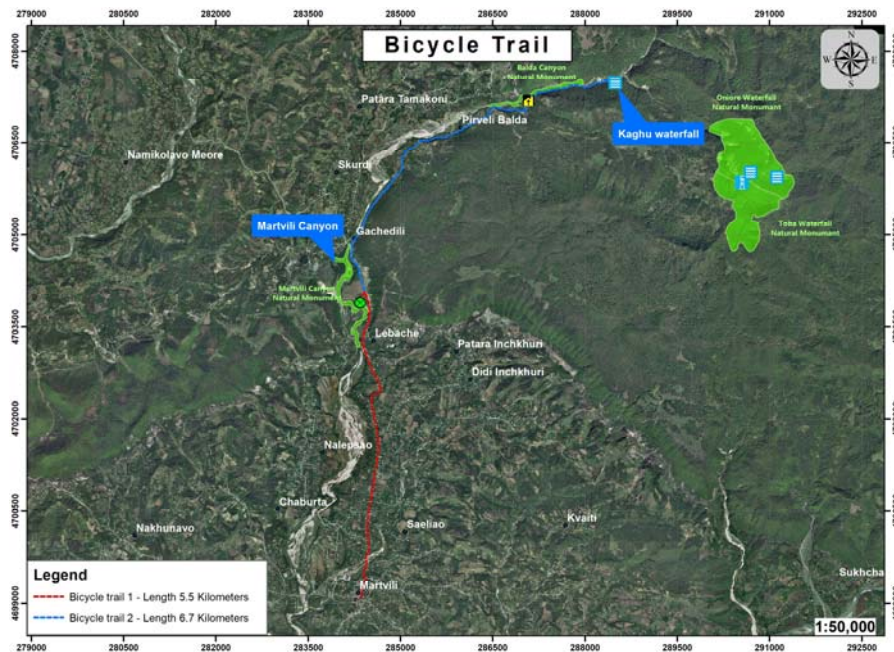
Picture 16: Final destination of the trail – the lake.

After reaching the final destination the tourists can enjoy beautiful nature and the lake view. The location will be attractive for birdwatchers as well. In the calm environment of the lake many species of birds can be seen and observed both visually and by hearing.

Going back on the same trail will still be necessary for returning to Tsachkhuri Monastery and waterfall. After returning from the 6.5 kilometer trail, the visitor will be able to rest at a selected recreational area adjacent to the monastery and waterfall.

3.2 Bicycle trails

As part of the project developing trails for all types of visitors of Martvili Municipality was planned, including bicycle users. Two sections were selected on the territory of the municipality that will be extremely interesting and easy to cycle. The area selected for the bicycle lanes is designed amateurs and does not require significant cycling experience and special physical trainings.



Map 3: Situational map of bicycle trails.

3.2.1 Martvili center – Martvili canyon bicycle trail

As mentioned in the previous chapters of the report, one of the most visited places in Martvili municipality is Martvili canyon. During the process of selecting the project areas in the municipality, we often encountered tourists traveling by bicycle towards canyon. The bicycle trail from the city center to Martvili Canyon is one of the best options among several others discussed. Cyclists will have to cover 5.5 kilometers from the center to the canyon on a relatively easy terrain, with a minimum altitude of 181 and a maximum of 254 meters. The average elevation of the trail is 215 meters above sea level. The inclination of the terrain is insignificant, averaging 2.6%.



Elevation profile 3: Height and difficulty profile of # 1 bicycle trail.

Such terrain will make it easier for the cyclist to move and the road will not be tiring. It will be possible to move along the sides of the asphalted road, for which there is sufficient space. Visitors coming to the canyon can either turn back to Martvili or continue their ride to the second bicycle trail towards Kaghu Waterfall.

3.2.2 Martvili canyon – Kaghu waterfall bicycle trail

The second selected bicycle trail runs from Martvili canyon to Kaghu waterfall and is the continuation of the first trail. Cyclists on the canyon will be able to learn the information and continue their way to Kaghu waterfall. Length of the trail is 6.7 kilometers. Compared to the first trail, the section leading to Kaghu waterfall is relatively difficult. The average altitude here is 299 meters above sea level, with an inclination of 6.1%.



Elevation profile 4: Height and difficulty profile of # 2 bicycle trail.

The trail leading to Kaghu waterfall will also pass through the Balda Monastery, which the visitors traveling along the trail will be able to visit. Cyclists will travel 12 kilometers from the waterfall to the center of Martvili.

3.3 Eco-educational trails

Environmental education and related activities are an important and highly discussed issue worldwide, as environmental education resources in a number of countries, including developing countries, are still a major problem. In Georgia too, environmental awareness campaigns are a relatively new issue. Various issues are being developed on a daily basis in this regard and eco-education activities for youth are becoming systematic.

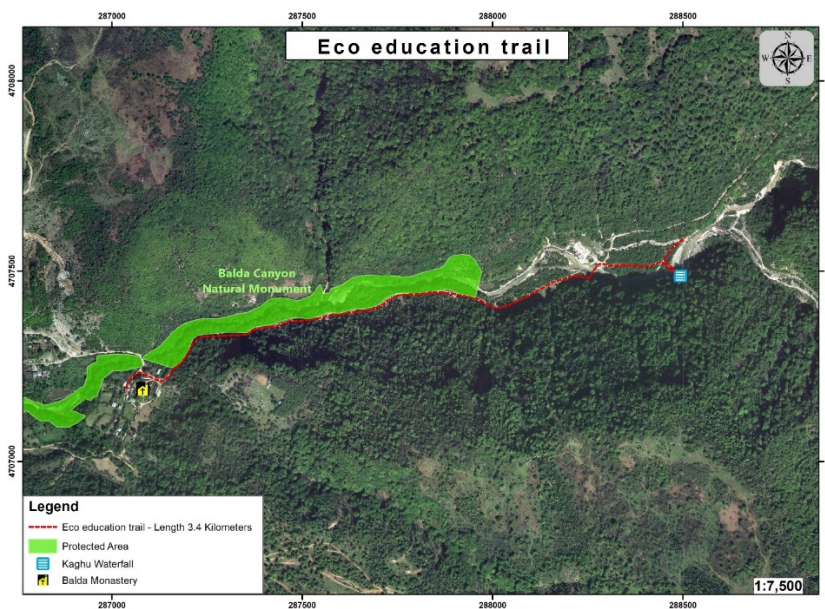
One of the best tools for environmental education is field trips in nature, as the participants can better understand the details on which have acquired theoretical knowledge. Consequently, by planning the eco-education trails within the project the level of environmental education in Samegrelo region and Martvili

municipality will be improved. In addition, the eco-educational trail may host visitors from other regions, as it is attractive due its diversity.

When planning educational trails, we took into account that the main segment of visitors on the trail will be school children. Therefore, easy paths with substantial biodiversity and sightseeing were selected. When selecting the trail, in addition to environmental education, we considered the fact that both historical and cultural monuments are available along the selected trails, which makes them more interesting and will attract more visitors. Both educational trails represent a one-way route, starting from and returning to the same destination. It is also worth noting that the eco-educational trails follow the route of the hiking trails on those sections, sightseeing are located and form a structurally integral part of the trails planned within the frames of the project.

3.3.1 Balda Monastery – Kaghu Waterfall eco-educational trail

The first selected eco-education trail, which is designed for schoolchildren, is located near the village of Balda, in the municipality of Martvili. The starting point of the trail is Balda Monastery and it follows a road along the river Abasha. The final destination is a confluence of river Toba near Kaghu (Zhuzha) Waterfall.



Map 4: Situational map of the eco-educational trail.

The total length of the trail, which includes hiking from Balda Monastery to Kaghu Waterfall and back, to Bald Monastery is 3.4 kilometers. Minimum elevation of the trail is 319 meters, while the maximum is 368 meters. An average altitude is 345 meters above sea level. The average inclination of the trail is 12.3%.

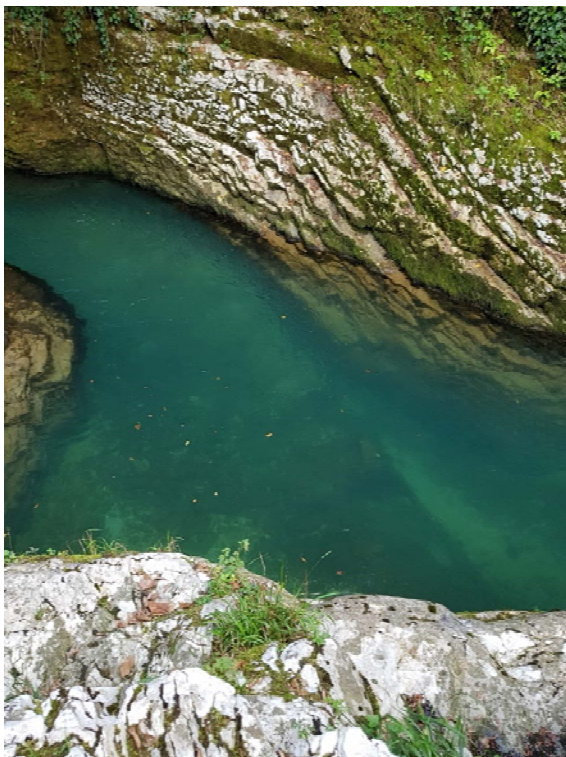


Elevation profile 5: Height and difficulty profile of the eco-educational trail

The main sightseeing of the eco-educational trail are Balda Monastery, Virgin Mary Church, Balda Canyon, Kaghu Waterfall and river Abasha.

Visitors of the trail will receive information on the historic and cultural monument, which is a frequently visited place in the Martvili municipality. During visiting the eco-educational trail, it will be possible to see the Balda Canyon Natural Monument, which is an important eco-educational site. The canyon is formed by Abasha in the southern part of the Askhi, in the limestone rocks. The canyon is about 1,400 meters long, 5-10 meters wide, with an average depth of 25-30 meters.

The canyon is unique, both in terms of its biodiversity, as well as its sightseeing.



Picture 17: Balda Canyon Natural Monument.

After visiting the canyon and getting the information, the road continues to Kaghu Waterfall, which is located on the river Abasha's side. On the trail there will be a section, where the visitors can stop and receive environmental information and increase their awareness. In 150 meters north of Kaghu Waterfall there is a crossing of river Abasha and river Toba, where increasing awareness of visitors on hydrological issues is possible.



Picture 18: River Abasha nearby Kaghu Waterfall.

Based on the above, the selected eco-educational trail, due to its importance, will be popular and often visited area in the Martvili municipality.

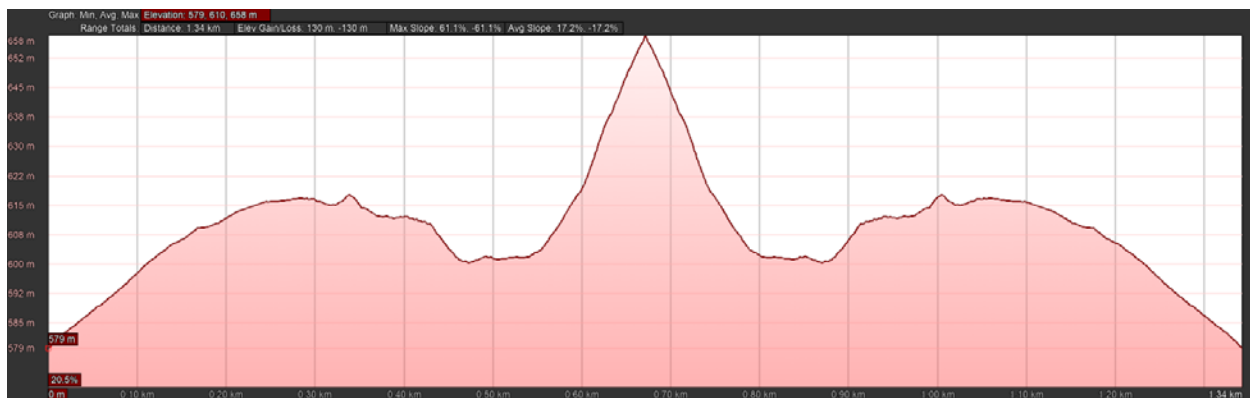
3.3.2 Tsachkhuri Monastery – Tsachkhuri (Khirzeni) Waterfall eco-educational trail

Tsachkhuri (Khirzeni) hiking eco-educational trail was selected in the village of Tsachkhuri, in Salkhino community of Martvili municipality, on the slope of Khirzeni, where the Tsachkhuri Archangel Church and Monastery are located. The starting point of the trail is the area adjacent to the church and the final destination is Tsachkhuri Waterfall.



Map 5: Situational map of the eco-educational trail.

The length of the trail is 1.3 kilometers, starting at 579 meters above sea level and rising to 658 meters, with an average elevation of 610 meters above sea level. The average inclination of trail is 17.2%



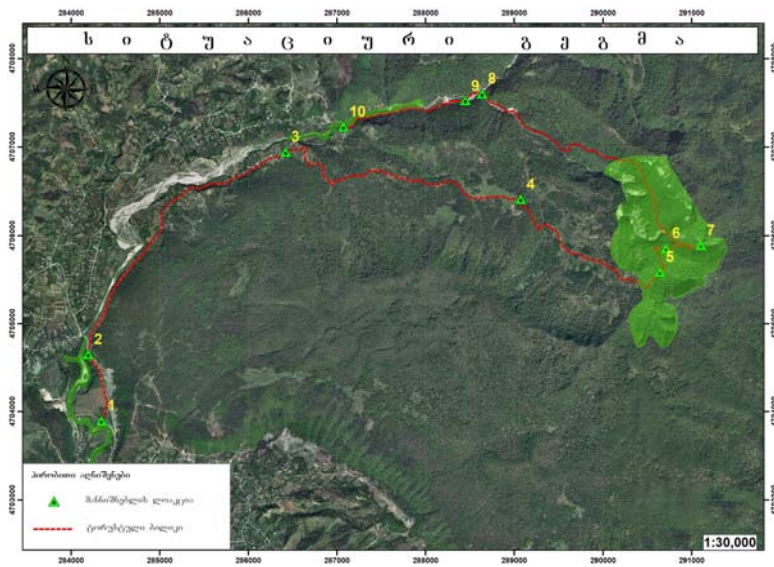
Elevation profile 6: Height and difficulty profile of the eco-educational trail.

The surface of the trail is the limestone. A recreational area has been selected near the church, where visitors will be able to have picnic at the well-arranged and equipped area. The presented eco-educational trail is also intended for schoolchildren, who will visit the historical-cultural monument, as well as the waterfall and observe the biodiversity of the area. The selected section allows the visitors to visit the areas adjacent to the trail, which is important for environmental education. In the vicinity of the Archangel Church of Tsachkhuri the visitors can view various geographical objects, which are important for eco-educational purposes.

Considering the above issues, the trail will be popular for educational purposes and will host a large number of visitors each year.

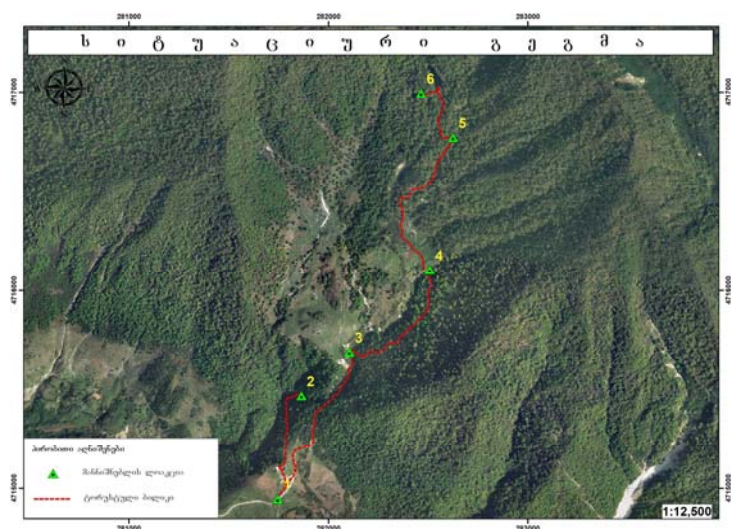
4. Signage of trails

The contractor shall place trail markers in accordance with the technical regulation – the requirements and norms of the “Planning and Signing of Hiking Trails”. The report provides the data to determine where the signs should be placed by the contractor.



Map 6: Plan of location of signs on the Oniore trail.

N	X	Y	Section	Length (meters)	Time / adverse
1	284345	4703899	1-2	830	0.30 / 0.20
2	284196	4704654	2-3	3507	1 / 0.50
3	286423	4706952	3-4	3231	2.30 / 1.30
4	289075	4706415	4-5	2257	1 / 1.40
5	290646	4705594	5-6	520	0.30 / 0.20
6	290716	4705860	6-7	442	0.30 / 0.20
7	291109	4705895	7-8	3579	2.30 / 3.30
8	288640	4707610	8-9	225	0.10 / 0.10
9	288451	4707528	9-10	1575	1 / 1
10	287078	4707233	10-1	5259	1.30
					9.40 /



Map 7: Plan of location of signs on the Tsachkhuri trail.

N	X	Y	Section	Length (meters)	Time / adverse
1	281746	4714946	1-2	648	0.20 / 0.20
2	281865	4715469	1-2	648	0.20 / 0.20
3	282105	4715692	1-3	929	1.30 / 1
4	282509	4716106	3-4	728	0.30 / 0.30
5	282625	4716771	4-5	897	0.40 / 0.30
6	282465	4716996	5-6	452	0.30 / 0.20
					3.50 / 3

Signs will be installed on the selected locations, indicating the distance to the destination, estimated time, direction and other information required by the technical regulations.

The contractor must also take into account all other regulations, including the rules for marking trails with painting.

5. Oral history in Samegrelo

Samegrelo has a rich historic past and an interesting way of life. Oral history here is transferred from older to younger generations. Within the framework of the Developing Ecotourism Net in Black Sea Region Project stories were collected by the consultants.



Picture 19: Gogilo Basilaia, Lamzira Kokaia and Boris Skhulukhia

The horse thief

Along with horse-breeding, horse theft was widespread in Samegrelo and was considered as an act of bravery. If an owner recognized a stolen horse and identity of a thief was disclosed, this was considered a shameful act. Therefore, horse theft required significant courage and skills.

Danelia and Khaindrava from Samegrelo visited Imereti Count – Tsereteli, who had two very good horses. Tsereteli received his guests with much respect and showed them his horses. Khaindrava enjoyed how well-behaved and trained the horses were. Danelia, on the other hand, decided to steal one of the horses.

Tsereteli had surrounded his yard with tall and strong fence. He also had two dogs and nobody dared to come close to them. Tsereteli claimed that nobody would dare to steal his horses.

Tsereteli treated his guests, Khaindrava and fellow companion Danelia with respect. After some time Danelia started preparations to steal the horse: he knitted two large baskets and put a meat inside. At midnight he sneaked into Tsereteli's yard and before the dogs were set free, he climbed on the walnut tree. At night the serviceman set the dogs free. When the family went to sleep, Danelia lowered the baskets with meat from the tree. The dog, following the smell of the meat, ended up in the basket, which Danelia lifted and tied to the tree branch. The second dog shared the same fate. Afterwards Danelia untied the horse and sneaked out. Danelia hid the horse in a place, where Tsereteli could not find it.

After some time Danelia told the story to Khaindrava and added that he could always steal a horse if he wanted to. Khaindrava informed Tsereteli. Delighted Tsereteli that his horse was safe, held dinner and invited Khaindrava and Danelia. Tsereteli rode the stolen horse when he visited the Count, who rewarded him.

According to another version of the story the thief – Danelia – was requested to swear that he did not steal the horse. He agreed, but first went home, laid in the cradle and asked his wife to rock it. Then he went to church and said: I swear I have not stolen anything ever since I got out of the cradle.

Story told by Amiran Nachkebia

Village Kveda Vakha

How Ojaleshi was saved

Mr. Gigilo Basilaia is a well-known figure among the older generation in Samegrelo. He is the author of a book "Chveni Salkhino", which describes chronicles of village Salkhino of Martvili municipality between the end of XVII and beginning of XXI centuries. Gigilo Basilaia was a very interesting speaker and told the following story:

Samegrelo has a rich history. Here cattle and horse breeding, crop and wine growing was practiced for centuries. Millet was often planted by local population, who also practiced weaving. Cotton, silk and wool clothes were made by locals, as processing tools and weaving machinery were available in almost all households. Locals made clay crockery from ancient times, which was preconditioned by availability of large deposit of clay. Production of baskets and lath for roofing was widespread as well.

Later these traditions were lost. Instead of millet people started planting corn, cloths and lath is not made at home any more. However, there are exceptional cases, when old traditions were preserved. A good example is preservation of one of the local grape varieties. Ojaleshi was considered as the best grape among those available in Samegrelo, as it gives high yield and the best quality wine can be made out of it, which is thick, strong and pleasant to drink.

By the end of XIX century Ojaleshi, which was grown only on the Tsachkhuri riverbank, was on the verge of extinction. A spouse of Salome Dadiani, daughter of the last Prince of Samegrelo and member of the French Royal Family – Achille Murat – started its cultivation and set up a magnificent farm on the lands of village Salkhino and started production of wine. A cellar, where the wine was produced, remains to this day.

According to Megrelians Achille Murat worked alongside the servants and peasants. He did earthworks and went hunting together with them. He established schools and pharmacies, laid roads and amply rewarded poor families. On the plains of river Tsachkhuri he planted a large vineyard of Ojaleshi.

Achille made remarkable wines and successfully exported them to Europe. Achille Murat sent Ojaleshi wine made in village Salkhino to Paris, on an international wine testing and competition, where the wine won the highest prize – Grand Prix. Ojaleshi from Salkhino became popular outside Georgia as well.

Story told by Gogilo Basilaia

Village Salkhino

Megrelian cuisine

Recipes of preparing Georgian dishes was normally transmitted from one generation to another. In all parts of Georgia, you will find different dishes that are characteristic of that particular region. Here is what Lamzira Kokaia, a housewife from Salkhino tells us about the Megrelian dishes.

Traditional Megrelian dishes:

Ghomi – is a dish made of coarsely ground corn and corn flour.

Elarji – is made of dairy products, ground corn and corn flour. From dairy products Sulguni, which is a typical Megrelian cheese, is added to the dish while cooking it.

Gebzhalia – is a dish overboiled in milk. It is made of milk products, mint and seasoning.

Sup-Kharcho – is an extremely tasty soup, characterizing Megrelian cuisine. Megrelians use seasoning in abundance, rice, water, tomato paste or tomato and beef.

Puchkholia – dairy products, fresh cheese, coriander, garlic sauce, pepper and mint are used to make it. The mixture is then put in hot Ghomi.

Megrelian Kuchmachi – traditional Megrelian Kuchmachi is spicy and fragrant. It is made of innards of cow or pig, onion, pomegranate, red pepper and other seasonings.

Ajika – is a traditional sauce and its main ingredients are red pepper, onion, salt and variety of seasonings. In Samegrelo local population makes both red and green Ajika. In 2018 Megrelian and Abkhaz Ajika were granted a Georgian intangible cultural heritage status.

Megrelian Khachapuri – its main ingredients are dough and cheese. In Samegrelo they add more cheese on top of Khachapuri.

Megrelian Satsivi – is made of walnuts, seasoning and turkey or chicken meat. In Samegrelo Satsivi is mostly white in color. It is a main dish on New Year's Eve.

Megrelian Chvishtari – is a corn bread roll, made of cheese and corn flour.

Megrelian Sulguni – is a cheese made through the special technology. Sometimes they make breaded and smoked Sulguni as well.

Story told by Lamzira Kokaia

Village Salkhino

Megrelian cuisine (extended version)

Elarji – is one of the main dishes of Megrelian cuisine. There are many recipes for Elarji, which, at first glance, seem very easy. You can eat a genuine Elarji only in Samegrelo.

Elarji is made of dairy products, ground corn and corn flour. From dairy products Sulguni, which is a typical Megrelian cheese, is added to the dish while cooking it. Sulguni helps the dish to become elastic, tasty and form a uniform substance. **Elarji is not a daily dish.** In Samegrelo they prepare Elarji only on celebrations or to greet special guests.

Do not miss the opportunity. Visit eastern Georgia and remember that you must try genuine Megrelian Elarji at least once in a lifetime.

Gebzhalia – is a traditional Megrelian dish. In Megrelian Bzha means milk. This is why the main essence of Gebzhalia is to overboil the dish in milk. Preparation process of Gebzhalia and Sulguni partially are similar.

Gebzhalia is made of milk products, mint and seasoning. Sulguni removed from the heat is mixed with mint, formed into a uniform substance and cut into rolls, which are placed in a mint sauce.

Gebzhalia, which supposedly symbolized the sun, was used on ritual fasting. Gebzhalia is one of the main dishes of Megrelian cuisine.

Sup-Kharcho – is an extremely tasty soup, characterizing Megrelian cuisine. People make it mostly in cold winter days. It is a traditional dish and its recipe clearly indicates this. Megrelians use seasoning in abundance, rice, water, tomato paste or tomato and beef.

Puchkholia – is a Megrelian word and means crumbled. Dairy product – fresh cheese, which easily can be crumbled, is used in the dish. Coriander, garlic sauce, pepper and mint are mixed with crumbled cheese. The mixture is then **put in hot Ghomi**, where the cheese starts melting. Puchkholia is a mouthwatering dish of traditional Megrelian cuisine.

Megrelian Kuchmachi – is a highly valued Georgian dish. There are many recipes for Kuchmachi and they vary from one region to another. Traditional Megrelian Kuchmachi is **spicy and fragrant**. Its recipe is based on traditions, which still persist among locals. Megrelian Kuchmachi is made of innards of cow or pig, onion, pomegranate, red pepper and other seasonings. This is a dish for all seasons.

Ajika – originates from eastern Georgia – Samegrelo and Abkhazeti regions. **Ajika is a traditional sauce**, which is used for preparing particular dishes. Traditional Ajika is spicy and fragrant. Its main ingredients are red pepper onion, salt and variety of seasonings. In Samegrelo local population makes both red and green Ajika. In 2018 Megrelian and Abkhaz Ajika were granted a Georgian intangible cultural heritage status.

Megrelian Khachapuri – is considered by many as the best Georgian dish. There are many recipes for Khachapuri in different parts of Georgia. Imeretian, Adjarian, Megrelian, Svanian, Rachian and Khevsurian Khachapuri differ from each other. Its main ingredients are dough and cheese. In Samegrelo they add more cheese on top of Khachapuri.

Megrelian Satsivi – is a well-known dish for celebratory meals, which is widespread across Georgia. It is made of walnuts, seasoning and turkey or chicken meat. In Samegrelo Satsivi is mostly white in color, as is made mostly of white walnuts and seasoning. It is a main dish on New Year’s Eve. Usually Megrelians eat Satsivi together with Ghomi.

Megrelian Chvishtari – is a corn bread roll, made of cheese and corn flour. It is widespread in eastern Georgia, mostly in Samegrelo and Svaneti. Chvishtari and Mchadi are similar in form, but based on different ingredients.

Megrelian Sulguni – is a cheese made through the special technology. Sometimes they make breaded and smoked Sulguni as well.

Story told by Lamzira Kokaia
Village Salkhino

Queen of the Forest

Megrelians say that the Queen of the Forest lives in forests and protects animals. She is very beautiful and has two long, golden-color braids. Comb is very important for the Queen. When she misses it, the Queen loses her serenity. According to myths, her hair is a source of life and this power is transmitted to the comb.

A fate of hunters was in the hands of the Queen of the Forest. If she favored a hunter, he would not miss a shot, even if he did not aim at animals. If during the meeting the Queen would call a person by his name, he should not respond, or he would be driven to madness. If the Queen liked a man, with his hands he should signal number of months or years that he could spend with her. Afterwards the Queen protected the family of the man, which would live in happiness if the man would keep his relationship with the Queen in secret. Otherwise the Queen would curse the man and his family would be tormented.

Story told by Boris Skhulukhia
Village Salkhino

Ochokochi

Ancient god Ochokochi (or Ochopintre) is madly in love with the Queen of the Forest. Ochokochi is a protector of wild animals.

Ochokochi is partially a goat and partially a man. His body is covered with long, rust-colored hair. On his chest he has a protuberance in the form of a horn, with which he defeats his enemies. Ochokochi cannot talk. He can only mumble, whimper and laugh. If anyone talks to him, he immediately starts a fight. He possesses great power and can easily defeat humans. Even though he loves the Queen of the Forest, if he sees a beautiful lady, Ochokochi convinces her to start a love affair with him.

Ochokochi is an ancient god and Pelasgians and Sumerians believed in him. Similar to various ancient civilizations, according to Kolikh mythology goat was considered to be a heavenly, divine creature.

Ochokochi possesses soul of every animal, fish and bird on this planet. Before going hunting, hunters must pray to him to let them kill animals.

Story told by Boris Skhulukhia

Village Salkhino

Devi Lake

When Saint George lived on earth, he visited Mukhura in Imereti. Many Devs (Devi is a giant, malicious creature) lived there. Saint George told a deacon that he was going hunting and deacon should not open the door to anyone, unless they put their little finger through the door crack. Deacon followed his advice and when he saw a hairy little finger of Devi, he did not open the door and called Saint George for help. Saint George was at the seaside and when he heard the voice of the deacon, he took a large rock and threw it at Devi so forcibly, that it flew over Mukhura and fell in village Barakoni of Racha region. The legend has it that the rock is still there and they call it the One Thrown by Saint George.

Saint George immediately went to Mukhura, fought Devi and defeated him. Afterwards he offered his powers to the deacon and told him to dispose the body of Devi. The deacon was too scared and declined his offer. Then Saint George with the hit of his boot threw Devi and several large logs from the mountain. Where Devi fell a lake appeared. They call it a Devi Lake. One can see the logs in the lake. Saint George cursed the cowardly deacon and told him: do not reproduce and do not vanish. Therefore, there was only one man among the deacon's descendants.

They say that if a peasant throws a rock in the lake during droughts, the rain will come and his harvest will be saved.



Picture 20: Devi Lake

Story told by Nato Davitashvili

Tsotne Dadiani

Tsotne Dadiani – was a Georgian nobleman in XIII century. He was part of a failed Kokhtastavi plot against Mongolians in 1245. Mongolians heard about the plot and arrested participants and brought them to

Noyan in Anis. Tsotne Dadiani survived the arrest as he was on a mission to recruit troops in eastern Georgia. The arrested Georgians insisted that they had no intention of rebelling and had met in Kokhtastavi to arrange a payment. The Mongols tied their hands and feet, stripped naked, greased their bodies with honey and left under the scorching sun. Upon hearing what had happened, Dadiani went to Anis and joined his compatriots by taking off his clothes and sitting under the sun. Mongols took this as testimony of the Georgians' innocence and set them all free.

On October 26, 1999 the Synod of the Georgian Orthodox Church choose Tsotne Dadiani as saint.

Carstic cave in Tsalenjikha municipality of Samegrelo region is called after Tsotne Dadiani. It is located on 1,580 meters above the sea level and has several halls with stalactites and stalagmites. There is a Tsotne Dadiani street in Tbilisi.

Historic legend

Brotherhood

Brothers fell out with each other over a simple issue. The elder brother told the younger that he did not want to have any relations with him anymore and moved to live in another village. After several years the elder brother borrowed large sum. The moneylender set the deadline and told him that unless the debt was paid back, he would take the elder brother's wife.

The elder brother asked his friends for help and received similar answers: If you would have come earlier, we would be able to help you.

Disillusioned he walked home. This road led to the house of the younger brother and suddenly he remembered the days they spent together and how they loved each other. He decided to visit the younger brother, who met him happily and invited him to have dinner. The younger brother saw how unhappy the elder brother was and asked the reason.

If I cannot repay my debt tomorrow, the moneylender will take my wife and I prefer to die, rather than let it happen – he replied.

Do not worry, I will help you out – said the younger brother.

The elder brother started crying and said: It is true that brothers always support each other, notwithstanding the occasion.

Story told by Otar Skhulukhia

Village Zemo Lebasile

Brave woodpecker

A queen eagle asked a king eagle to find out whether there are more smart or senseless people. In order to find the answer, the eagle gathered all birds and sent them to different parts of the world. After some time, the birds returned back and told the eagle everything they could find out. The last one to come was a woodpecker.

The eagle asked why he was late.

Your Majesty, it was very hard to evaluate this question – the woodpecker replied;

What exactly did you find out?

There are more senseless people in this world, than smart.

Other birds said the opposite. Why do you think so – asked the surprised eagle.

I included those, who listen to their spouses without thinking to the list of senseless and their number is bigger – replied the woodpecker.

The eagle thought about the response of the woodpecker, then agreed that it was correct and flew back to his nest.

Story told by Melenti Tsaava

Letsaave

Prepared hawk

Achille Murat received untrained hawk as a gift. Who can train him for hunting – he asked. All the locals can do that – was the answer.

Achille gave the hawk to the very first person he met, who was a cook and asked to prepare the hawk well.

The cook thought that for Achille hawk was a delicacy and fried and seasoned it well. The dish was ready for dinner. When Achille heard that the hawk was fried, he understood the mistake and told the cook that it was his poor Megrelian that was at fault, rather than the cook himself.

Story told by Gogilo Basilaia

Village Salkhino

Arvelodi and hens

Arvelodi Tsaava had a wooden workshop. However, later he became jobless. His friends visited him and asked how he was.

Not very well – he replied. I cannot look my hens in the eye. They lay eggs and make money every day and I have not done anything lately.

Story told by Longinoz (Gizhua) Berishvili

Kv. Vakha

6. Annexes

Annex 1: Oniore Waterfall hiking trail / bird watching tower

Sightseeing: Martvili Canyon Natural Monument > Toba Waterfall Natural Monument > Oniore Waterfall Nature Monument > Kaghu Waterfall > Balda Canyon Nature Monument > Balda Monastery.

Municipality: Martvili.

Recommended time for travel: April-October.

Type: Hiking trail.

Difficulty: Medium.

Length: 16.2 km from Martvili Canyon to Balda Monastery.

Estimated time of travel: 10 hours.

Minimum/maximum/average height: 235/720/459 meters above sea level.

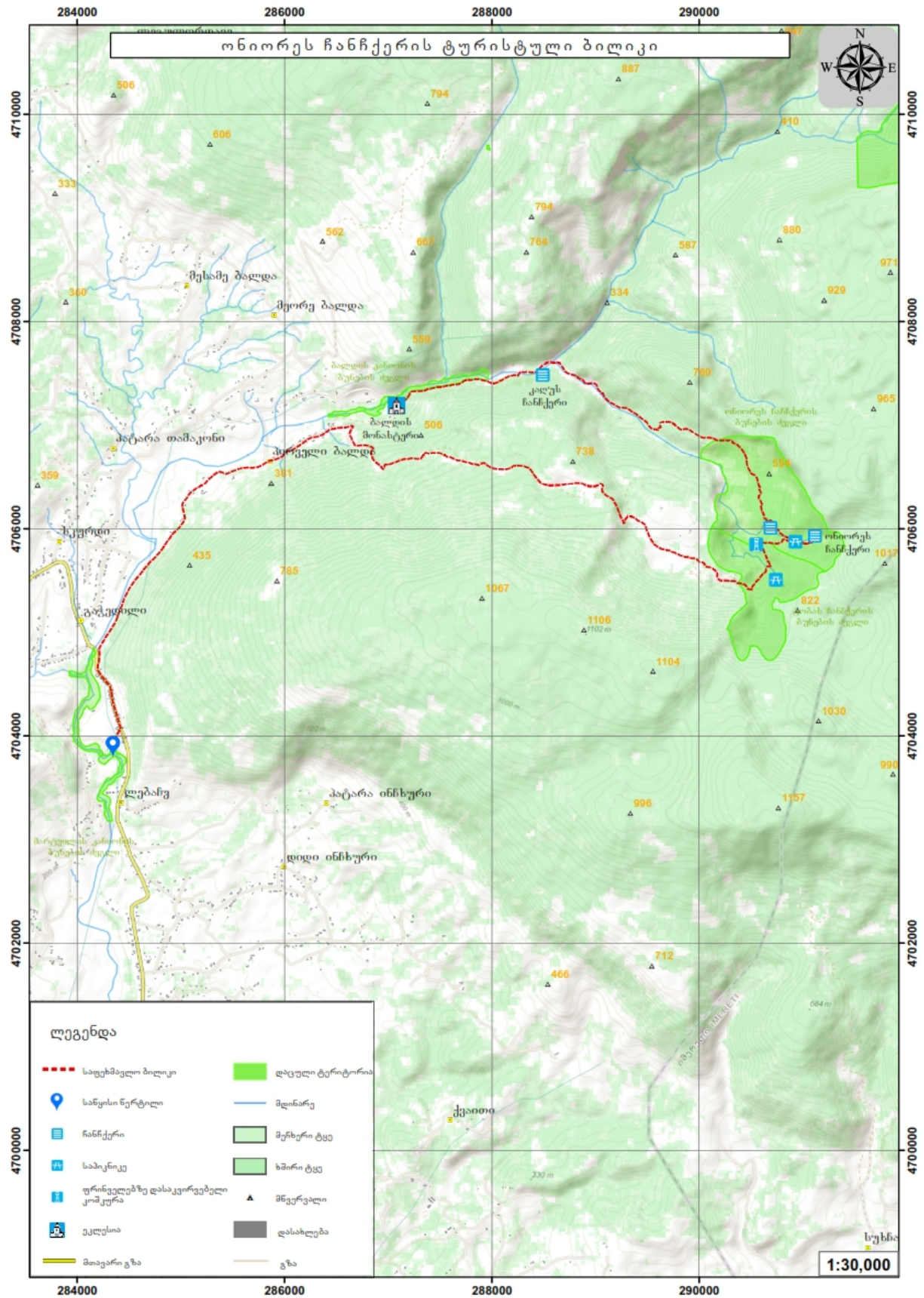
Total length of uphill/downhill: 911/1004 meters.

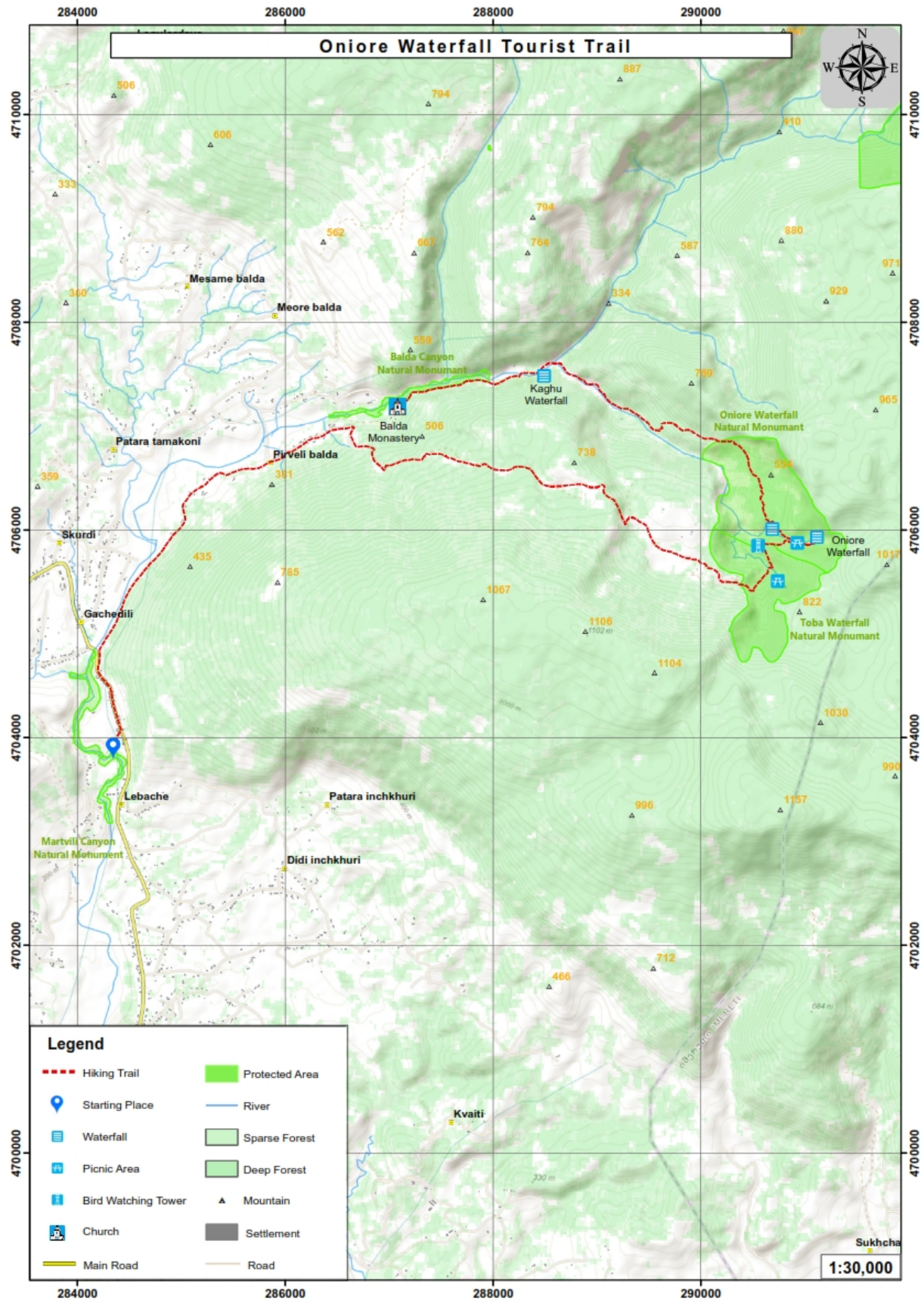
Coverage of cellular network: available in some zones.

Availability of drinking and technical water: Drinking water is available only at the starting and final destinations of the trail. Therefore, it is necessary to stock up on water in advance. The headwaters of springs are adjacent to the trail.

Remarks: The trail cuts through the protected areas – Toba Waterfall and Oniore Waterfall Natural Monuments. When moving on the territory of the protected area, it is necessary to follow the rules of conduct. The trail crosses the rivers Toba and Oniore, with easy crossings. The trail crosses the river Abasha in the final section, on the way to Kaghu waterfall. In most cases, the water level does not exceed half a meter and it is not difficult to cross the river. However, when planning your hiking route, it is necessary to keep in mind the above fact to avoid unforeseen factors. From the Oniore waterfall to the Kaghu waterfall some sections of the trail follow the ravines, which require maximum caution and attention when travelling. The trail starts and ends at two different destinations and it is possible to start hiking from both directions. From a sightseeing perspective, it is recommended to start from hiking from Martvili Canyon.

Description: The trail enables visitors to see unique natural and cultural heritage of Martvili Municipality. Visitors of the trail can visit Martvili Canyon and then continue towards relatively untouched nature of the Toba and Oniore Waterfalls, where you will see beautiful nature, karst terrain, caves, waterfalls, canyons, rivers and other unique creeks. You will also see the flora and fauna, from which the typical Colchian forest is remarkable. While visiting the trail, you can enjoy the well-equipped picnic spots and hygienic infrastructure near Toba and Oniore. On the trail you will also find a bird-watching tower, from which you can observe various species, including orbits, whose nesting spots can be seen from the tower. In addition to bird watching, panoramic views are visible from the tower, which will help the visitor to better understand the surrounding areas.







Annex 2: Tsachkhuri trail

Sightseeing: Tsachkhuri Archangel Monastery > Tkhopra Waterfall > Khirzeni Lake.

Municipality: Martvili

Recommended time for travel: April-October.

Type: Hiking trail.

Difficulty: Medium.

Length: 6.5 km from Tsachkhuri Monastery to Khirzeni Lake.

Estimated time of travel: 3 hours.

Minimum/maximum/average height: 580/1037/790 meters above sea level.

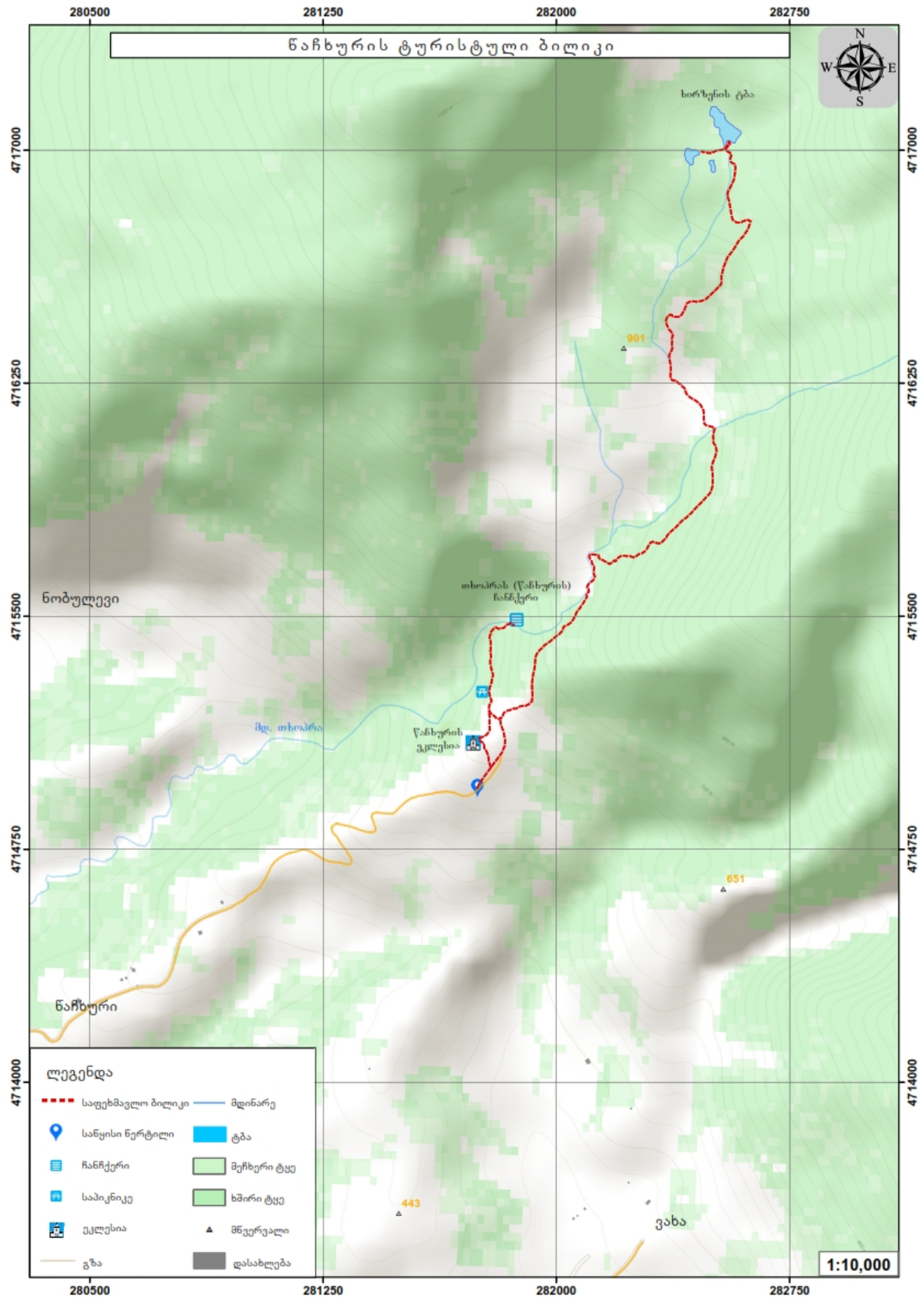
Total length of uphill/downhill: 611/589 meters.

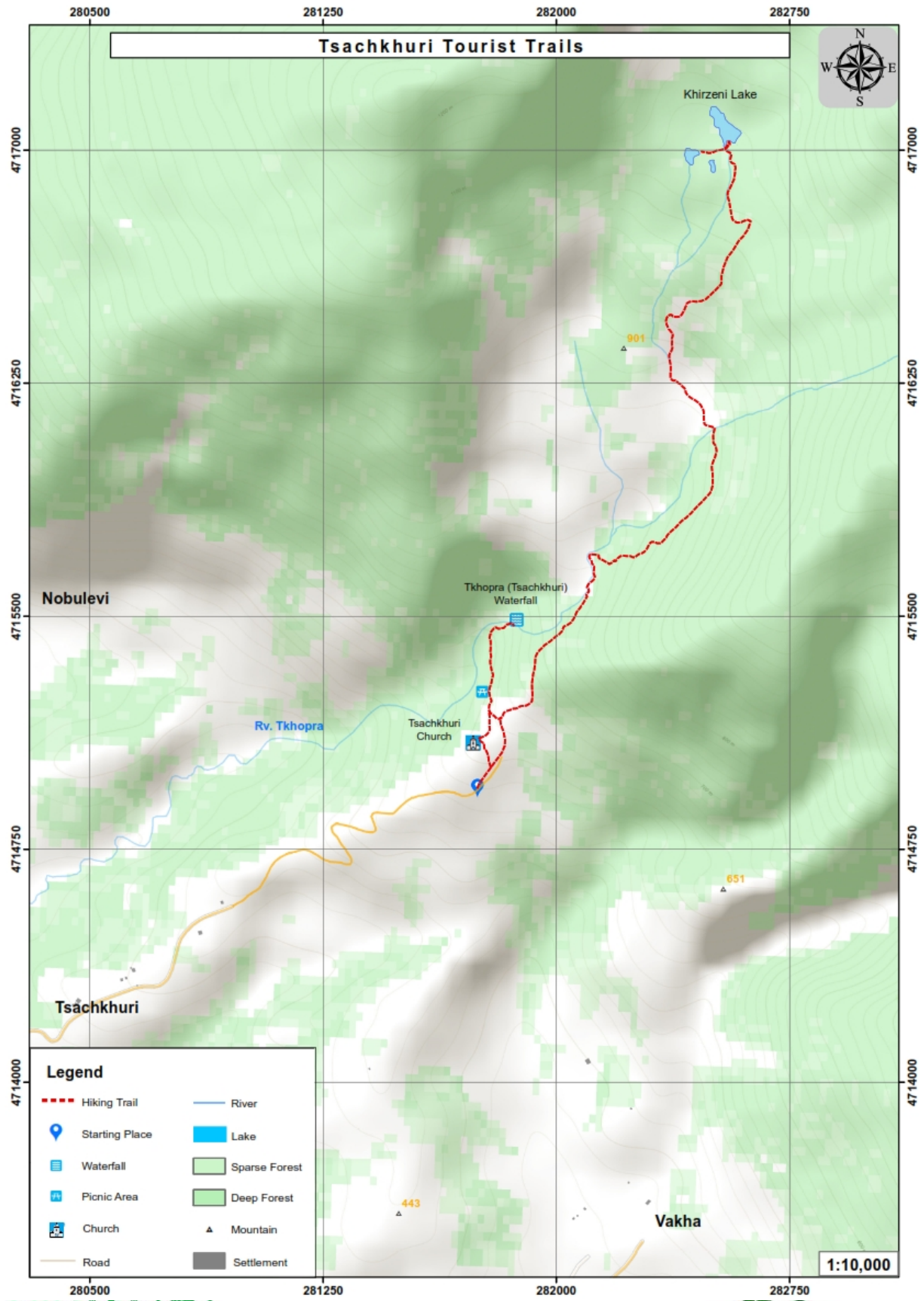
Coverage of cellular network: available in some zones.

Availability of drinking and technical water: Drinking water is not available along the trail. Therefore, it is necessary to stock up on water in advance. The rivers are adjacent to the trail.

Description: The trail enables visitors to see unique natural and cultural heritage of Martvili Municipality. Visitors of the trail can visit the Archangel Monastery of Tsachkhuri, the Tkhopra Waterfall located in 500 meters from the monastery and Khirzeni Lake. From the starting point – the church – to the final section it is necessary to walk 3 kilometers. The trail to the lake is of medium difficulty. The hiking path is mainly the limestone and ground road. The areas adjacent to the trail are rich in biodiversity. The area is mainly represented by beech and hornbeam, as well as typical trees characteristic to Colchian forest with sugarcane and blackberry cover. Of particular note is the final location of the trail, a lake that is located directly in the forest, which begins immediately after the shoreline. Such a lake is extremely rare and is an important ecotourism site. The surface of the lake is about 5,000 square meters. Two small lakes adjacent to the lake, which are also unique in terms of biodiversity and beauty, are also noteworthy locations.

Visitors of the trail can enjoy a well-equipped picnic spot on the way leading from the Tsachkhuri Monastery to the waterfall.









Annex 3: Bicycle trail, Martvili center – Martvili Canyon

Municipality: Martvili.

Recommended time for travel: March-November.

Type: Bicycle trail.

Difficulty: Easy.

Length: 5.5 km from Martvili center to Martvili Canyon.

Estimated time of travel: 20 minutes.

Minimum/maximum/average height: 181/254/215 above sea level.

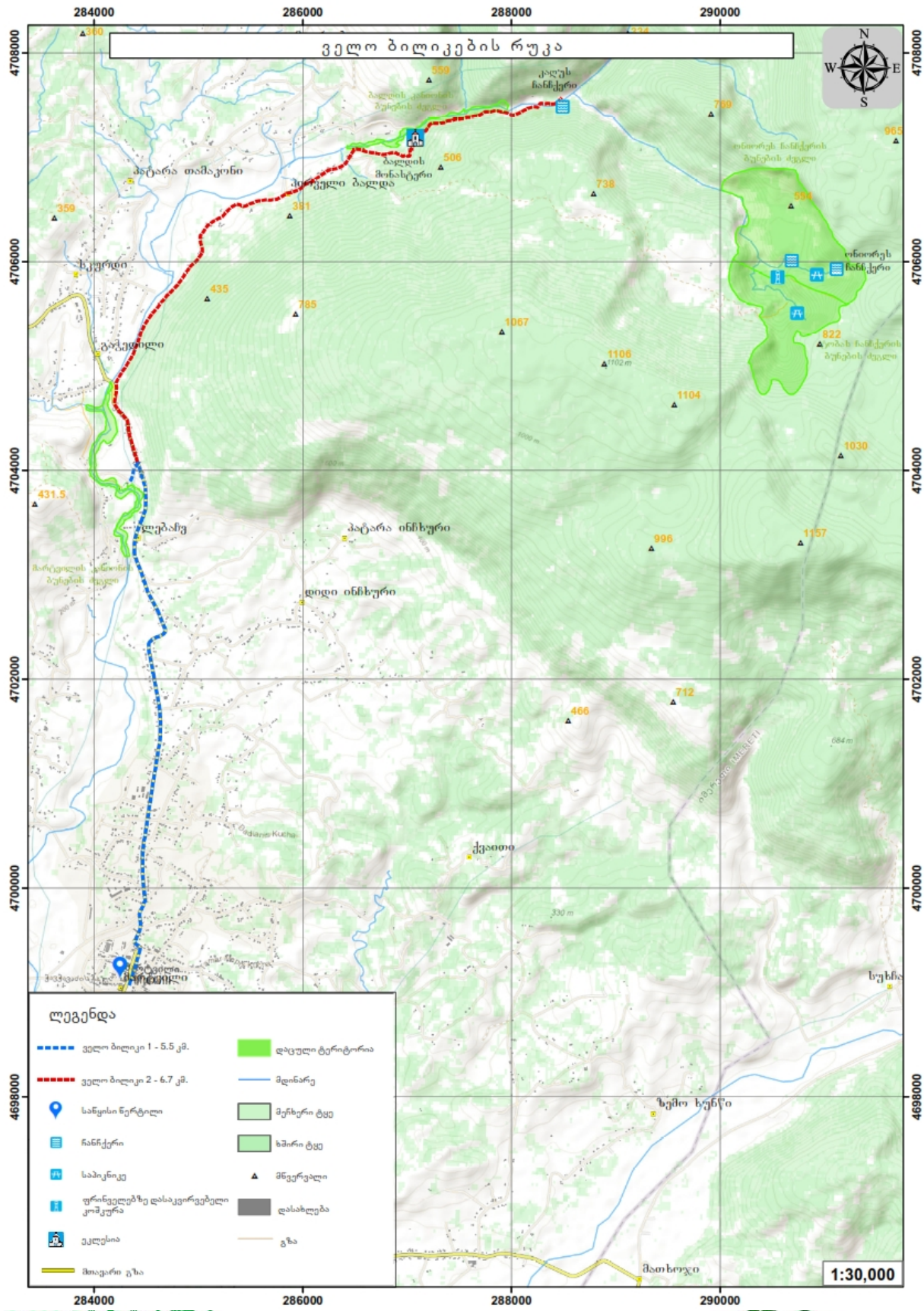
Total length of uphill/downhill: 109/68 meters.

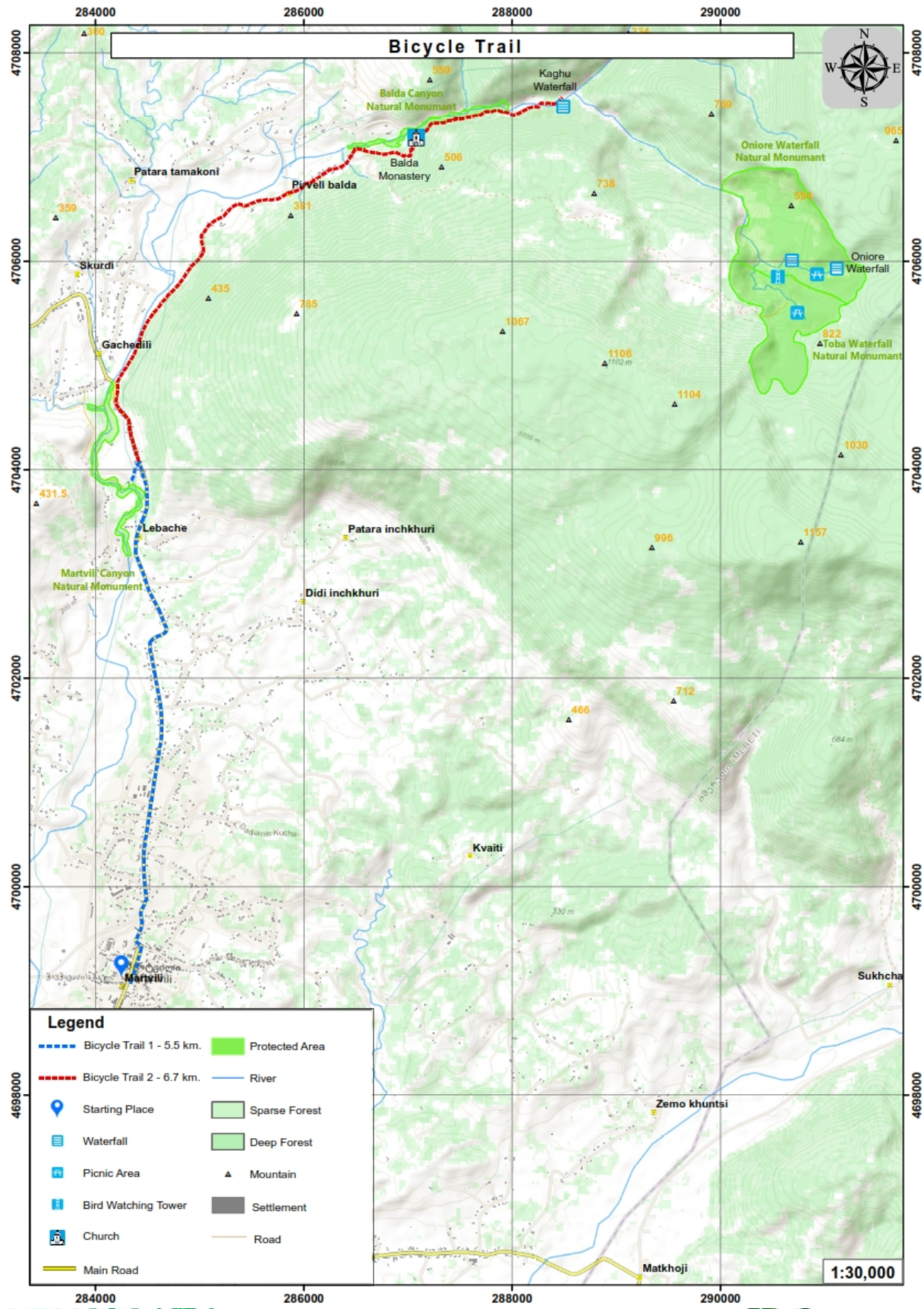
Coverage of cellular network: available across the trail.

Availability of drinking and technical water: one spring is located on the trail. Visitors can buy water in shops located along the trail.

Remarks: The trail follows the asphalted road and there is sufficient space for cycling. In some areas cyclists need to cross the road and in these areas maximum caution must be applied. During nighttime cyclists are advised to use special equipment to increase their visibility to drivers.

Description: Cycling is one of the most convenient means of transportation towards Martvili Canyon. The terrain is relatively easy, suitable for amateurs and does not require significant cycling experience and special physical trainings. Visitors coming to the canyon can either turn back to Martvili or continue their travel towards Kaghu Waterfall. The bicycle trail is linked with the Oniore Waterfall hiking trail and visitors can enjoy unique nature, rest at picnic spots and use the bird-watching tower.





Annex 4: Bicycle trail, Martvili Canyon – Kaghu Waterfall

Municipality: Martvili

Recommended time for travel: March-November.

Type: Bicycle trail.

Difficulty: Easy.

Length: 6.7 km from Martvili Canyon to Kaghu Waterfall.

Estimated time of travel: 30 minutes.

Minimum/maximum/average height: 235/368/299 above sea level.

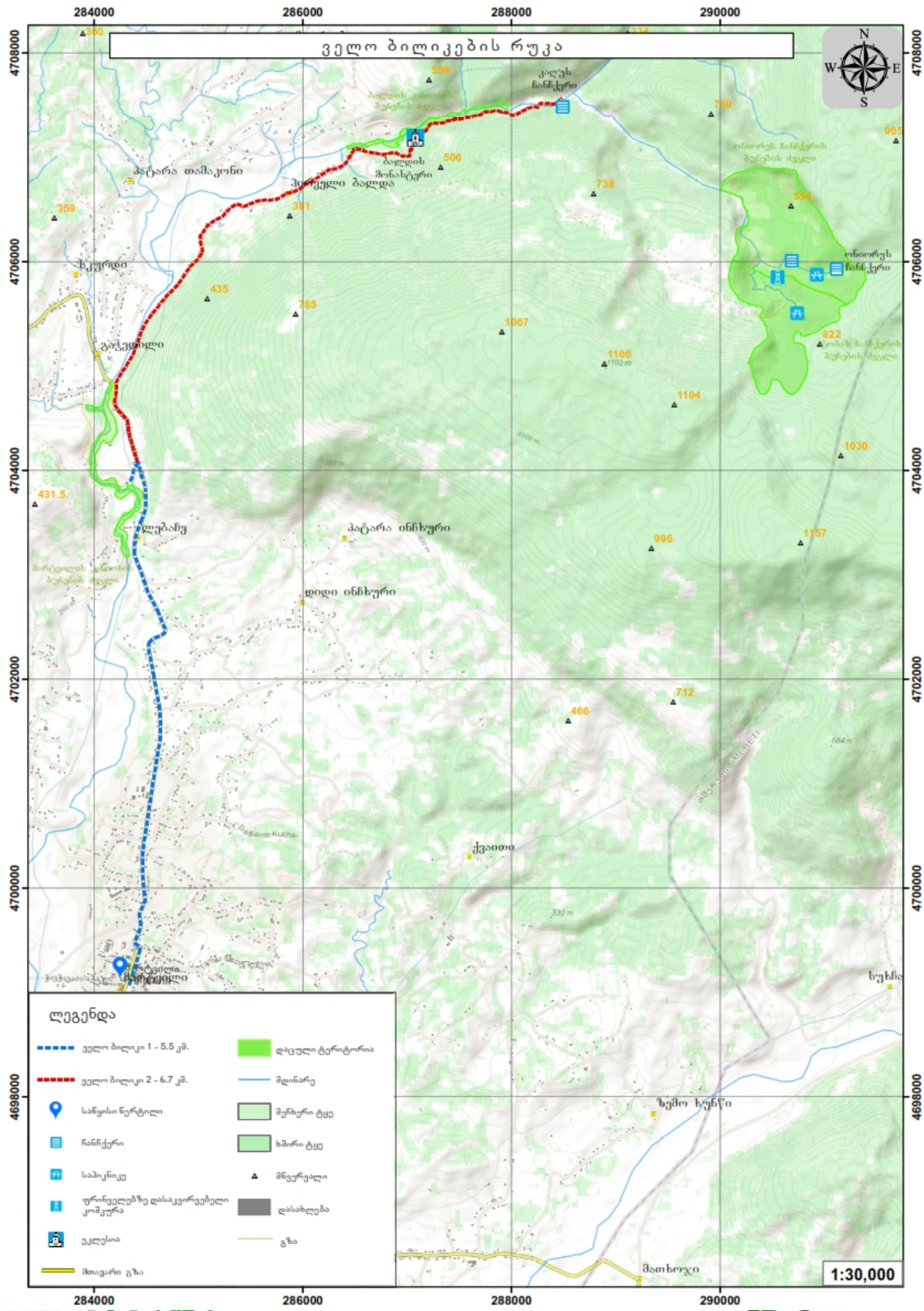
Total length of uphill/downhill: 176/298 meters.

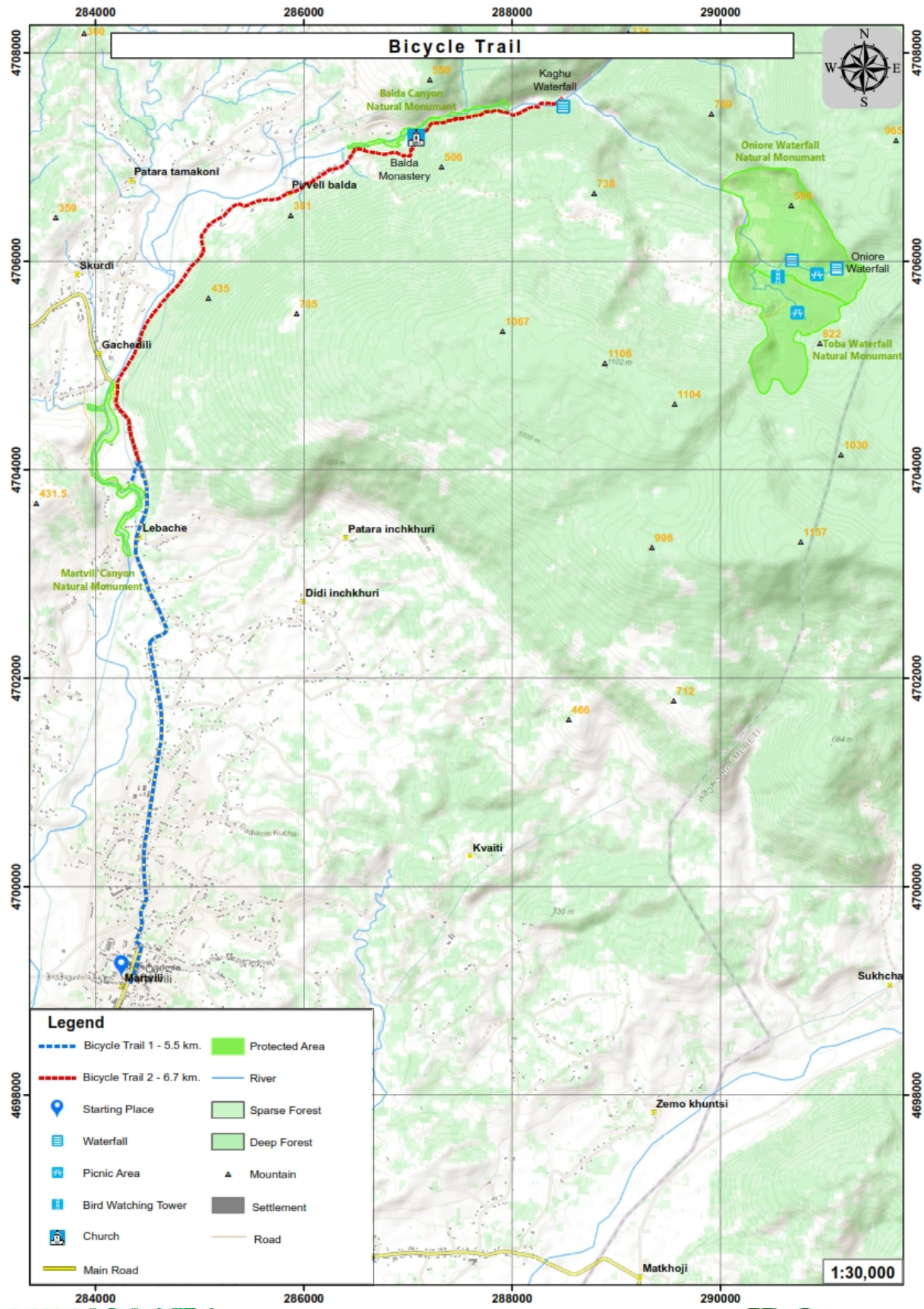
Coverage of cellular network: available in most zones.

Availability of drinking and technical water: one spring is located on the trail. Visitors can buy water in shops located along the trail.

Remarks: The trail follows the asphalted road and there is sufficient space for cycling. In some areas cyclists need to cross the road and in these areas maximum caution must be applied. During nighttime cyclists are advised to use special equipment to increase their visibility to drivers.

Description: This trail is an extension of the first bicycle trail. Compared to the first trail the terrain is harder, but still suitable for amateurs and does not require significant cycling experience and special physical trainings. The trail leading to Kaghu Waterfall will pass through Balda Monastery and Balda Canyon. The bicycle trail is linked with the Oniore Waterfall hiking trail and visitors can enjoy unique nature, rest at picnic spots and use the bird-watching tower.





Annex 5: Balda Monastery – Kaghu Waterfall eco-educational trail

Sightseeing: Balda Monastery > Balda Canyon Natural Monument > Kaghu Waterfall.

Municipality: Martvili.

Recommended time for travel: March-November.

Type: Hiking trail.

Difficulty: Easy.

Length: 3.4 km from Balda Monastery to Kaghu Waterfall.

Estimated time of travel: 1 hour.

Minimum/maximum/average height: 319/368/345 meters above sea level.

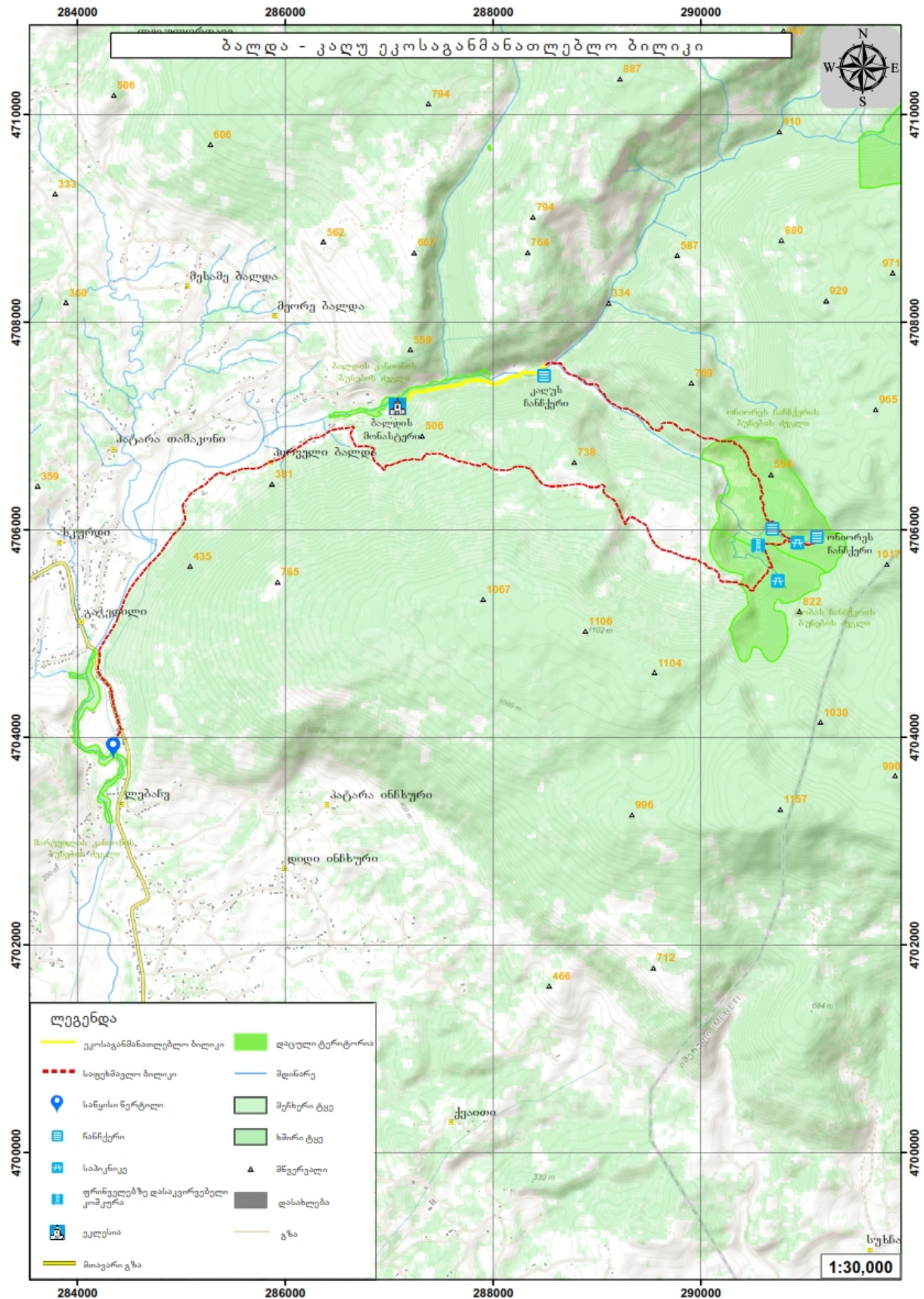
Total length of uphill/downhill: 245/247 meters.

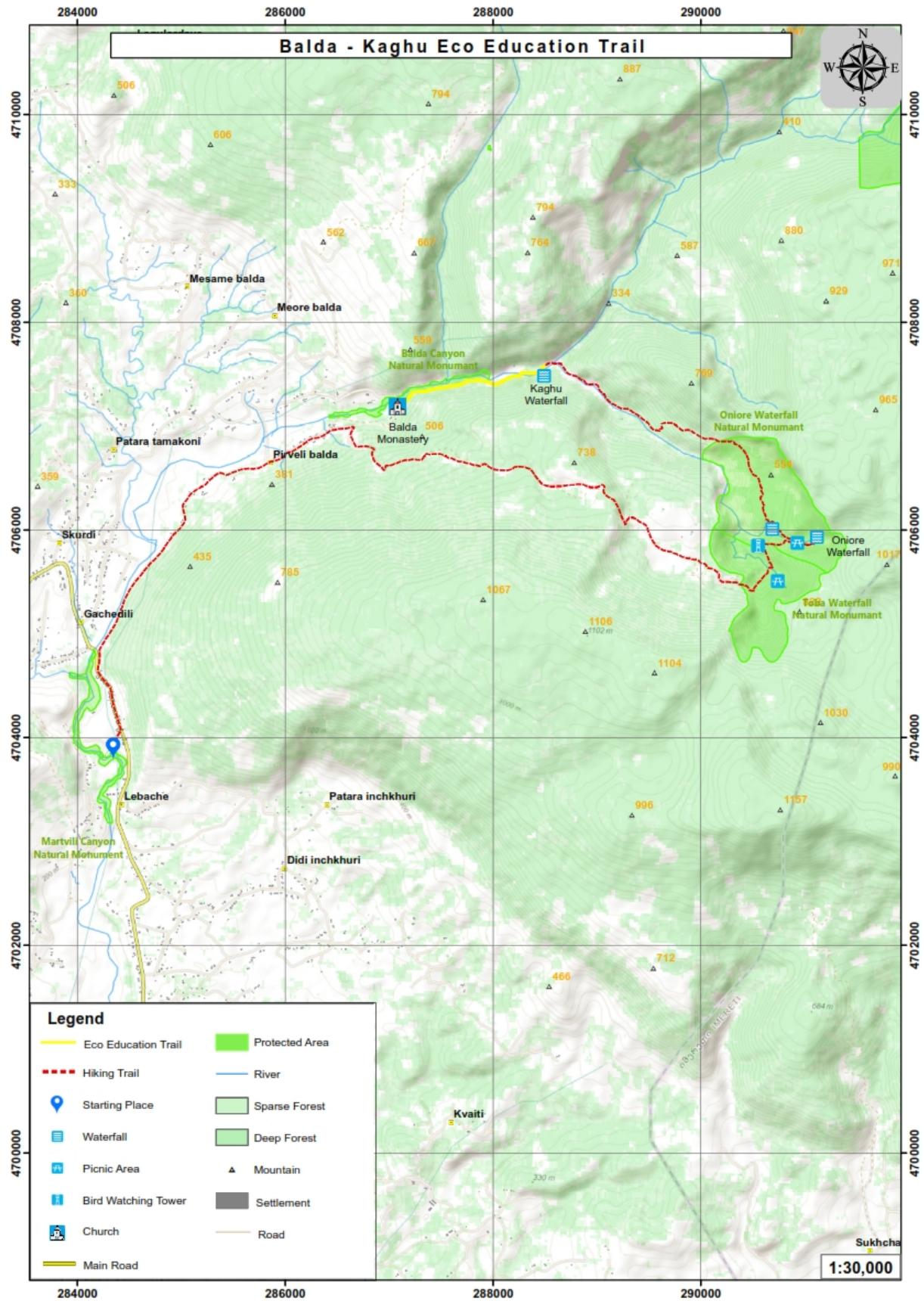
Coverage of cellular network: available in most zones.

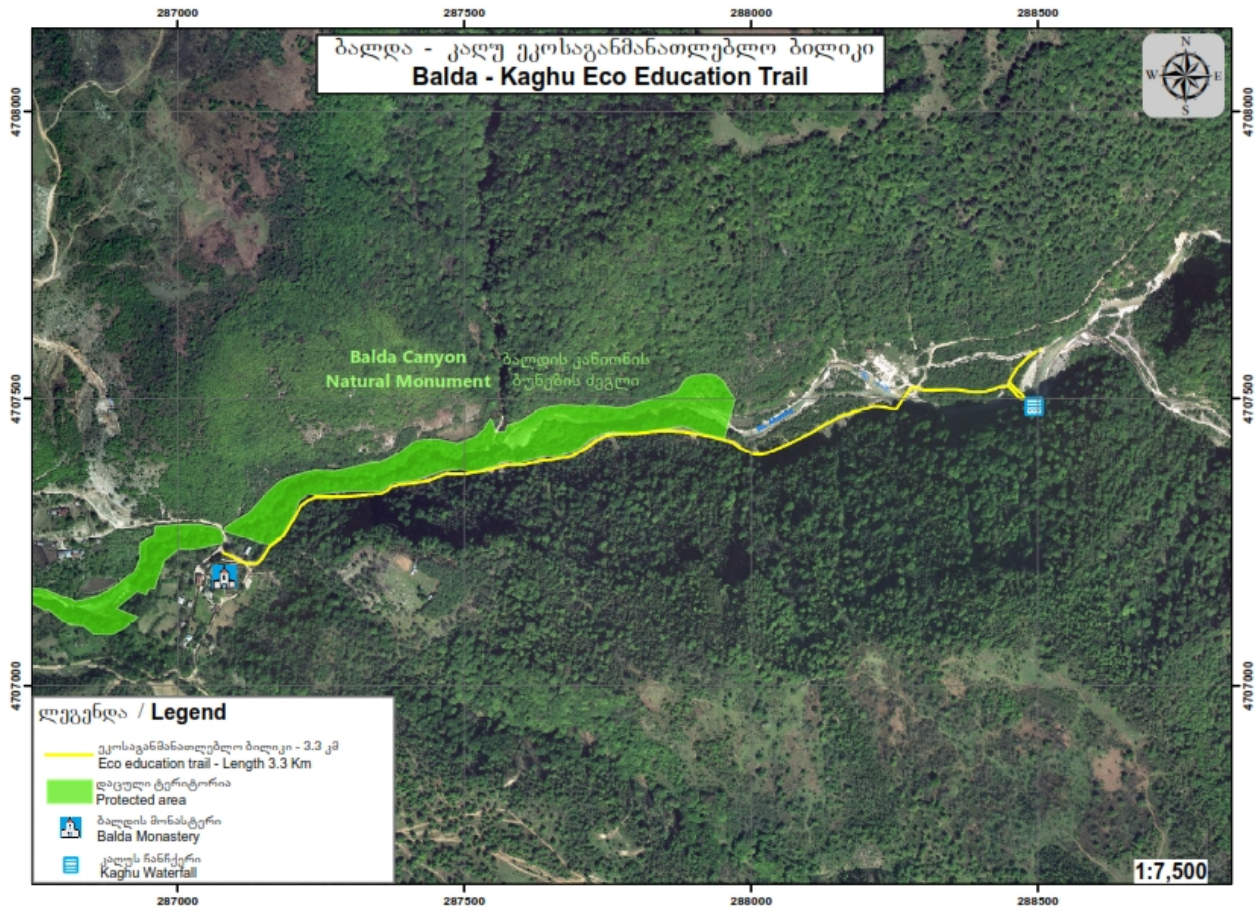
Availability of drinking and technical water: one spring is located on the trail.

Remarks: Visitors of the trail you visit the Balda Canyon Natural Monument, which is a protected area. When moving on the territory of the protected area, it is necessary to follow the rules of conduct.

Description: The main sightseeing of the eco-educational trail are Balda Monastery, Virgin Mary Church, Balda Canyon, Kaghu Waterfall and river Abasha. Visitors of the trail will receive information on the historic and cultural monument, which is a frequently visited place in the Martvili municipality. During visiting the eco-educational trail, it will be possible to see the Balda Canyon Natural Monument, which is an important eco-educational site. The canyon is formed by Abasha in the southern part of the Askhi, in the limestone rocks. The canyon is about 1,400 meters long, 5-10 meters wide, with an average depth of 25-30 meters. The canyon is unique, both in terms of its biodiversity, as well as its sightseeing. After visiting the canyon and getting the information, the road continues to Kaghu Waterfall, which is located on the river Abasha's side. On the trail there will be a section, where the visitors can stop and receive environmental information and increase their awareness. In 150 meters north of Kaghu Waterfall there is a crossing of river Abasha and river Toba, where increasing awareness of visitors on hydrological issues is possible.









Annex 6: Tsachkhuri eco-educational trail

Municipality: Martvili.

Recommended time for travel: April-October.

Type: Hiking trail.

Difficulty: Easy.

Length: 1.3 km from Tsachkhuri Church to Tkhopra Waterfall.

Estimated time of travel: 30 minutes.

Minimum/maximum/average height: 579/658/610 above sea level.

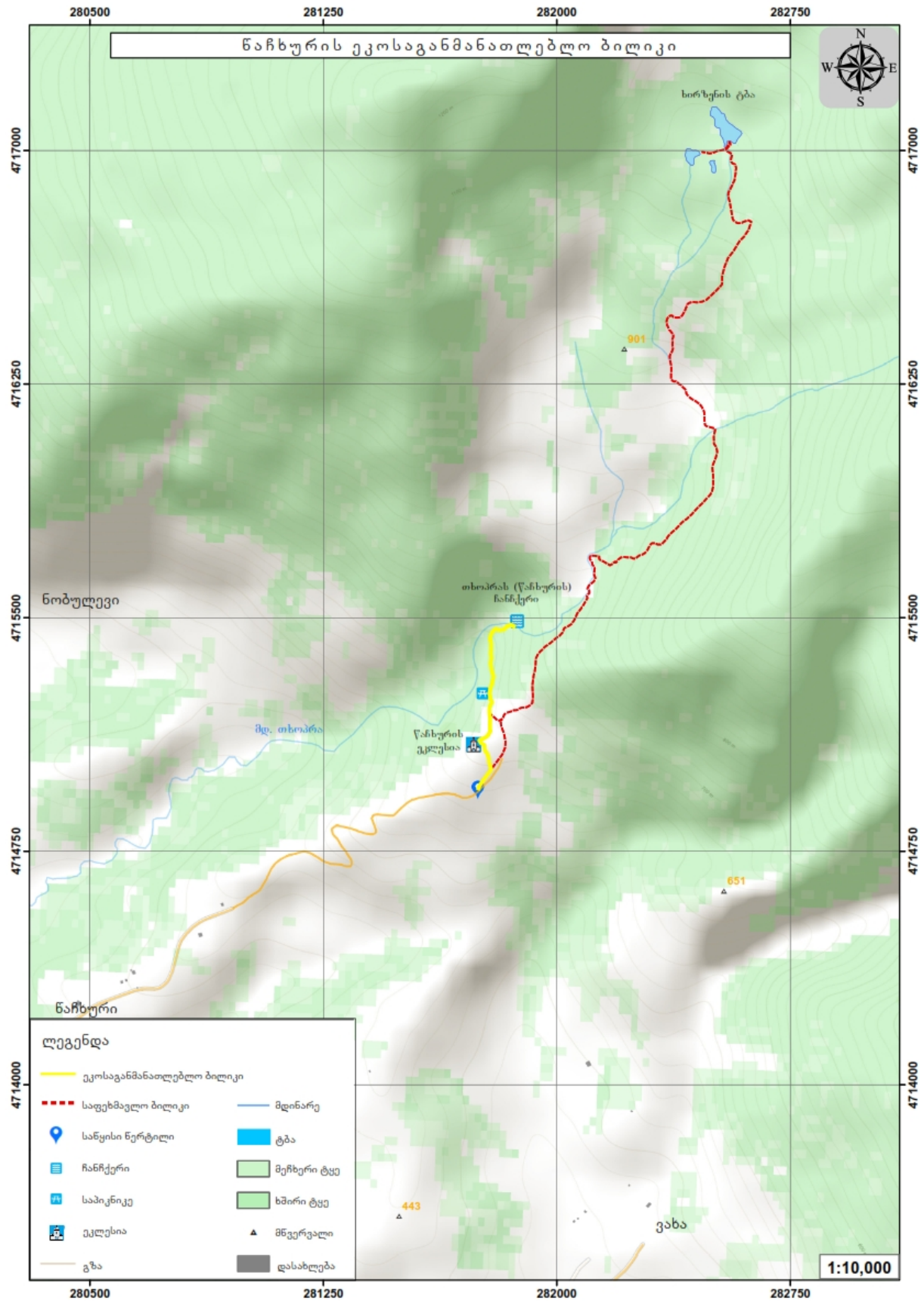
Total length of uphill/downhill: 130/130 meters.

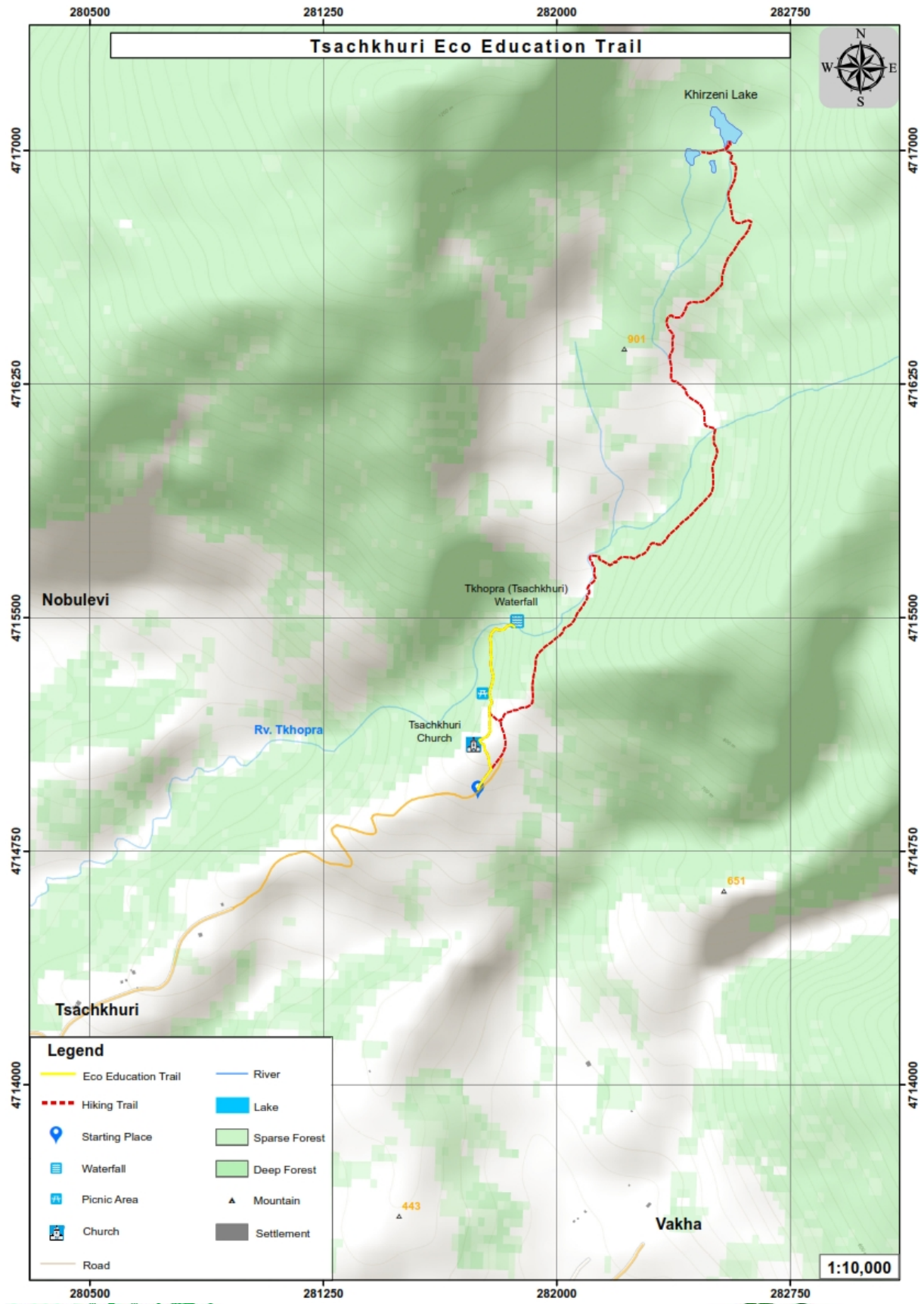
Coverage of cellular network: available in most zones.

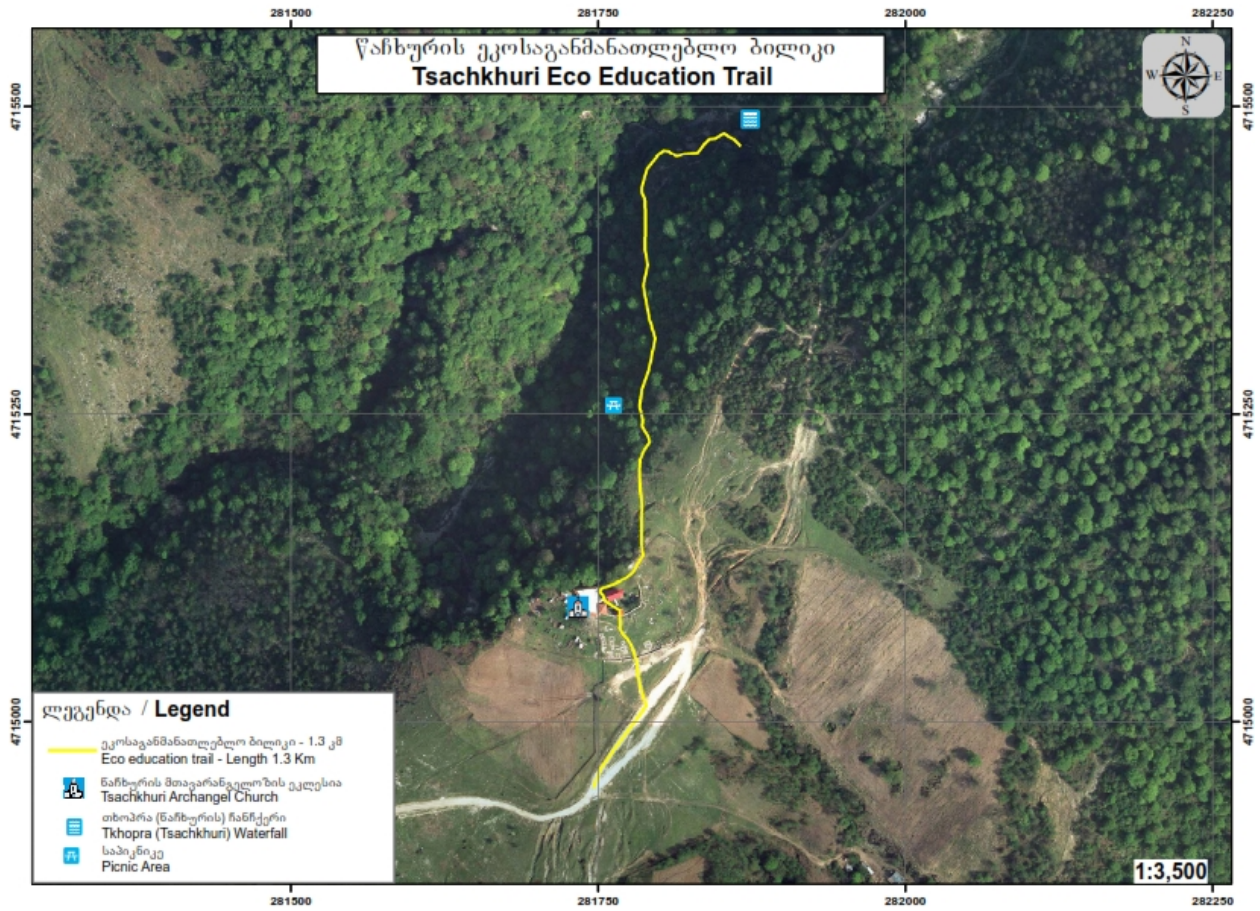
Availability of drinking and technical water: one spring is located on the trail.

Remarks: The surface of the trail leading to Tsachkhuri Waterfall is the limestone. When the trail wet, visitors must apply maximum caution to avoid injuries.

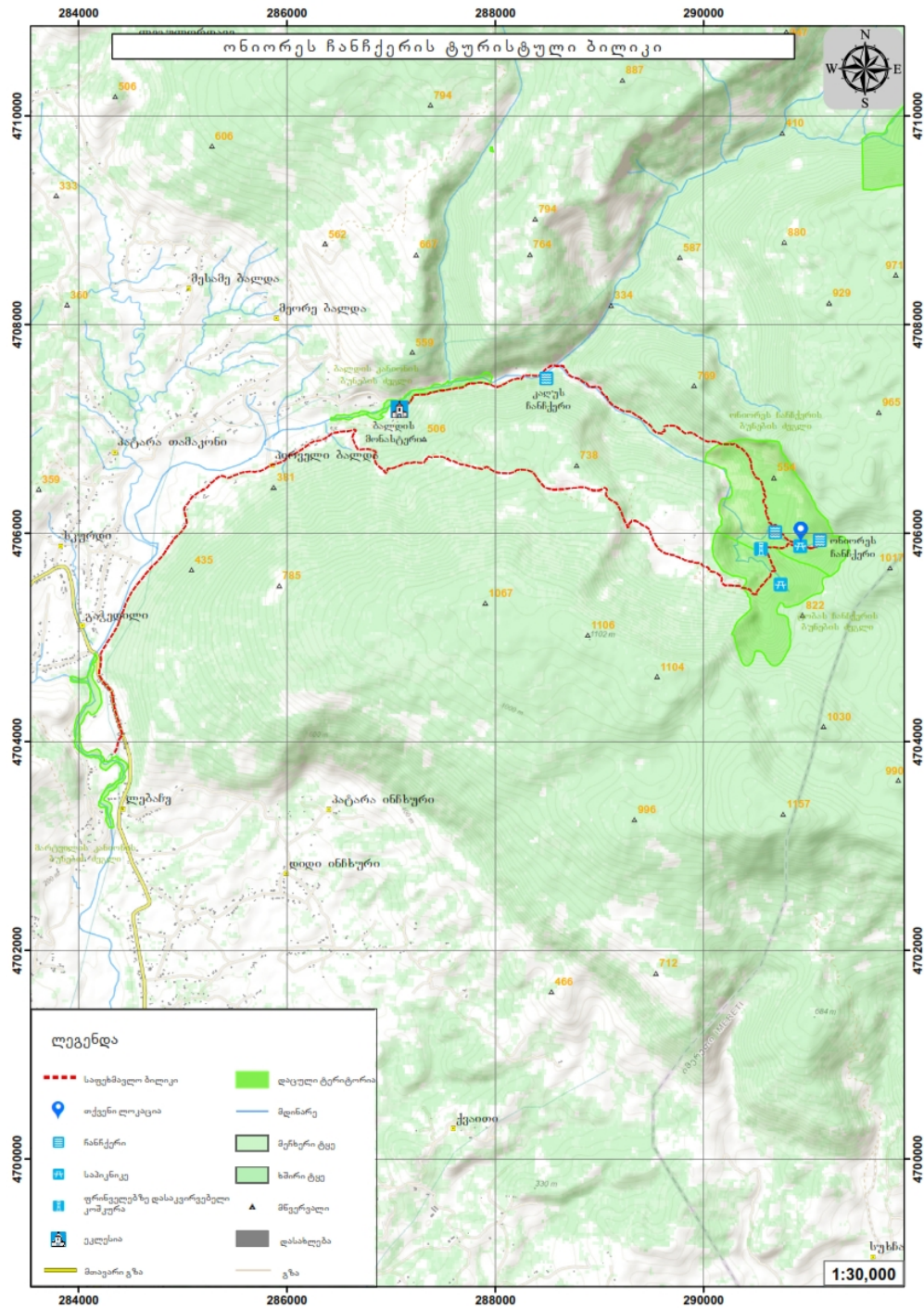
Description: Tsachkhuri (Khirzeni) hiking eco-educational trail was selected in the village of Tsachkhuri, in d community of Martvili municipality, on the slope of Khirzeni, where the Tsachkhuri Archangel Church and Monastery are located. The starting point of the trail is the area adjacent to the church and the final destination is Tsachkhuri Waterfall. The surface of the trail is the limestone. A recreational area has been selected near the church, where visitors will be able to have picnic at the well-arranged and equipped area. The presented eco-educational trail is also intended for schoolchildren, who will visit the historical-cultural monument, as well as the waterfall and observe the biodiversity of the area. The selected section allows the visitors to visit the areas adjacent to the trail, which is important for environmental education. In the vicinity of the Archangel Church of Tsachkhuri the visitors can view various geographical objects, which are important for eco-educational purposes.

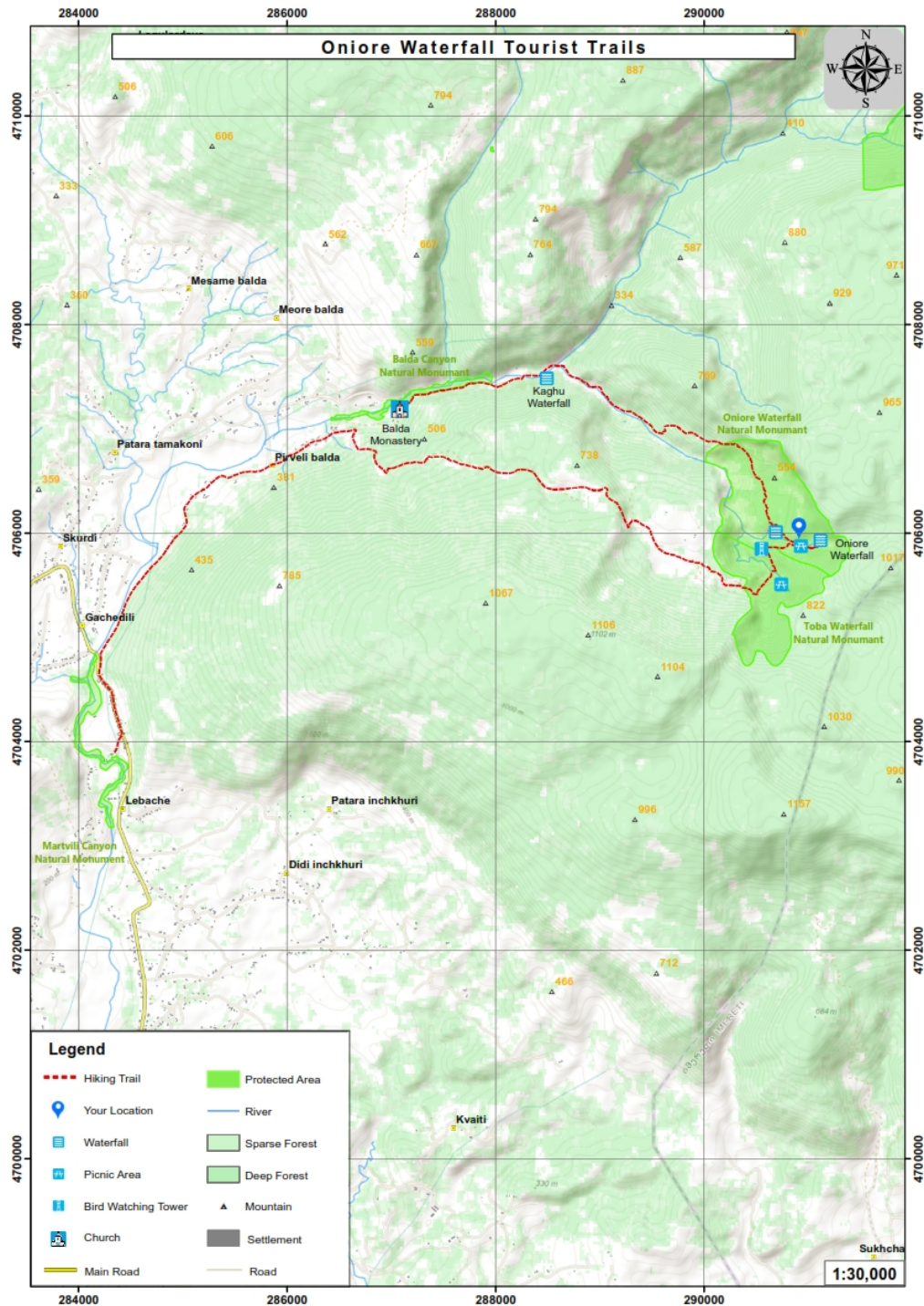






Annex 7: Recreational area # 1





Text of the sign:

A combination of Toba Cave and Oniore Waterfall creates a rare and beautiful sight. The entrance to the cave (12x5m) is located near the cliff. In 70 meters from the entrance the visitors can reach an underground waterfall, which is 21 meters high in some places the tunnel width reaches 12-15 meters.

Underground river coming out of the cave produces a tall Oniore waterfall. Its height is 67 meters.

Annex 8: Recreational area # 2



Text of the sign:

Attention! You are in a protected area.

Protected areas are created to protect and restore the most important national heritage - unique, rare and characteristic ecosystems, plant and animal species, natural habitats and cultural areas, for conservation of their scientific, educational, recreational and natural resources.

You are in a Category III Protected Area – Oniore Waterfall and Toba Cave Natural Monuments. The main function of the natural monument is to protect unique natural areas and rare natural and natural-cultural formations. Ecotourism and related activities are also one of the important purposes.

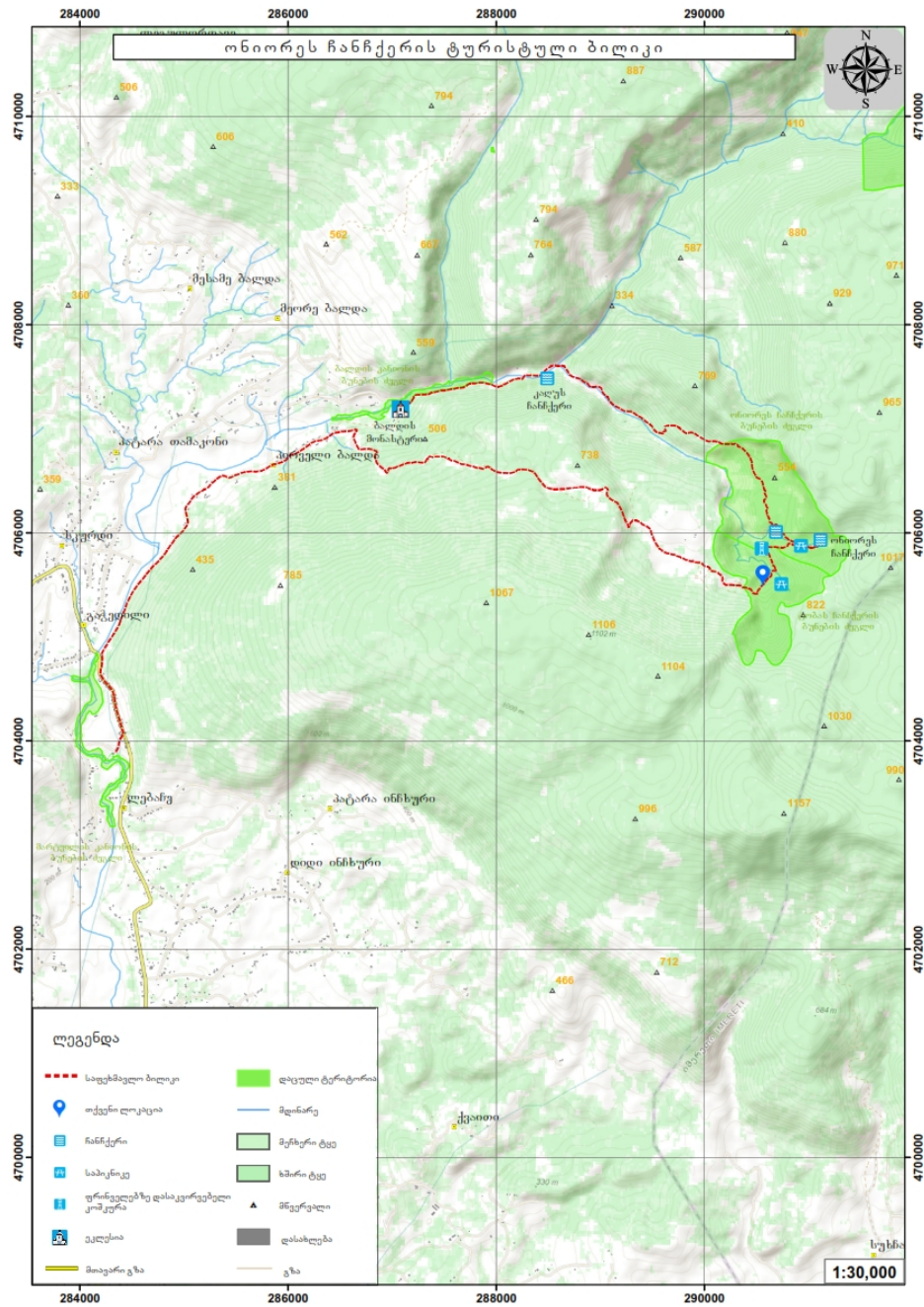
According to the International Union for the Conservation of Nature (IUCN), ecotourism is defined as environmentally responsible visiting of relatively unspoilt natural areas, in order to enjoy and appreciate nature (and any accompanying cultural features - both past and present), that promotes conservation, has low negative visitor impact, and provides for beneficially active socio-economic involvement of local populations.

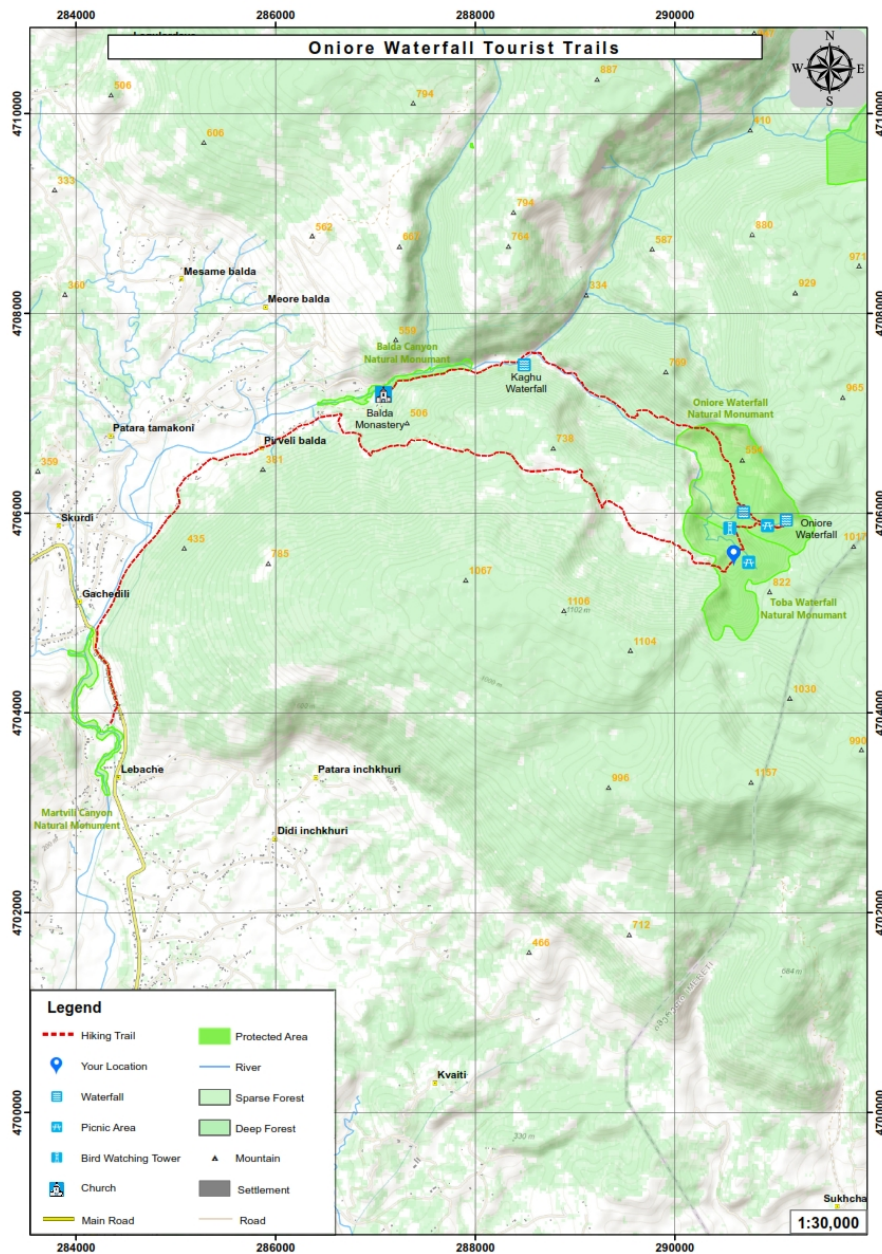
Considering the above, it is important to keep in mind the rules of visitor behavior. In this section of the protected area the following is prohibited:

- Hunting, fishing, carrying firearms and other equipment that endangers the environment;
- Vandalism to nature and infrastructure, inscriptions on trees, rocks and stones.
- Environment pollution;
- Walking pets;
- Screaming and loud talking;

- Lighting fire (excluding specially designated areas);
- Other activities prohibited by the legislation.

Annex 9: Recreational area # 3





Text of the sign:

The Toba Waterfall and Arsen Okrojanashvili Cave Natural Monuments create a rare and beautiful sight.

The cave is difficult to access without a special equipment. It is recommended to use a rubber boat for traveling inside. The entrance to the cave (15x20m) is located near the cliff. There are several halls in a three-tiered, multi-lane cave. Among them stand out "Nona Hall", "Nana Hall", "Salon", "University 50", "Tbiani" and other halls. Chemical precipitation is present in many forms. The height of one of the stalagmites reaches 7 meters. The total length of the cave is 1300 meters.

The river coming out of the cave, which forms four lakes underground, generates a 234 meters high (the highest in Georgia) cascading waterfall.

Annex 10: Recreational area # 4

Text of the sign:

Attention! You are in a protected area.

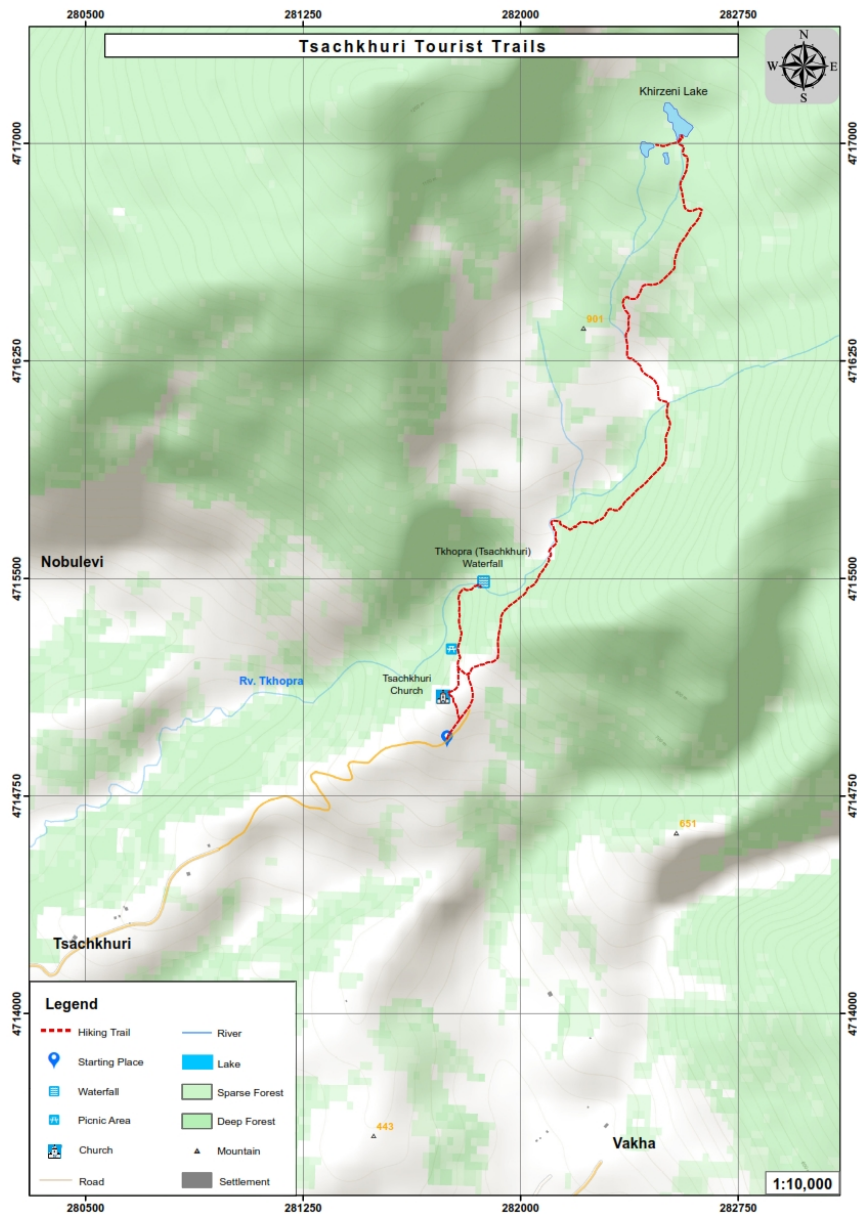
Protected areas are created to protect and restore the most important national heritage - unique, rare and characteristic ecosystems, plant and animal species, natural habitats and cultural areas, for conservation of their scientific, educational, recreational and natural resources.

You are in a Category III Protected Area – Oniore Waterfall and Toba Cave Natural Monuments. The main function of the natural monument is to protect unique natural areas and rare natural and natural-cultural formations. Ecotourism and related activities are also one of the important purposes.

According to the International Union for the Conservation of Nature (IUCN), ecotourism is defined as environmentally responsible visiting of relatively unspoilt natural areas, in order to enjoy and appreciate nature (and any accompanying cultural features - both past and present), that promotes conservation, has low negative visitor impact, and provides for beneficially active socio-economic involvement of local populations.

Considering the above, it is important to keep in mind the rules of visitor behavior. In this section of the protected area the following is prohibited:

- Hunting, fishing, carrying firearms and other equipment that endangers the environment;
- Vandalism to nature and infrastructure, inscriptions on trees, rocks and stones.
- Environment pollution;
- Walking pets;
- Screaming and loud talking;
- Lighting fire (excluding specially designated areas);
- Other activities prohibited by the legislation.



Text of the sign:

Tsachkhuri (Khirzeni) hiking trail was selected in the village of Tsachkhuri, Salkhino community of Martvili municipality. It is located on the slope of Khirzeni, where the Tsachkhuri Archangel Church and Monastery are located. Tsachkhuri Church is also called Moske-Tsachkhuri, which means a dairyman. It was built in the 7th century. However, the present hall-type church was built in the 18th century. The liturgy was no longer practiced in the temple from the beginning of the 20th century, but was restored here in the 90's.

The visitor coming to the presented location, in addition to the historical-cultural monument, has the opportunity to enjoy the unique nature. Next to the picnic spot you will find Tkhopra Waterfall, which excites its visitors. Hiking lovers can enjoy the marked trail, the final location of which is Lake Khirzeni.

From the shores of the lake begins the Colchian forest, which makes the lake unique. All sections of the trail leading to the lake are different in both landscape and biodiversity and visitors will enjoy hiking the trail.

Annex 12: Bird-watching tower

Spring and fall are particularly favorable for birdwatching, when birds begin migrating. Birdwatching is becoming more and more popular across the world. Georgia has a great potential for developing birdwatching as a tourist attraction, as we have the narrowest corridor of migratory birds of prey in the country, which is also characterized by diversity and high number of species.

Martvili municipality is not distinguished by the large number of migratory birds. However, some species can be observed. One of the most important species in the area is the vulture (*Gyps fulvus* (Hablizl, 1783)), whose nesting places are visible from the tower. Vulture is a big bird. Their body reaches one, wingspan 2.5 meters. They weight up to 8 kilograms. Vultures are widespread in Europe, Asia and North Africa. The nests are usually close to each other and sometimes form small groups. They feed on carcass of dead animals. Despite their large size, vultures do not attack live prey. The reason for this is that it is equipped with blunt claws and blunt beaks that cannot tear animal skins. Therefore, vultures start eating dead animals from the part where skins are damaged. Number of vultures in Georgia and worldwide is small and, therefore, they have a high conservation status - IUCN Status: LC; National Red list status: VU

In addition to bird watching from the tower it is possible to see the entrance to the Toba Cascading Waterfall (the highest in Georgia), which flows from a rock cave and an entrance to the Arsen Okrojanashvili Cave. Panoramic views are also available.



Annex 13: Directions

#	Direction	N	E	Elevation	Oniore	Length (meters)	Time / return
1	On the left side of the road to Canyon, right arrow (→) simple.	42.45742376	42.37723732	235	1-2	830	0.30 / 0.20
2	On the left side of the intersection of the dirt road and asphalted road, right arrow (→) simple.	42.46418089	42.37514284	255	2-3	3507	1 / 0.50
3	On the right side of the road, at the end of village First Balda, right arrow (→) medium.	42.48546837	42.40134573	310	3-4	3231	2.30 / 1.30
4	Near the panoramic view, right arrow (→) medium.	42.48136281	42.43378211	715	4-5	2257	1 / 1.40
5	On the right side of the trail near river Toba, left arrow (←) medium.	42.47440827	42.45317713	533	5-6	520	0.30 / 0.20
6	On the right side of the trail towards Oniore, left arrow (←) medium.	42.47682054	42.4539277	630	6-7	442	0.30 / 0.20
7	Near Oniore waterfall, left arrow (←) medium.	42.47724123	42.45869051	688	7-8	3579	2.30 / 3.30
8	On the right side of the trail near river Abasha, left arrow (←) simple.	42.4919944	42.42805045	335	8-9	225	0.10 / 0.10
9	Near Kaghu waterfall, right arrow (→) simple.	42.49121103	42.42579279	344	9-10	1575	1 / 1
10	On the left side of the trail near Balda church, left arrow (←) simple.	42.48817448	42.40920566	330	10-1	5259	1.30
							9.40 /

N	Direction	N	E	Elevation	Oniore	Length (meters)	Time / return
1	(N1) On the right side of the road, from Tsachkhuri monastery towards waterfall, left arrow (←) (←) simple.	42.55608126	42.34145519	580	1-2	648	0.20 / 0.20
2	Coordinates of the waterfall	42.56081698	42.34270414	660	2-1	648	0.20 / 0.20
3	On the right side of the road near Tsachkhuri monastery, left arrow (←) (←) medium.	42.55608126	42.34145519	580	1-3	929	1.30 / 1
4	On the right side of the trail from the third to fourth location, right arrow (→) medium.	42.56289077	42.34554303	765	3-4	728	0.30 / 0.30
5	On the right side of the trail from the fourth to fifth location, left arrow (←) medium.	42.56673276	42.35029166	875	4-5	897	0.40 / 0.30

6	On the right side of the trail, from the fifth location towards the lake, left arrow (←) medium.	42.57274893	42.35145357	1020	5-6	452	0.30 / 0.20
7	Final location.	42.57472678	42.3494187	1040	6		
							3.50 / 3

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