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PROJECT " Creation of a cross-border Water Assets Geopark in Nestos Area " with acronym: CB Water Geopark, financed under grant agreement B2.6C.08/ 02.10.2017

Activity 3.3.2: Study of Delimitation of the Geopark , and geographical and environmental description
(Report on the results of the implementation of contract No. 19 of 2018)

Responsible PB: Municipality of Hadjidimovo (PB3)

SUBCONTRACTOR: GEO-BM, Gotse Delchev

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CONTENTS

INTRODUCTION 3
1. Geopark "Hajidimovo" - general conceptual basis and project assignment 5
2. Implementation methodology 7
3. General characteristics of Hadjidimovo municipality 11
4. Natural resources and conditions of Hadjidimovo municipality 17
4.1. Relief 17
4.2. Geological structure and paleo geographical development 19
4.3. Minerals 21
4.4. Tectonics 22
4..5. Climate 24
4.6. Hydrological characteristic. Description and assessment of water resources 32
4.7. Hydro geological characteristic. 42
4.8. Soils 44
4.9. Agricultural territories 66
4.10. Vegetation and animal world 54
5. Cultural heritage 59
6. Natura 2000 Biodiversity Act Protected Areas: 65
7. Socio-economic structures and processes on the territory of the municipality 66
8. Khazzhidimovo Geopark 71
8.1. Delimitation of Hadjidimovo Geopark and assessment of potential 71
8.2. Functions of the Geopark 74
8.3. Natural-geographical and cultural-historical morphology of Geopark 75
8.4. Description of the more significant natural and cultural-historical sites on the territory of the Hadjidimovo Geopark 80
8.5. Physical-geographic boundaries of Geopark Hadjidimovo 86
8.6. Geotopes 87
8.7. Accessibility to the Geopark and connectivity with the economic infrastructure 99

INTRODUCTION

The concept of Geoparks arose in the mid-1990s as a response to the perceived need to preserve and enhance the values of geological sites throughout Earth's history. Natural features and geological formations are key witnesses to the evolution of our planet and determining factors for our future sustainable development. Geoparks can have both national and international significance.

Geoparks are a new category of protected area. These are areas of outstanding examples of geological heritage, both of aesthetic and scientific value. The focus of Geoparks is on people, and more specifically, on developing the tourism resources of the regions that include these landmarks.

The concept of the Geopark is based on a principled methodology for building harmonious and sustainable human-natural systems, optimizing the relationship and relationship of man and society with natural resources from the standpoint of sustainability of this system and the preservation and development of its characteristics in the future in the interest of man and society. In this sense, it is not so much and not only a nature-protection system, but rather a socio-cultural system, relying on the complex relationship "man-society-nature". It includes the vital and economic activity of people and the construction of a culture of their relationship with nature, based on knowledge, habits and information, as well as on tools for their creation and management.

Geoparks are related to the geological heritage, but are not limited to it alone. Although the UNESCO Global Geopark includes geological heritage of international importance, the purpose of the UNESCO Global Geopark is to explore, develop and exploit the links between this heritage and all other aspects of the natural, cultural and intangible heritage of the particular area. Global Geoparks, according to UNESCO's concept, are single, unified geographical areas in which sites and natural features of international importance are managed with a comprehensive concept of protection, education and sustainable development. The UNESCO Global Geopark uses its geological heritage in conjunction with all other aspects of the area's natural and cultural heritage to raise awareness and understanding of key issues facing society, such as the sustainable use of Earth's resources, climate change mitigation of the climate and reduce adverse outcomes caused by natural disasters. By raising awareness of the importance of geological

heritage, today's UNESCO Global Geoparks give local people a sense of pride in belonging to the Territory , strengthen their identification with the area.

1. "Hajidimovo" Geopark - general conceptual basis and project assignment

The idea of creating the Hadjidimovo Geopark is based on the assessment of the rich natural diversity and features in the South Pirin region and along the valley of the Nestos River in its middle and lower reaches. From a physico-geographic point of view, the region is endowed with a wide variety of natural features - relief, climate, waters, flora and fauna. Precisely because of these characteristics, the area is distinguished by particularly active human activity over the millennia.

From the standpoint of the geoparks concept, a system-forming factor for the area is the Nestos River, which has a defining role for a large part of the geology, climate, flora and fauna; it has a direct influence on the directions and forms of human activity; on the culture, customs and traditions to which the population adheres.

Today, the targeted area falls on the territories of the Republic of Greece and the Republic of Bulgaria. Due to its location, it is characterized by dynamic development of infrastructure, trade, agriculture, industrial production, tourism. From these positions, the issue of preserving natural wealth and optimizing the relationship between man - society - nature acquires essential importance.

Idea concept for "Study and determination of boundaries for a Geopark on the territory of Hadjidimovo Municipality".

According to the project concept, Geopark Hadjidimovo falls entirely within the territory of the municipality of Hadjidimovo. On the basis of a preliminary assessment of the facts, it is planned that the Geopark will include geotopes related to the water resources in the area and to the cultural and historical objects in the municipality, to the lifestyle and traditions of the population. At the same time, the Geopark should be linked to the activity of the population, to the economic profile of the municipality and to the prospects for its development, to the transport and communication network.

Taking into account the cross-border nature of the project, Hadjidimovo Geopark should be associated with the idea and prospects for the development of economic and cultural connections with the neighboring regions of the Republic of Greece.

By definition, concept and content, the Geopark is an inseparable integral part of the municipal infrastructure. Its characteristics, boundaries, objects, functional orientation, activities, spatial organization, etc. are based on the givens of the territory, their evaluation and analysis and the formation of this basis of a general vision and specific ideas for the Geopark.

Understanding the nature of the project:

The purpose of the proposed project is to assess the natural and cultural features of the area by improving and preserving:

- **the natural natural and geographical features**
- **the heritage, traditions, aesthetics, history, culture and well-being of its inhabitants.**

Understanding the nature of the Geopark

Geoparks include:

- **Natural natural-scientific objects deserving of protection;**
- **Parts of the geosphere with geological, geomorphological or geoecological significance;**
- **Cultural or archaeological monuments, as well as myths or traditions;**
- **Tourist sites that contribute to the sustainable development of the regions;**
- **Natural beauty, aesthetic values and aesthetic perception of nature**

The boundaries of the Geopark must include localities (Geotochki) that meet the following characteristics:

- **To have specific natural, cultural-historical, climatic, etc. characteristics;**
- **The specificity of these localities should represent a potential interest for tourists and thus stimulate the tourist flow in the region;**
- **Be accessible through appropriate road infrastructure;**
- **To provide an opportunity to determine tourist routes.**

3. General characteristics of Hadjidimovo municipality

The municipality of Hadjidimovo is located in Southwestern Bulgaria, on the territory of Blagoevgrad district. To the west, the municipality borders the municipality of Sandanski, to the north - with Gotse Delchev and Garmen, to the east - with Satovcha, and to the south the municipal border coincides with the state border of Bulgaria with Greece.

The municipality of Hadjidimovo (geographical coordinates 41°31′N 23°52′E) is located in the southern part of the Gotsedelchev valley. The basin is located on both sides of the middle course of the Nestos River, and to the west it abuts the steep slopes of Pirin, and to the east the slopes of Dabrash Hill, part of the Western Rhodopes. To the south, the valley extends to the northern slopes of Sturgec Mountain. To the north, the Momina Gorge of the Nestos River connects with the Razlozhka Hollow. It has an oblong shape, its length from north-northwest to south-southeast is 21 km, and its average width is 6 km. Total area 122 km². The average altitude of the valley floor is 530 m.

The territory of the municipality is located on the border line between the Pirin Mountains and the Rhodope Mountains in the Gotsedelchev Valley along the middle reaches of the Nestos River on the border between Bulgaria and Greece. Geographically, the region is one of the transitions from the Sofia and Samokov fields and from the eastern part of the Upper Thracian lowland to the White Sea. An important characteristic of the place of birth is the relative proximity to the Razlog Valley, Bansko, Dobrinishte, as well as to the Drama Valley and the White Sea in Greece.

The main part of the territory of the municipality, where the municipal center of Hadjidimovo is located, is 485 m above sea level. South-southwest of the city spread the most south-eastern foothills of South Pirin. About 2 km to the east, the Nestos river forms the so-called Hadjidim gorge, which separates the Rhodope Mountains from Pirin. South-east of Hadjidimovo flows the Mutnitsa river (a right tributary of the Nestos river), on whose right bank descends the northernmost slopes of Beslenski ridge (Saint Todor mountain or Shtilka) of the Bozdag mountain.

The relief is varied and extremely rich in forms. Highland and mountainous elements, low-mountain massifs, foothills, faults, hollow areas, rivers, river ravines, spills are combined. There is a wide variety of altitude - from 450 to 2200 m. Due to the location and relief, the climate is diverse with clearly defined summer and winter seasons and transitional spring and autumn seasons. In general, the climate suffers from a Mediterranean influence and is characterized by higher average temperatures than those for the country and with an amount of precipitation around the average for the

country. Due to the valley location and the proximity to the mountain massifs, the territory is protected from strong winds.

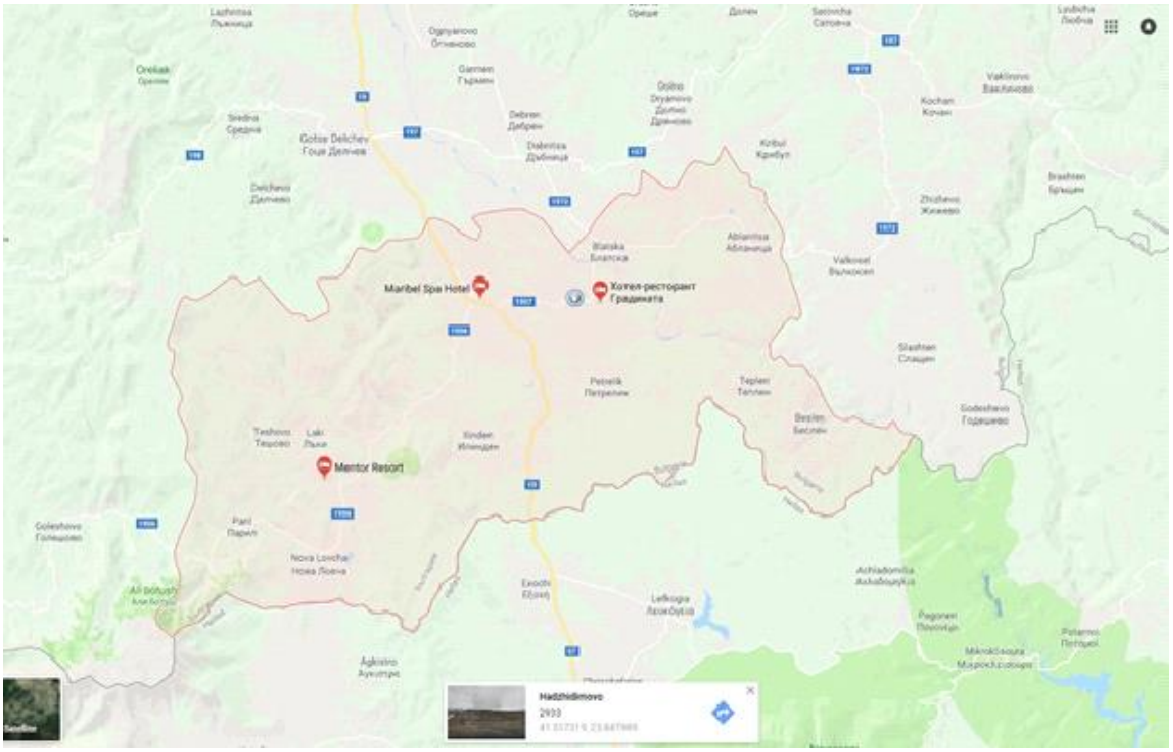

Fig. 1 Physic - geographical map of Hadjidimovo municipality

The territory of the municipality covers the southernmost part of the eastern slopes of Pirin Mountain, part of Slavyanka Mountain, a small part of the southwestern slopes of the Dabrashki ridge of the Western Rhodope Mountains, and part of the Gotsedelchev valley and the valley of the Nestos River. The highest point is the peak „Golyam Tsarev" (Slavyanka Mountain) with an altitude of 2132.2 m. The municipal center of the city of Hadjidimovo is located on a hollow, slightly hilly terrain, with an average height of 400 m above sea level. The municipality has a very good natural bioclimatic potential.

In the southwestern part of the municipality is Mount Slavyanka (geographic coordinates - 41°22′38″N 23°37′14″E). It is the southernmost mountain in Bulgaria, known until 1955 under the name Alibotush, located immediately south of Pirin Mountain, with which it is connected via the Paril saddle (1170 m above sea level). In Greece, the mountain is known by the name Orvilos, a variant of the ancient Orbelos - a name with which ancient authors refer to today's Mountains Pirin, Bozdag, Alibotush, and Belasitsa.

The Paril Saddle (G.K.: 41° 25' 34'' N, 23° 39' 00'' E) is a mountain saddle (pass) in Western Bulgaria, between the mountains Slavyanka Mountain (Alibotush) in the south and Pirin Mountain in the north in the Municipality Hadjidimovo and Sandanski municipality, Blagoevgrad district. The pass is 10.6 km long, and the altitude of the saddle is 1,174 m. It connects the southern part of the Gotsedelchev basin in the east with the southeastern part of the Petrich-Sandanski basin in the west. It starts from the western edge of the village of Paril, at 817 m above sea level. and heads southwest, up the valley of the Chokovitsa River (right tributary of the Burovitsa). After 4.6 km it reaches the saddle at 1174 m above sea level. and begins a descent to the west along the valley of the Chereshar River (Goleshovska River). After 7 km, it ends at the northeastern end of the village of Goleshovo, at 756 m above sea level.

East of the municipal center Hadjidimovo is the semi-mountainous southwestern part of the Dabrash part of the Western Rhodopes Mountains. Its natural border is formed between the valleys of the rivers Nestos from the southwest and its left tributary Bistrica fever from the east. This part of the municipal territory falls into the historical-geographic region of Chech, divided between Bulgaria and Greece.

The northwestern part of the Municipality is located in a mountainous area in the historical-geographical region of Mervashko. It is located in South Pirin Mountain, at the eastern foot of Peak Saint Peter (1757 m) at 960 m above sea level and 25 km southwest of the town of Gotse Delchev. Other peaks from north to south are Sveshtnik - 1975 m, Mutorok - 1970 m, George's Tomb -1560 m, Saint Constantine - 1750 m, Saint Peter - 1757 m, Chinilo - 1417 m.

The land of the city covers an area of 22,671 km², with only its southern edge being hilly, and the predominant part of its territory is flat. The municipality of Hadjidimovo occupies an area of 327.8 km², which represents 5.1% of the territory of the Blagoevgrad region.

Its population is 10,551 (2003). It includes 15 settlements - 1 city (Hajidimovo) and 14 villages.

The region is characterized by a multi-sectoral economic structure. The general state of the environment in the controlled area is good. There are no major industrial pollutants.

The main axis of urbanization development is the direction Sofia - Blagoevgrad - Kulata, and the secondary axis of development is along the direction Simitli - Razlog - Gotse Delchev - Ilinden.

The road network of the municipality is on a relatively good level in terms of saturation and quality. The main road II-19 "Gotse Delchev - Drama" has been built through the municipality. Its commissioning has provided opportunities for the municipality to exit the state of a dead-end border region. All settlements are connected by an asphalt road, which is maintained. Although good for mountainous conditions, the republican connectivity is not suitable for high-intensity traffic. The area has no railway connection. In general, connectivity does not imply the development of production and activities with volume cargo flows.

As geographical features, the area has a strategic location and value along the directions of European transport corridors. Its proximity to the state border and the well-developed network of regional and local transport infrastructure are potential for cross-border cooperation. The construction of the "Struma" highway has an important role in improving the national, regional and European connectivity of the area and increasing its economic importance.

4. Natural resources and conditions of Hadjidimovo municipality:

This paragraph provides a detailed description of the main types of natural resources:

4.1 Relief

4.2 Geological structure and paleo geographic development

Precambrian metamorphic complexes

Igneous granit and grano diorite plutons

Sedimentary and volcano genes - sedimentary formations

Quaternary sedimentary complexes

4.3 Minerals

4.4 Tectonics

Main fault and block structures in the Nestos River area

Vertical velocity gradients

Seismicity in the area of the Nestos River

4.5 Climate

General characteristic

Climatic factors

Temperatures

Radiation balance

Winds

It's raining

Humidity (Moisture deficit Absolute humidity Relative humidity)

Climate change and related droughts and floods

4.6 Hydrological characteristics. Description and assessment of water resources

A. Surface water bodies

o Type of river

o Type equated to a river,

o Type of modified water bodies

o Type of highly modified water bodies

B. Underground water bodies

o Quaternary type

o Neogene type

o Pleogen type

o Crack type

o Karst type

Determination of water bodies for each surface water category.

Surface waters - type "river" and equated to "river" in the catchments of the Nestos River on the territory of the municipality of Hadjidimovo

Nestos River (hydrological and economic description and assessment)

The Nestos River catchments

The catchments area of the Nestos river has a total area of 2785 square km (25% of the area of the catchment area in the Western White Sea region, for comparison - three times smaller than that of the Struma river and 4 times larger than that of the Dospat

river), its length is 125 km. Its natural runoff is 950.53 (30% of the total natural runoff of the watershed in the Western Baltic region for comparison - two and a half times smaller than that of the Struma River and 5 times larger than that of the Dospat River).
Natural drainage

Natural outflow of the rivers Struma, Nestos and Dospat _(Mln. cubic meters)
Struma 2242.47
Nestos 950.53
Dospat 182.59

Relief of the watershed of the Nestos River on the territory of Hadjidimovo municipality
Tributaries of the Nestos River. There are 64 tributaries, of which 28 are right and 36 are left.
Description of the main tributaries of the Nestos River, the territory of the common Hadjidimovo - the Matnitsa River, the Dabnishka River, the Burovitsa River

Highly modified and artificial water bodies
Dams on the territory of Hadjidimovo municipality. (hydrological and economic description and evaluation) – Sadovo, Blatska, Ablanitsa, Petrelik, Ilinden.

Description and characterization of groundwater. Identification of groundwater. Determination of underground water bodies. Fracture waters in amphibolites and granites - Pore waters in Neogene's - Gotse Delchev; Fracture waters in the Gotsedelchev Paleogene aquifer; Fracture waters in Teshovski, Spanchevski, Central Pirin, Bezbozhki, Igralishki, Kresnenski plutons; Fracture waters in Western Rhodopes metamorphites - gneisses, slates , marbles, amphibolites; Gotsedelchev karsts basin

4.7 Hydro geological characteristic.
• Water in the hydro geological and hydrological structures fed by the Rila, Pirin and Western Rhodopes mountains ranges.
• Water in karsts basins and aquifers in the crystalline and fissure massifs;
• The large amounts of precipitation in the high mountain belts

Water use

4.8 Soils (classification, description, evaluation)

Soil-geographical zoning

Zonal soil types

No zonal soil types

Soil resources

Agricultural territories

Erosion

4.8 Vegetation and animal world

Flora

Distribution of the forest fund of the municipality by land

Protected plants

The distribution of the forest fund of the municipality by land

The distribution of the forest fund of the municipality by land

Protected animal species. Bird Habitats

5. Cultural and historical heritage

Main historical periods determined the appearance of the territory

Historical monuments of culture

Hadjidimovo Monastery "St. George the Victorious"

Archaeological sites

12 archeological immovable cultural values are concentrated in the municipality. Of them, 5 are of "national importance" category

• Ancient settlement in the town of "Kozluka" and the town of "Bryasta" near the village of Koprivlen

• Late antique and medieval fortress - the town of "St. Dimitar"

Ancient settlement and mound necropolis, "Tumbite" town, near the "St. George" monastery

• Late antique necropolis in the town of "Gornyanska koria" near the village of Petrelik;

• Ancient settlement and burial mounds - massif 49 and massif 78, site Muyanche, village Ilinden.

On the territory of Hadjidimovo municipality there are 7 archaeological National cultural values with the category of "local significance":

• Thracian necropolis, "Drezhno", 5 km south of the village of Ablanitsa;

• Ancient and medieval necropolis, "Polyanata" village, in the village of Ablanitsa;

• Medieval necropolis, Mirulya town, 3 km south of Ablanitsa village;

• Late antique settlement, 4 km west of the village of Gaitaninovo;

• Ancient settlement, the town of "Chuchuligata", 5 km north of the village of Lucky;

• Ancient settlement, m. "St. Spas", 2.5 km north of the village of Lucky;

• Thracian necropolis, Halkite, 1.5 km west of the town of Hadjidimovo.

6. Protected territories, protected areas and biodiversity (Description, assessment)

Reserve: "Ali Botush"

Protected Area "Pavlova Padina"

Natura 2000 Protected Areas under the Biodiversity Act :

□ BG0002078 Slavyanka - under the Birds Directive;

□ BG0002076 Places - under the Birds Directive;

□ BG0002126 Pyrin Buffer - under the Birds Directive;

□ BG0001028 Middle Pirin - Ali botush - under the habitats directive;

□ BG0000220 Dolna Nestos - under the habitats directive;

□ BG0001030 Rhodopes - Western - under the Habitats Directive.

7. Socio-economic structures and processes on the territory of Hadjidimovo municipality

Assessment of the economic potential of the municipality. Development of the economy - trends, processes, problems

According to the data of the territorial statistical bureau in the city of Blagoevgrad, the production and economic complex of the municipality of Hadjidimovo has 192 companies that have realized BGN 20.7 million in net revenue from sales and have provided employment to 2,109 people. Net sales revenue per inhabitant has been steadily increasing

.The territorial distribution of economic activities is extremely uneven. The main economic activities are concentrated in the territory of the town of Hadjidimovo, the village of Koprivlen, the village of Ablanitsa and a very small part in the villages of Teplen and Beslen.

Branch structure of the economy

According to official statistics, in the production and economic complex of Hadjidimovo municipality, the industry (processing industry and construction) has the greatest importance. 26% of the companies operate in the industrial sector, 84% of the manufactured products and 69% of the net sales revenue are realized and 89% of the employment in the municipality is provided.

In the structure of the industrial sector, the processing industry is of dominant importance. It is characteristic of it that a larger part of the produced production is mainly on "ishlem"(concrete client order).

Next in importance is the service sector. It is the most dynamically developing. More than 70% of the economic entities registered on the territory of the municipality function in it, mainly micro-enterprises (up to 10 employees), the so-called "family businesses". In the service sector, the largest relative share is the "Trade, repair and technical service of cars and motorcycles, personal items and household goods" branch, in which 44% of the companies in the municipality operate and more than 29% of net sales revenue. The municipality has unused opportunities (preserved natural environment, cultural and historical heritage) for the development of alternative forms of tourism (cultural, rural and eco-tourism) and the first steps in this direction have already been taken. With the opening of the Ilinden border crossing, development of the

service sector was achieved (construction of hotels, motels, gas stations, shops, restaurants, etc.).

The agricultural sector accounts for only 1.6% of companies and 0.4% of jobs and net sales revenue. It should be borne in mind that the importance of agriculture in the economy of the municipality is much greater, since a significant part of the producers are not registered under the commercial law. This is due to the numerous and small plots of land and the nature of the production (mainly tobacco and fodder crops). Apart from tobacco, the rest of the production of agricultural products is mainly to meet the needs of households, i.e. it is not market-oriented and has no market character. The products produced in the sector are a good raw material base for the development of the processing industry, in particular the food industry.

Structure of agriculture - land use

The agricultural territories occupy a total of 178,403 dka[1] (54.4% of the area of the municipality against the national average of 58.7%). Cultivable land in the agricultural territories has a total area of 59,854 dka.

The largest share is occupied by fields - 49,065 dka (82.0% of arable land).

17,944 dka of irrigated areas (30.0% of cultivated land) were developed for irrigation from state water sources. Of these, 12,346 dka are suitable for irrigation, and 5,598 dka are unsuitable - eroded and swampy, and subject to restoration. 8437 dka areas are irrigated from own water sources.

Perennial plantations occupy 2,755 dka (4.6%), and meadows – 8,034 dka (13.4%). 17,944 dka of irrigated areas (30.0% of cultivated land) were built for irrigation from state water sources. Of these, 12,346 dka are suitable for irrigation, and 5,598 dka are unsuitable - eroded and swampy, and should be restored. 8437 dka are irrigated from own water sources.

The meadows and pastures cover an area of 93,561 dka. Together with the arable land, they form the so-called farmed land - a total of 153,415 dka, or 46.8% of the territory of the municipality. Areas of pastures and natural meadows, conventionally called "grasslands", are a serious resource for the development of animal husbandry. Their area occupies 101,595 dka, or 31% of the territory of the municipality. They are a source for obtaining high-quality grass fodder.

[1] Dka - 1000 square meters

Dynamics and restructuring of economic development

The most pronounced change was in construction - 50%, followed by the "Transport, storage and communications" - 36%, "Hotels and restaurants" - 10% and "Manufacturing industry" - 8%.

Industry development

The industrial sector includes mining, manufacturing and construction. The number of enterprises is 79; the gross output produced in 2017 and the net sales revenue are on an upward trend.

According to data from the territorial statistical bureau, in 2017, 84% of the production was produced in the industrial sector of the municipality, 69% of the total amount of net sales revenue was realized and 89% of the employment in the municipality was ensured. About 86% of the production capacities are also concentrated there. The majority of employment in the industry – 97% – is provided by the private sector.

In the structure of the industrial sector, the processing industry is of dominant importance. It accounts for 92% of firms and 99% of employment in the industrial sector, as well as 93% of output and net sales revenue. Firms in the manufacturing industry are mostly small and medium-sized and are only in the private sector. There are no productions on the territory of the municipality that pollute the environment.

The more important sub sectors of the processing industry are: textile production, textile products and clothing production; manufacture of facial skins, manufacture of travel goods, leather products and footwear; food and beverage production; production of products from other non-metallic mineral raw materials. A distinctive feature of these productions is their low energy consumption. In general, they are not dependent on importing expensive raw materials.

Animal husbandry

Kinds	2016г	2017	Ibdex 2017/2016
Cattle	1780	1426	80.1

including cows	**1762**	**1400**	**79.5**
Sheep in general	**4757**	**5359**	**112.4**
Mother sheep	**3971**	**4200**	**105.8**
Goats in general	**3375**	**3107**	**92.0**
Mother goats	**3274**	**2605**	**79.6**
It sucks in general	**35**	**200**	**571.4**
Chickens	**16470**	**7411**	**45.0**
Rabbits	**235**	**107**	**45.5**
Bees	**642**	**1087**	**169.5**

The main branch of animal husbandry is cattle breeding. It is entirely concentrated in small farms with 1-3 cows.

The breeding of sheep and goats has no market orientation, but rather complements the fund of natural farms. The milk sold for industrial processing was 708 tons.

In the poultry sector, there is also a decrease in birds. They are grown only on private farms and have no market orientation.

On the territory of the municipality, the number of bee families is about 1100, and the amount of honey produced is 20 tons. Interest in this sector is increasing due to its export orientation and serious foreign exchange earnings, the provision of additional income to producers and the relatively quick return on invested funds. In the municipality of Hadjidimovo, there is no enterprise for the production and trade of bee honey and bee products, as well as an enterprise for the processing of wax and the production of wax bases, which makes it difficult to control the quality of honey.

Agricultural structures

In the last 3-4 years, an average of 500 economic structures are engaged in agriculture in the municipality. Absolutely predominant (99.2%) are private farms with relatively small plots of land - about 10.0 dka. Market-oriented production is realized by 1 agricultural cooperative and several sole traders.

Plant breeding

Agricultural land in the municipality in 2004 occupied 193,829 dka and represented 59.1% of the total area. Of these, the largest areas are occupied by meadows and pastures (47.1%), meadows (24.9%), meadows (4.1%), permanent plantations (1.4%), etc.

The main livelihood of the rural population of Hadjidimovo municipality is related to tobacco production. There are about 1,800 tobacco producers in the municipality (market farms). Tobacco is a crop that provides the most income to the population in the municipality and the entire region.

The other crops grown in the past - perennial crops and vegetable crops - cannot be an alternative to tobacco due to the specific feature of land ownership in the region and municipality.

8. Hadjidimovo Geopark

8.1 Delimitation of Hadjidimovo Geopark and evaluation of the potential for tourism purposes

Factual premises and general conceptual design

By definition, concept and content, Hadjidimovo Geopark is an inseparable integral part of the municipal infrastructure. Its characteristics, boundaries, objects, functional direction, activities, spatial organization, etc. are based on the givens of the territory, their evaluation and analysis, and on this basis the formation of a general vision and specific ideas for the Geopark.

The main natural and cultural-historical prerequisites and conditions for the construction of the Geopark are described.

8.2 Functions of the Geopark

Main activities within the Geopark are:

Study of the natural wealth and cultural-historical heritage of the territory.

** Provision and dissemination of information about the natural wealth and cultural-historical heritage of the territory to visitors and citizens of the municipality.**

□ Dissemination of information about the natural wealth and cultural-historical heritage of the territory in the country and abroad, including and through the global network. Advertising the tourist potential of the Geopark and the Municipality.

□ Creation of conditions for connecting Geopark Hadjidimovo with Geopark Drama.

□ Assistance for the preservation and maintenance of the natural landmarks and cultural-historical heritage on the territory of the Geopark.

□ Developing proposals and influencing the development of the municipality's economy, road infrastructure and connectivity in view of the goals and functions of the Geopark.

□ Maintenance of the tourist routes and paths, the built infrastructure and activities on the territory of the Geopark.

□ Provision of information services - tourist information.

□ Development of ways and means of getting to know the Geopark.

□ Conducting events for the education of the population of the municipality on the issues of efficient and environmentally-friendly use of natural resources.

□ Building a corps of people supporting the ideas and goals of the Geopark and working on a voluntary basis to achieve them.

8.3 Natural-geographical and cultural-historical morphology of the Geopark

Hadjidimovo Geopark includes geological, relief and water features, vegetation and wildlife, cultural and historical values and objects, traditions of the population, economic activities and objects, cultural institutes and activities that are united in a single human-natural complex.

A. Natural landmarks

• Nestos River in its middle course on the territory of the Municipality.

• Mutnitsa River in the region of its confluence with the Nestos River

• The Neogene fissure waters in the Teshovo plutons and the spring waters in the region of the village of Teshovo generated by them

• The artificial water bodies (dams) in the village of Sadovo and the village of Blatska.

• The relief and geological formations in South Pirin, located on the territory of the municipality

• The relief and geological formations in the Paril saddle and the parts of the Slavyanka and Sturgech mountains located on the territory

of the municipality

B. Bird habitats

• Habitats of alpine species - three-toed woodpecker and white-throated thrush in the high parts of Eastern and Southern Pirin

• Habitats of the Balkan kestrel, jay, woodpecker, thrush in the foothills of the Western Rhodopes and the adjacent basin of the Nestos River.

C. Vegetation

• Vegetation cover in the parts of the mountains Slavyanka and Sturgec and the Paril saddle that is located on the territory of the municipality.

• Vegetation cover along the river Nestos.

D. Cultural-historical sites and landmarks

• Monastery "St. Great Martyr George the Great Martyr" in the town of Hadjidimovo;

• Archaeological remains from the ancient Roman era in the village of Blatska;

• Chapel "St. Dimitar"

• The stone tower in the village of Teshovo

• Ancient settlement in "Kozluka" and "Bryasta" near the village of Koprivlen - archaeological NCC of national importance;

• Late antique and medieval fortress - the town of "St. Dimitar" near the town of Hadjidimovo

• Ancient settlement and mound necropolis, Tumbite town, near the St. George monastery near the town of Hadjidimovo;

• Late antique necropolis in the town of "Gornyanska koria" near the village of Petrelik;

• Ancient settlement and burial mounds - massif 49 and massif 78, m. Muyanche, village Ilinden.

Archaeological National Cultural values with the category "local importance:

• Thracian necropolis, "Drezhno", 5 km south of the village of Ablanitsa;

• Ancient and medieval necropolis, "Polyanata" village, in the village of Ablanitsa;

• Medieval necropolis, Mirulya town, 3 km south of Ablanitsa village;

• Late antique settlement, 4 km west of the village of Gaitanino;

• Ancient settlement, the town of "Chuchuligata", 5 km north of the village of Lucky;

• Ancient settlement, m. "St. Spas", 2.5 km north of the village of Lucky;

• Thracian necropolis, Halkite, 1.5 km west of the town of Hadjidimovo.

E. Objects related to culture and traditions

• Community center in the town of Hadjidimovo

• Church in the village of Teshovo

• Church in the village of Petrelik

• Mosque in the village of Ablanitsa

• Hadjidimovo Zoo

F. Objects of the tourist infrastructure

• Hotel "Katerina", town of Hadjidimovo

• Hotel "Gradinata", town of Hadjidimovo

• Maribell Hotel, Koprivlen village

• "Slavyanka" hut

• Guest house, Koprivlen village

• Tourist attraction - boats and pedal boats - Blatska Dam.

• The city water park in Hadjidimovo

G. Objects related to economic history

• Tepavitsa[2] in the village of Teshovo

• Dairy – Koprivlen village.

• Dairy – Teshovo village

• Vineyards south of Hadjidimovo

8.4 Description of the more significant natural and cultural-historical objects on the territory of the Hadjidimovo Geopark

- **The Nestos River in its middle course on the territory of Hadjidimovo municipality**
- **The city water park in Hadjidimovo**
- **Relief and geological formations, flora and fauna in South Pirin, the Paril saddle and parts of the mountains Slavyanka and Sturgech, located on the territory of the municipality.**

- **The monastery of St. George the Victorious in the town of Hadzhiidimovo**
- **Late antique and medieval fortress - the town of "St. Dimitar" near the town of Hadjidimovo**

8.5. Physical-geographic boundaries of Hadjidimovo Geopark

[2] An ancient water using technology to produce cloth by carding wool

 The digital geographic coordinates of the Geopark territory are described (geodesic points: coordinates of the borders of the Hadjidimovo Geopark, WGS 1984 coordinate system).

The total area of Gopark is 15408 dka

8.6 Geotopes in Hadjidimovo Geopark

The boundaries of the Geopark include localities (Geotopes) that meet the following characteristics:

- They have specific natural, cultural-historical, climatic, etc. characteristics;

- Are of cultural, cognitive, educational, recreational or entertainment interest.

- They are of potential interest for tourism - cultural-historical, natural, environmental, ecological, mountain, water, sports, folklore, photo-hunting, bicycle tourism, entertainment, health (resort-restorative), culinary, wine, etc.

- Make it possible to define tourist routes.

- They are accessible through the road infrastructure of the territory

- In which the connection between natural processes and givens - geology, waters, relief, climate with flora and fauna and between them and human activity and history, culture, traditions - stands out.

 Water-geographical Geotop "Water treasures - Water - a source of life for wild nature", which will be presented with a route: river bed of the Nestos river north of the town of Hadjidimovo - monastery "St. Georgi" - vineyards south of the city - a meander of the Nestos River with a refuge for ornithological observations and photo-hunting of migratory birds.

- The digital geographic coordinates of the Geotope territory are described (geodetic points: coordinates of the boundaries of the Geotope in the UTM 35 coordinate system)

- The thematic characteristics of the Geotope, the natural and cultural historical sites that it includes, the way of access to the Geotope, the tourist routes connecting the sites are described)

□ Water-historical Geotop "Water treasures - Water as a part of everyday life, livelihood and entertainment in the modern life of people", which will be presented by a route with a route in the town of Hadjidimovo (at the bridge from the village of Blatska - city water park - monastery "St. George" (the water in Christian ritual traditions) - hills south of the village of Sadovo - international road to the Republic of Greece - micro-dam "Sadovo" (zone for recreation and a source of water for agricultural plantations).

- The digital geographic coordinates of the Geotope territory are described (geodetic points: coordinates of the boundaries of the Geotope in the UTM 35 coordinate system)

- The thematic characteristics of the Geotope, the natural and cultural historical sites that it includes, the way of access to the Geotope, the tourist routes connecting the sites are described)

□ Water Historical Geotop "Water Treasures - "Places of Worship and Spirituality from Antiquity to the Present Day", which will be represented by a route with a route between the town of Hadjidimovo and the monastery of "St. George" - vine plantations (a practice related to the cult of Dionysus in antiquity) - "St. Dimitar" temple in the area of "St. Dimitar" - a late antique and medieval fortress in the town of "St. Dimitar".

- The digital geographic coordinates of the Geotope territory are described (geodetic points: coordinates of the boundaries of the Geotope in the UTM 35 coordinate system)

- The thematic characteristics of the Geotope, the natural and cultural historical sites that it includes, the way of access to the Geotope, the tourist routes connecting the sites are described)

Water-historical Geotop "Water in everyday life, the economy and historical development", which will be presented through a tourist trail with a route: the town of Hadjidimovo / the bridge of the village of Blatska / the village of Blatska deviation to the worm in the land of the village of Blatska and the reservoir in the land Blatska and from there back to the republican road network to the dam in the village of Ablanitsa

- The digital geographic coordinates of the Geotope territory are described (geodetic points: coordinates of the boundaries of the Geotope in the UTM 35 coordinate system)

- The thematic characteristics of the Geotope, the natural and cultural historical sites that it includes, the way of access to the Geotope, the tourist routes connecting the sites are described)

8.7 Accessibility to the Geopark and connectivity with the economic infrastructure

Road accessibility: It is provided by means of the existing republican and municipal road infrastructure; to the territory of Hadjidimovo municipality. Within the Geopark, accessibility to the sites is via the designated and marked routes including off-road paths and sections of the municipal road network.

Connection with the economic infrastructure

The following economic activity takes place on the territory of the Geopark:

• Workshop for the production of wood pellets, Hadjidimovo

• Milk processing and cheese production enterprise - village Teshovo.

• Workshop for the production of marble products.

• Enterprise for the production of clothing - the town of Hadjidimovo.

• Food outlets

• Shops for household goods

• Car repair services

• Service enterprises

• Banks

• Vineyards

• Orchard

• Livestock farming

• Growing tobacco

• Vegetable production

• Economic activities and objects do not negatively affect the state of the environment.

Applications

• Appendix 1. Used literary sources

• Appendix 2. Methodological materials

• Appendix 3. Maps of Hadjidimovo Geopark Maps of water resources

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Application 2

METHODOLOGY FOR RESEARCH, DESCRIPTION AND EVALUATION OF THE TERRITORY OF THE MUNICIPALITY OF HADJIDYMOVO FOR THE PURPOSES OF TOURISM AND GEOPARK AS A SPECIFIC FORM OF ORGANIZATION AND USE OF TOURIST RESOURCES

Introduction

The present integrated methodology in the implementation of activity Activity 3.3.2 "Study and determination of boundaries for a geopark on the territory of Hadjidimovo municipality" within the project "Creation of a transboundary water geopark in the area of the Nestos River" with the acronym: CB Water Geopark, financed by ERDF under the Territorial Cooperation Program INTERREG V Greece - Bulgaria ?014-2020, under grant agreement B2.6C.08 of 02.10.2017

The purpose of this leaflet is to provide expertise in relation to the promotion of the cultural and natural heritage of the cross-border region.

The methodology was developed by using the best practices in this area, by applying eligibility criteria determined by the Contractor in view of the ultimate goal of the methodology - to promote cultural/natural attractions in the region. The criteria developed on the basis of the European Ecotourism Labeling Standard and the World Criteria for Sustainable Tourism are also taken into account:

• The UNESCO Convention for the Protection of World Cultural and Natural Heritage;

• The Convention for the Protection of Underwater Cultural Heritage, adopted in 2001. in Paris;

• The Convention for the Protection of Intangible Cultural Heritage, adopted in Paris in 2003.

• The Convention on the Protection and Promotion of the Diversity of Cultural Expression, adopted in 2005 in Paris;

• The Convention on Biological Diversity, adopted in Rio de Janeiro in 1992;

• The Convention for the Protection of the Architectural Heritage of Europe adopted in Grenada in 1985;

• The European Convention on Landscape adopted in Florence in 2000;

• The Convention for the Protection of the Archaeological Heritage adopted in Valletta in 1992;

• The UNIDROIT Convention on Stolen or Illegally Exported Cultural Monuments, adopted in Rome in 1995;

• The Convention for the Protection of the Intangible Cultural Heritage, adopted in Paris in 2005;

• The Framework Convention of the Council of Europe on the importance of cultural heritage for society (Faro Convention), adopted in Faro in 2005. and others.

The methodological framework envisages a combination of information from various sources – the concept of geoparks, the concept underlying Natura-2000, the theoretical and methodological concepts related to tourism, the methodology underlying the National Concept for Tourism Development 2014-2030, etc.

I. Objectives of the study

The purpose of the activity is to assess the tourist potential in the municipality of Hadjidimovo, to assess the possibilities for building a Geopark, to determine the elements of the tourist potential of the territory that can be included in a future Geopark. On this basis, to define the scope, content and goals of the future Geopark, to delimit its spatial boundaries and to determine the main Geotopes (Points) within the Geopark and the tourist routes connecting them. In the end, the study should provide a basis for a detailed development of the goals, functions, structure and organization of the future Geopark and its relation to the territory of the municipality in a natural-geographical, cultural and economic aspect.

II. Conceptual framework

Concept for Geoparks (The main goals, principles and methodology of the concept are presented)

III. Approaches and methods for research, description, analysis and evaluation of natural tourism resources

1. Natural tourist resources

Definitions, typology (types of resources, requirements for description and evaluation, method of description, methods of evaluation - from the positions of tourism) are given. The main sources of information about the natural resources of the Hadjidimovo municipality and the Geopark for the purposes of tourism are indicated.

2. Methods for research, description and evaluation of the natural-geographical situation of the territory of Hadjidimovo municipality as a resource for the purposes of tourism

Definitions, significance for tourism, way of influencing tourism, typology, requirements for description and evaluation, way of description, methods of evaluation - from the positions of tourism) are given. The main sources of information to be used are indicated.

3. Methods for research, description and evaluation of the relief, geological and geophysical characteristics of the territory of the Hadjidimovo municipality as a resource for the purposes of tourism

Definitions, significance for tourism, way of influencing tourism, typology, requirements for description and evaluation, way of description, methods of evaluation - from the positions of tourism) are given. The main sources of information to be used are indicated. Guidelines for the study of landscape fragmentation, requirements for the description and assessment of the geological feature, requirements for the description of land cover and land use are indicated

4. Methodology for research, description and evaluation of the climatic and bioclimatic characteristics of the territory as a resource for the purposes of tourism

Definitions of the climate and its elements are given (Touristically significant elements of the climate are: air temperature; thermal inversions and fogs; winds; precipitation; humidity; sunshine; heat balance), significance for tourism, way of influencing tourism, typology , requirements for description and evaluation, method of description, methods of evaluation - from the positions of tourism). The main sources of information to be used are indicated.

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5. Methods for research, description and evaluation of the soil cover of the territory as a tourist factor

Definitions of soils, significance for tourism, way of influencing tourism, typology of soils (types of soils), requirements for description and evaluation, method of description, evaluation methods - from the standpoint of tourism) are given. The main sources of information to be used are indicated.

6. Methods for research, description and assessment of flora and fauna on the territory of Hadjidimovo municipality as a resource for tourism purposes

6.1. Flora and fauna as a tourist resource

Biogeographic resources

6.2. Method of exploring, describing and evaluating the flora

Typology of the territory's vegetation

• Mountainous and semi-mountainous forest massifs

• Meadow vegetation in the semi-mountainous areas of the territory

• Vegetation cover of the alluvial territories in the rivers of Nestos and its tributaries;

• Rare and protected plant species;

• Vegetation with economic origin and purpose (vineyards, orchards, vegetation with technical purpose, mass plant crops.

The description must include:

• Name of the vegetation - genus, species;

• Physical and nature-biological characteristics of the vegetation - size, color, seasonal characteristics, way of spreading and spreading;

• Quantity of the plant as a resource;

• Role of the plant as the resource;

• Ecological assessment of the plant;

• Socio-economic characteristics, purpose of the plant as a resource within the municipality and the geopark.

6.3. Survey, description and evaluation of the fauna

Definitions of fauna, significance for tourism, way of influencing tourism, typology of the animal world (species), requirements for description and evaluation, indicators, way of description, methods of evaluation - from the positions of tourism) are given. The main sources of information to be used are indicated.

7. Methods for research, description and evaluation of waters on the territory of Hadjidimovo municipality as a resource for the purposes of tourism

7.1 Role and importance of natural waters

7.2 Typology of water resources on the territory of Hadjidimovo municipality

7.2.1 Groundwater - groundwater and artesian. Mineralny, karstovil

7.2.2 Surface water.

7.2.2.1 Rivers. River network.

7.2.2.2 Lakes

7.2.2.3 Dams.

7.4 Use of waters

Definitions of water resources, importance for tourism, way of influencing tourism, typology of water resources (type, types), requirements for description and assessment, indicators, way of description, methods of assessment - from the positions of tourism) are given. The main sources of information to be used are indicated.

8. Methods of research, description and evaluation of the protected natural heritage

Definitions of protected natural resources, significance for tourism, way of influencing tourism, typology of protected natural resources (type, species), requirements for description and evaluation, indicators, method of description, evaluation methods - from the positions of tourism) . The main sources of information to be used are indicated.

III. Methods for research, description, analysis and assessment of anthropogenic rhesus resources on the territory of Hadjidimovo municipality as a resource for the purposes of tourism

1. Anthropogenic tourism resources

2. Methods for research, description, analysis and evaluation of the cultural values, ethno-social specifics and artistic features of the territory

2.1 Cultural values

2.2 Ethnosocial resources

2.3 Artistic Resources

Definitions of cultural resources, significance for tourism, way of influencing tourism, typology of cultural resources (type, types), requirements for description and assessment, indicators, way of description, assessment methods - from the positions of tourism) are given. The main sources of information to be used are indicated.

IV. Approach and method of research, description and evaluation of tourist infrastructure

1. Tourist infrastructure - role and title

2. Typology of the tourist infrastructure on the territory of Hadjidimovo municipality

Within the framework of the implementation, the following main types of anthropogenic resources important for tourism are identified, studied, described and evaluated:

- Road infrastructure
- Transportation
- Health infrastructure
- Commercial infrastructure
- Services for tourists
- Infrastructure with a cultural purpose
- Places of accommodation
- Restaurants
- Human resources of the territory and capacity for the purpose of tourism

Definitions of each of the specified types of tourist infrastructure, importance for tourism, way of influencing tourism, typology of each individual resource (types), requirements for description and evaluation, indicators, method of description, evaluation methods - from the positions of tourism are given.). The main sources of information to be used are indicated.

V. Phasing and organization of the survey, analysis and evaluation of the tourist resource and the determination of the territory and functions of the Geopark

 Survey of the territory and establishment of available and potential tourist resources. Compilation of a list of established resources; Sources of information of a different nature are being studied, including strategic documents - OSR, OPR, etc., similar, as well as literary and historical sources, establishes contact with competent authorities such as NIKNI, local and regional history museums, tourist information centers in the region, administrative structures in the field of culture and natural resources in the municipality and in the district, with the regional environmental and water inspections, etc.

 Research and description of the tourism resources established under item 1 in accordance with the determined methodological rules and requirements.

o This stage includes:

 Collection of primary information - from literary sources and management documentation (strategies, programs, plans, reports, etc.) - review, familiarization and study of existing information sources - publications, monographs, reports affecting the studied territory, etc.

 Collection of accessible data from cartographic and thematic sources, physical-geographical and special natural and industry maps.

 Field survey - a method of landscape research, including conducting a route survey of the territory and work on key landscape sections, considered conditionally natural; determination of the natural character of the studied territory.

 Systematization and analysis of the collected information according to the determined methodological criteria. Generating a description of tourism resources. Systematization of the

collected information according to certain indicators - such as type of tourist resource, value of the resource, connectivity with other tourist resources, possibilities for use, guidelines for development as a tourist resource. A basic methodological element is the disclosure of the connection of the specific resource with water as a leading and system-forming element of the future Geopark - water as a source of life, the role of water in the economic life of the population, water as a factor in the culture, lifestyle and traditions of the people.

The main elements of the description are defined as:

• Name;

• Location;

• Description;

• Condition;

• Tourist attraction;

• Tourist significance;

• Accessibility;

• Possibility of use for tourist purposes; Possibilities for inclusion in tourist routes

In view of the different nature of tourist resources, additional indicators such as working hours and seasonality of use of the resource, characteristics of the resource related to their conservation and protection, etc. can be derived.

1. Expert assessment of the tourist potential of the established tourist resources; Assessment of the value and importance of each individual resource for tourism purposes, ranking the identified resources according to this assessment. Assessment of the possibilities and conditions for using each individual resource for the purposes of tourism. The expert assessment is carried out by selected, competent specialists in the field of tourism. The assessment is qualitative - in the form of assessment qualifications for the assessed resource. The expert assessment is carried out in three stages - independent assessment of the resource by the individual experts; evaluative discussion and coordination of the assessments of individual experts; preparation and adoption of a unified general assessment of the tourist resource.

2. Spatial and thematic grouping of resources – determination of related complexes of resources from the positions of the Geoparks concept. – definition of the potential Geotopes of the future Geopark. Description of Geots as systemic thematic spatial structures. Defining their tourist potential and purpose. Selection of Geotopes for inclusion in the future Geopark. This is a stage of formation of tourist sites as a complex of spatially and thematically related tourist resources. In essence, a tourism product is being built at this stage. Its main elements, their tourist purpose, the ways and conditions for tourist use are described. The possibilities and approaches for the development of the system of bound resources as a tourist destination.

3. Geodetic delimitation of the Geopark and mapping. Determining the geodetic boundaries of the Geopark territory, drawing up a physical-geographical map, drawing up maps of the main tourist routes with designated tourist resources. Determination and mapping of tourist routes within the Geopark

4. Development of a basic functional model of the Geopark. Determination of the tourist goals and tasks of the Geopark, the cognitive and educational activities and activities, the goals and activities for the protection and development of resources for the purposes of tourism.

Organization of the assignment.

A. Formation of a study team

B. Periodic reporting of study participants' performance

C. Selection and training of experts for expert evaluation of tourist resources

D. Creation of an organization to compile a report on the implementation of the activity.

E. Initial reporting of results to the Employer.

F. Making corrections and additions, according to the notes received.

G. Preparation of final report.

Basic requirements and rules for applying the expert evaluation method

Objectives of expert evaluation

The main objective of the expert assessment is to determine the potential of the assessed resource for the purposes of tourism.

Assessment techniques.

The assessment is carried out on the basis of the collected information. The evaluation is in the form of qualitative judgments. The main evaluation criteria are the tourist attractiveness of the resource, the authenticity of the resource, the degree of uniqueness of the resource, the usefulness of the resource for educational and recreational purposes, the accessibility of the resource and the possibilities of its use for tourist purposes.

From the Geopark's point of view, the assessment should include the relevancy of the resource to water as a source of livelihood and culture-forming factor.

An important aspect of the assessment is to determine the forms and types of tourism for which it can be used.

The expert assessment is carried out in three stages - independent assessment of the resource by the individual experts; evaluative discussion and coordination of the assessments of individual experts; preparation and adoption of a unified general assessment of the tourist resource

Requirements for experts

To have knowledge and qualification in the fields of economy and geography of tourism

To have participated in surveys and evaluations of tourism resources

To have knowledge in the field of ecology and nature protection

To have experience in the study and evaluation of cultural and historical monuments and landmarks.

Appendix 3

MAPS

3.1. Maps of Hadjidimovo municipality

3.1.1 Map of the administrative-territorial division of Southwest Bulgaria

3.1.2 Physicogeographical map of Hadjidimovo municipality

3.1.3 Map of the administrative-territorial division of Hadjidimovo municipality

3.2. Maps of the territory of Hadjidimovo Geopark

3.2.1 Hadjidimovo Geopark - Geodetic photo

3.2.2 Map of Gedpark Hadjidimovo

3.2.3. Satellite photo of the territory of the "Hayajidimovo" Geopark

3.2.4 Map of the soil cover on the territory of the "Hayajidimovo" Geopark by soil type.

3.3. Maps of water resources on the territory of Hadjidimovo municipality and the Geopark.

3.3.1. MAP of the underground water bodies in the Western Mediterranean Region (ZBR)

3.3.2. MAP of underground water bodies - III layer, "Paleogene" in ZBR - 3 pieces

3.3.3. MAP of surface water category "river" in ZBR

3.3.4 MAP Water bodies category "river" and equated to "river"

3.3.5. MAP Highly modified water bodies category "river" and equated to "river" in the ZBR

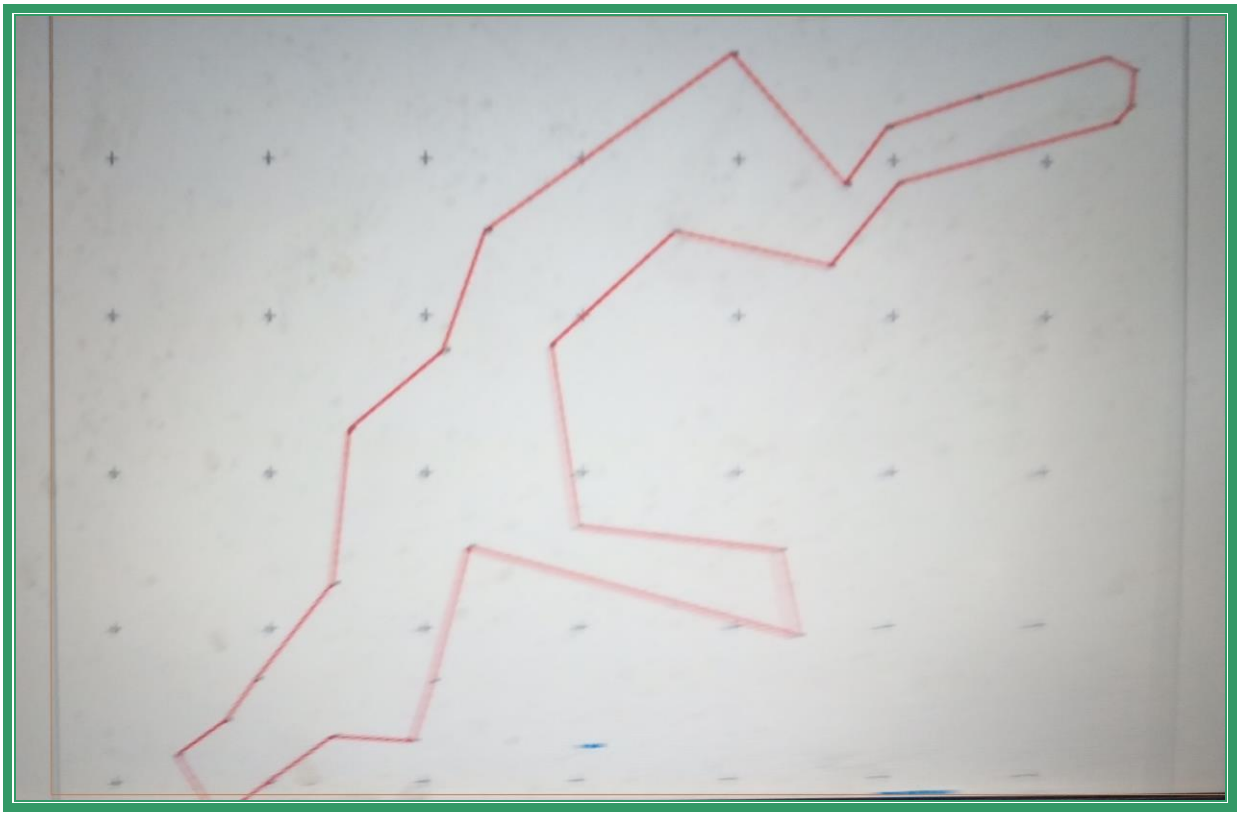
3.3.6 MAP of the water bodies category "lake" in the ZBR

3.1.1 Administrative map of southwest Bulgaria

3.1.2 Physic-geographical map of Hadjidimovo municipality

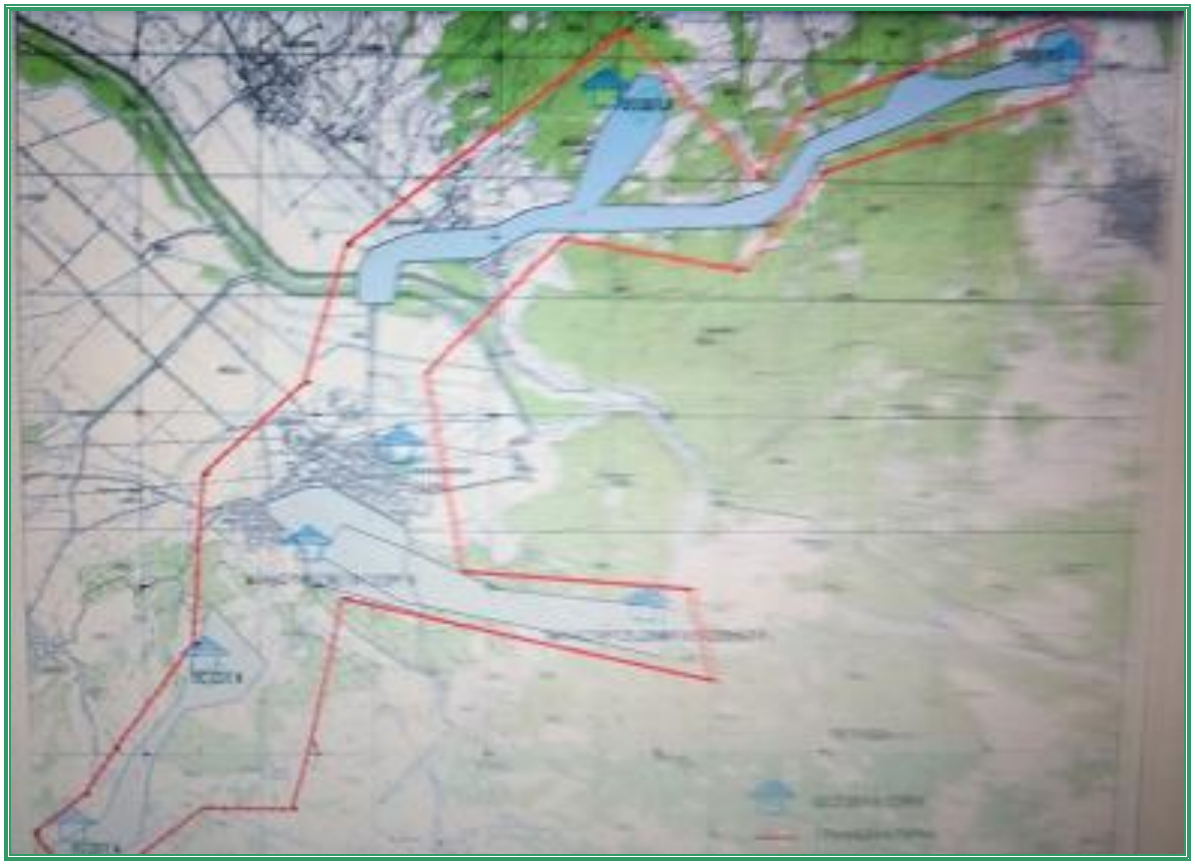
3.1.3 Map Administrative-territorial division of Hadjidimovo municipality

3.2.1 Hadjidimovo Geopark - Geodetic photo [3]



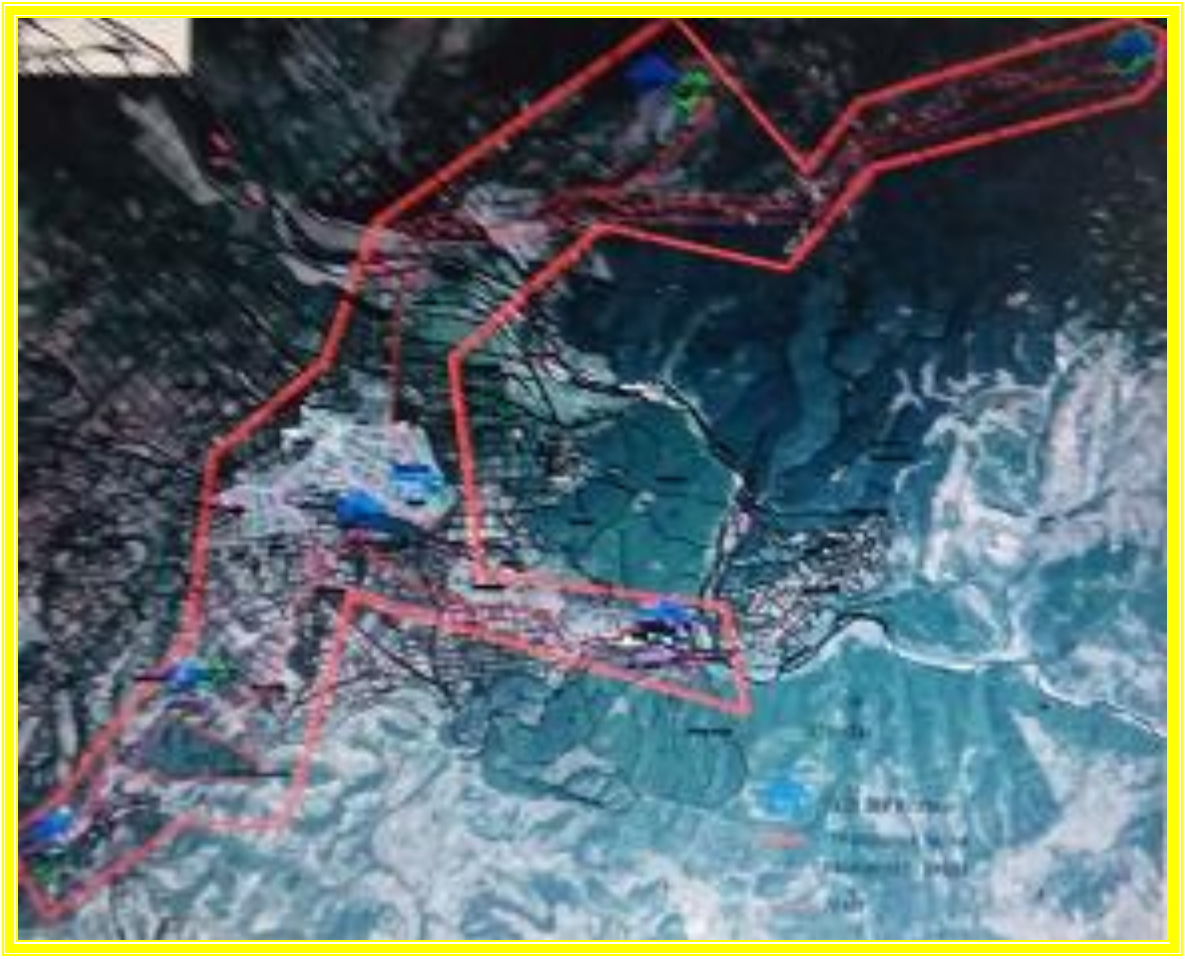
[3] **Вж Картата в Pdf формат - файл D 3.3.3 Appendix 3 / 1.1 прикачен към MIS - Bulten N 16, Attachment N 21**

3.2.2 Map of Hadjidimovo Geopark [4]

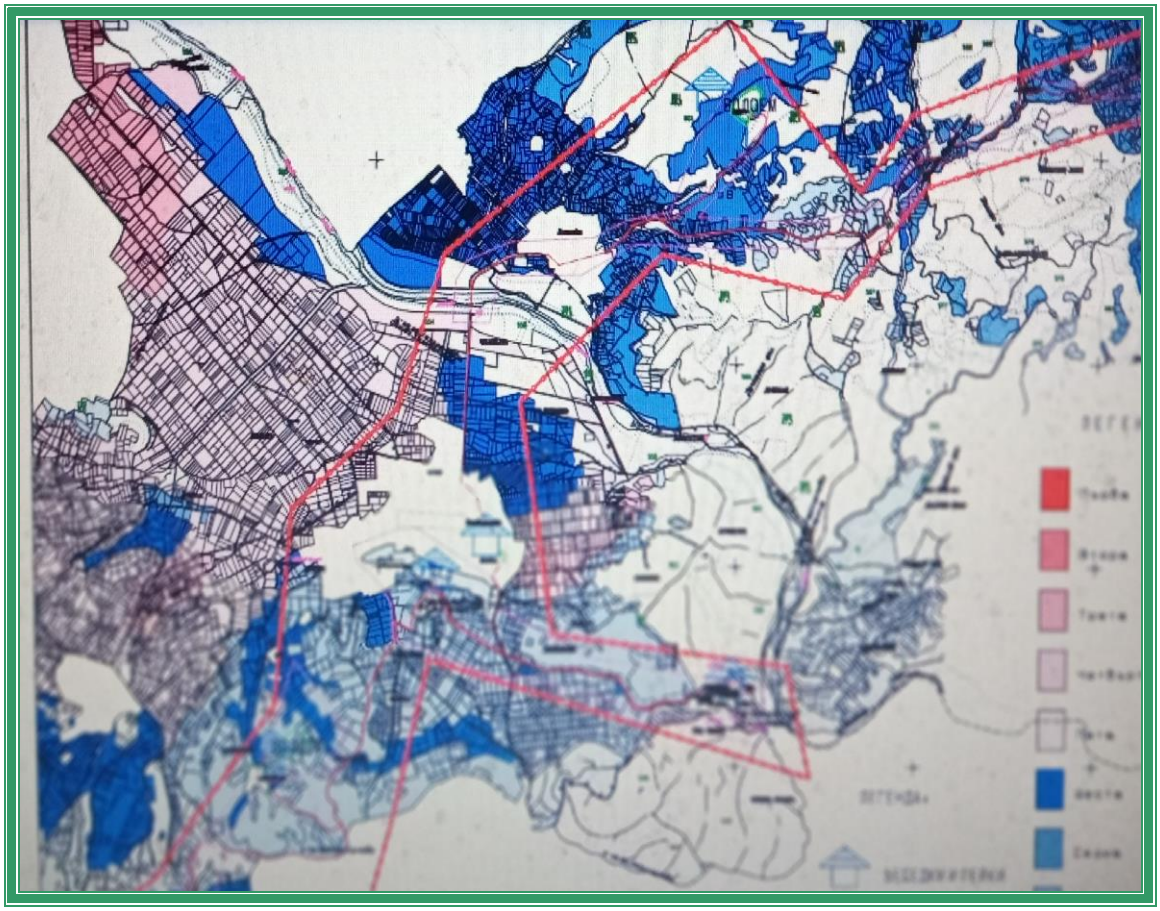


[4] **Вж Картата в Pdf формат - файл D 3.3.3 Appendix 3 / 1.2 прикачен към MIS - Bulten N 16, Attachment N 22**

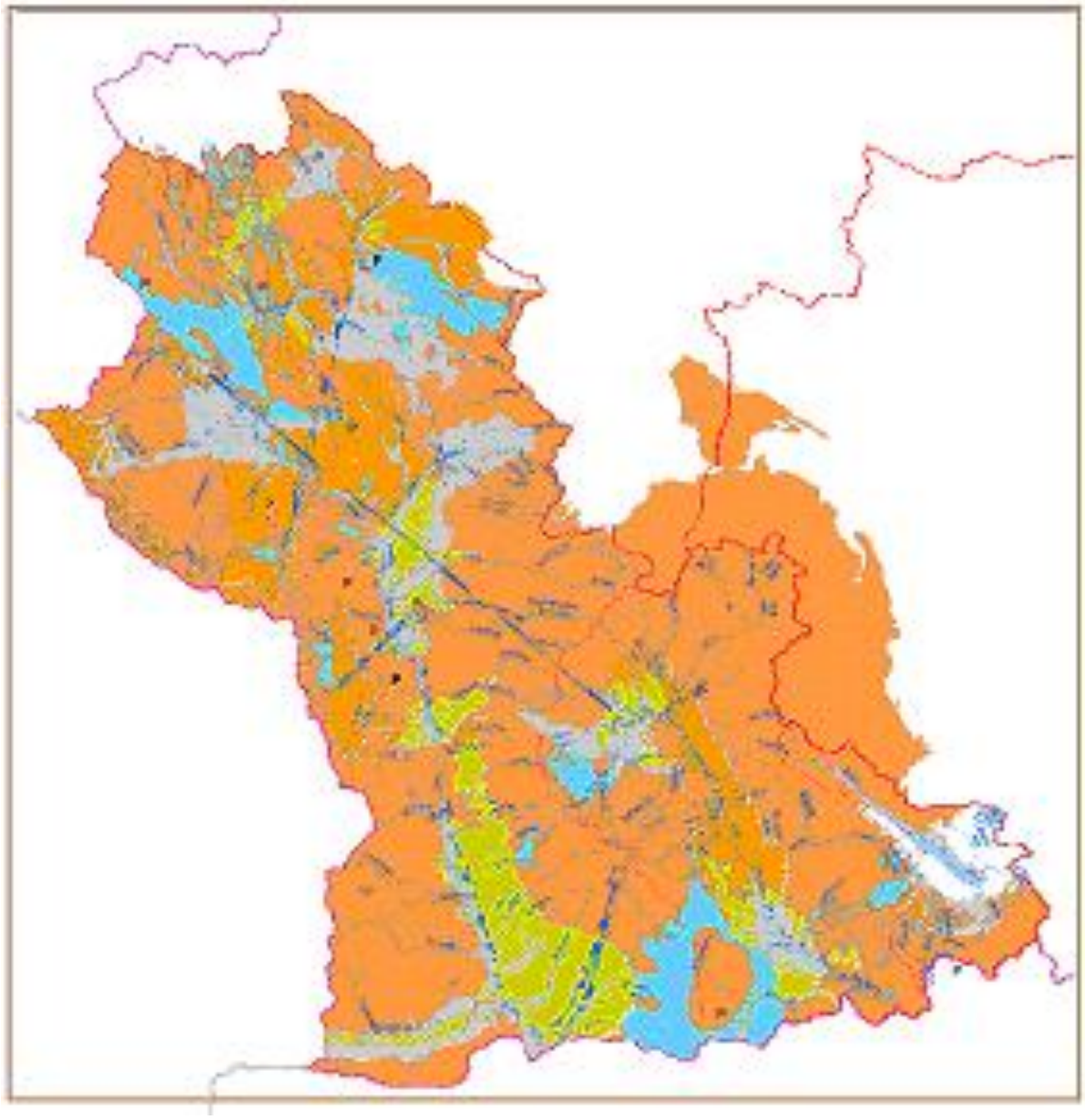
3.2.3. Satellite map of the territory of the Hadjidimovo Geopark



3.2.4 Geopark "Hajidimovo" - soil cover map by categories



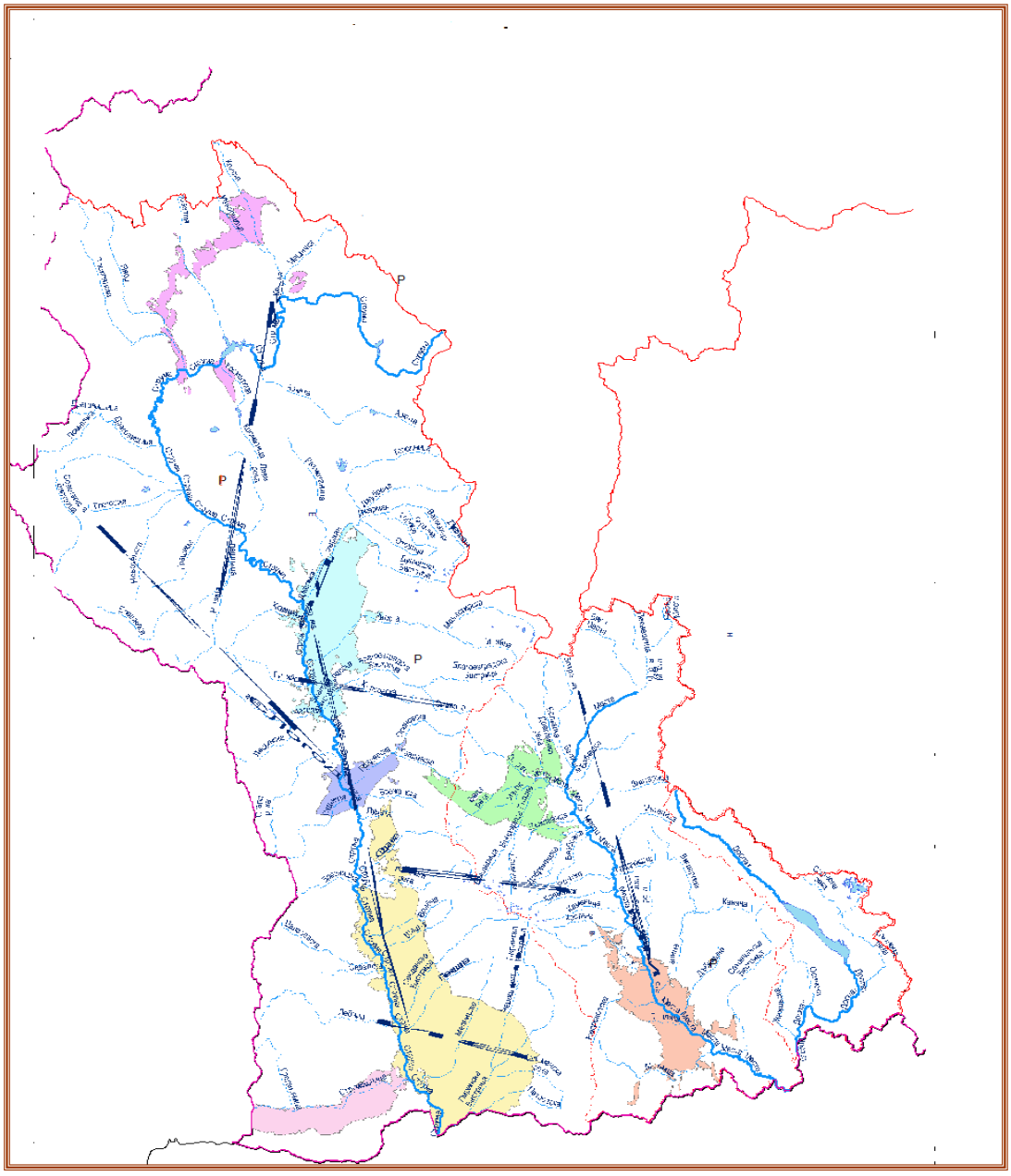
3.3.1 MAP of underground water bodies in WASR[5]



[5] WASR – West Aegean see Region

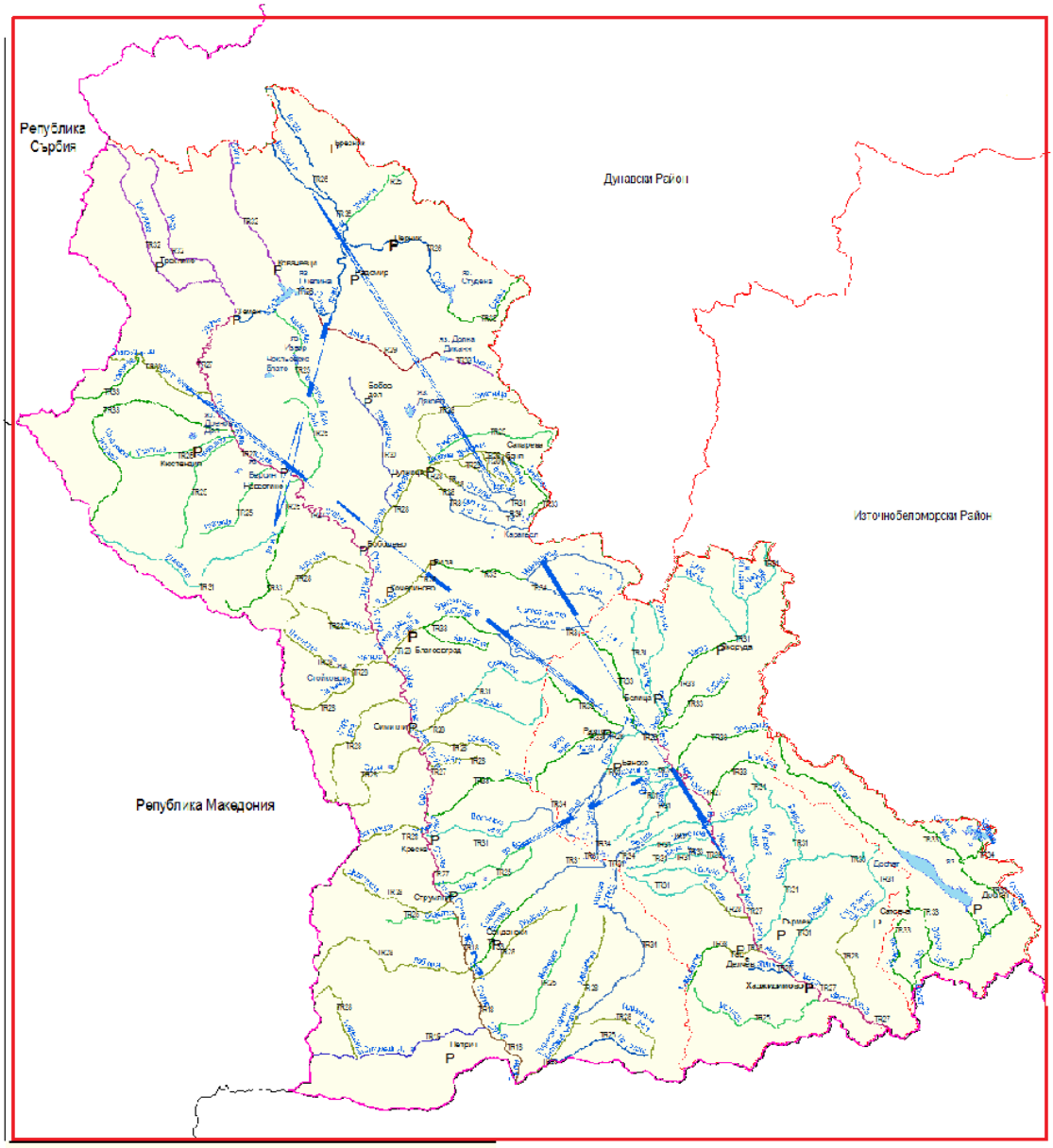
3.3.2 MAP of underground water bodies - III layer, "Paleogene" in WASR

3 pieces

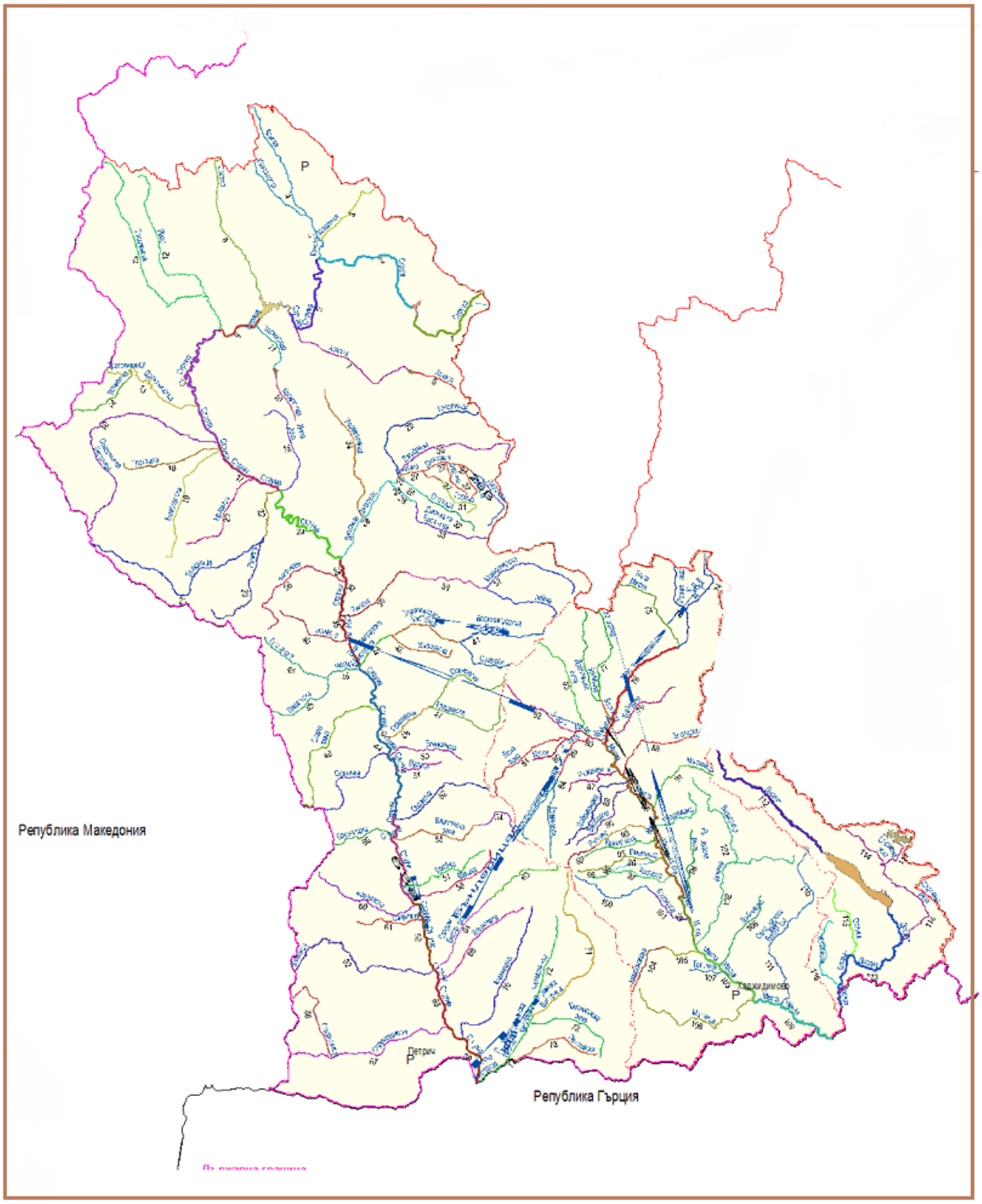


3.3.3 MAP Water bodies category „river“ in WASR

КАРТА Типове повърхностни води категория "река"



3.3.2 MAP Water bodies category "river" and equated to "river" in WASR



3.3.4 MAP Highly modified water bodies category "river" and equated to "river" in the WAR

3.3.5 MAP of water bodies category "lake" in WAR