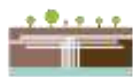


# Interreg



EUROPEAN UNION

## Greece-Bulgaria



## TERRA-MINE

European Regional Development Fund

### **Deliverable “3.2.1 Place Branding and Marketing Design”**

**within the project TERRA-MINE “Sustainable Eco-Cultural Valorization of Mines and Quarries Sites in the Cross-Border Area”**

**PB2\_Municipality of Pilea-Hortiatis**



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## 1. Introduction

### 1.1. The context of the Terra-Mine project and the object of study as its integral part

The Municipalities of Madan and Pilea-Hortiatis, facing the reuse of their mines and quarries respectively at the same time as an important challenge and opportunity, designed in 2016 the project "**Terra-Mine: Sustainable Ecocultural Valorization of Mines and Quarries Sites in the Cross-border Area**"<sup>1</sup>. In fact, in the context of a multidimensional approach both in terms of design and implementation, they chose to collaborate with bodies qualified with relevant academic knowledge and research experience in the fields of mines and quarries, as well as in the field of tourism: specifically with the Laboratory of Environmental Management and Industrial Ecology of the Department of Production and Management Engineering of the Democritus University of Thrace, the Department of Organisation Management, Marketing and Tourism of the International Hellenic University and the University of Mining and Geology "St. Ivan Rilski".

The proposal for the implementation of the **Terra-Mine** project was submitted in the framework of the 2<sup>nd</sup> Call for Proposals of the **Interreg V-A** Cooperation Program "**Greece - Bulgaria 2014-2020**"<sup>2</sup> and in particular, in Priority Axis 2 "A sustainable and climate adaptable cross-border region" and Priority 6c "Preservation, protection, promotion and development of natural and cultural heritage". Its inclusion in the Program was completed in July 2019 with a total budget of 1,260,812.56€ and funding from the European Regional Development Fund (85%) and national resources (15%) of the countries participating in the Program. The budget of the Municipality of Pilea-Hortiatis within the project amounts to 225,100.00€.

The **central idea** of the project is based on the development of mines and quarries in the cross-border area of Greece and Bulgaria and their reuse through their transformation into attractive and functional visitable destinations

Focusing on the modern development of mines and quarries as a major challenge and opportunity to achieve endogenous sustainable development, as well as to enhance the attractiveness of the cross-border area, **the Terra-Mine project aims to protect, exploit and promote the old mines and quarries of the cross-border area** and aims to develop and promote thematic forms of tourism with respect for the principle of sustainability.

<sup>1</sup> The title of the project in Greek is «Terra-Mine: Βιώσιμη Οικοπολιτιστική Αξιοποίηση Περιοχών Μεταλλείων και Λατομείων στη Διασυνοριακή Περιοχή».

<sup>2</sup> The Interreg V-A Cooperation Program "Greece - Bulgaria 2014-2020" is co-financed by the European Union under the European Regional Development Fund, aiming to promote cross-border cooperation in order to enhance the development of the region and become a center of sustainable development. In particular, the Program aims to promote the harmonious, balanced and sustainable development of the cross-border region, while reducing the economic and social territorial disparities that have arisen in lagging Regions and Regional Units, and at the same time accelerating their economic and social restructuring. More information about the Program is available on its official website: <https://www.greece-bulgaria.eu/>

The project adopts an integrated approach with a multilevel perspective:

At the micro level, integrated actions will be carried out for the restoration and promotion of inactive mines in the Municipality of Madan, making them fully visitable and thus strengthening the carrying capacity of the local tourist and geocultural potential. At the same time, integrated actions for the promotion of inactive quarries will be implemented in the Municipality of Pylaia-Chortiatis with the use of modern digital tools

At the intermediate level, the project will contribute to the development of a common understanding among the stakeholders about the value and dynamics of the local geocultural heritage in a systematic way.

At the macro level, the project will highlight and propose new solutions for the promotion of sustainable tourism business practices, which will focus on innovation, diversity and synergy through the activation of all stakeholders.

Furthermore, the **added value** of the Terra-Mine project lies in the creation of an integrated strategy for the development of a specialized and emerging tourism market, focusing on geotourism, which can be a good practice for adoption by other areas in the Greek-Bulgarian cross border area.

This study is one of the main actions of the Terra-Mine project entitled "**Place Branding & Place Marketing Study**" and corresponds to Deliverable 3.2.1 of Work Package 3 "Thematic actions for the development of mines and quarries", while its contents are briefly presented below:

- Presentation of the wider application area of the Terra-Mine project, as well as the intervention areas - Municipalities of Pilea-Hortiatis and Madan.
- Bibliographic review regarding place branding and marketing, conservation and promotion policies and geotourism.
- Analysis of the cross-border branding, as well as the branding of areas with geographical peculiarities similar to those of the Municipality of Pilea-Hortiatis and Madan.
- Analysis of good practices for the development of quarry and mining tourism internationally.
- Recording and analysis of existing resources (historical, cultural, environmental) and their interconnection within an integrated approach to sustainable tourism development in the area of the Municipality of Pilea-Hortiatis, focusing on quarries and mines.
- Presentation of the place-branding strategy for the cross-border area of Greece-Bulgaria focusing on the Municipalities of Pilea-Hortiatis and Mandan.

- Recording and analysis of the financial tools for the implementation of actions for the protection and promotion of the intervention areas, as well as for the wide promotion of the Municipality of Pilea-Hortiatis and its special heritage.

## 1.2. Study Methodologies, Techniques and Tools

Key methodological tools used during this study were:

- A bibliographic research which included (a) international literature study on place marketing and place branding, including cross-border place branding and marketing literature, (b) the study of national tourism development plans, as well as the tourism plan development of the Region of Central Macedonia, (c) the Business Plan of the Municipality of Pilea-Hortiatis, the technical program of the Municipality, as well as its recent annual reports, (d) bibliographic study regarding the history of the quarry areas of the Municipality of Pilea-Hortiatis, as well as general information about its cultural and environmental heritage etc. Respectively, material was sought for the Municipality of Madan.
- An internet research, recording and analysis specifically for the identification and evaluation of financial tools that can be used to upgrade or create infrastructure, as well as to strengthen marketing actions.
- Stakeholder consultation procedures, as well as the realization of two focus groups with the participation of selected target groups and guided by the development of a marketing strategy and a place branding with the active participation of citizens and organizations.
- Primary research including interviews and open discussions both with entities and persons active in the study area.
- A field study in the context of the process of identification and recording cultural and environmental resources of the areas involved in the study, with particular emphasis on locating all attractive elements within the quarry zone.
- An external and internal environmental analysis, as well as strengths, weaknesses, opportunities and threats (SWOT Analysis).
- A benchmarking, trying to identify the best and most relevant practices in the case of cross-border city cooperation, internationally

Finally, both during the design and the study preparation process, the Consultant collaborated with the Department of Organisation Management, Marketing and Tourism of the International Hellenic University to jointly formulate the contents of the study and provide methodological guidelines for its preparation.

## 2. The Terra-Mine Project Application Area

The Terra-Mine project was designed and implemented in the framework of the 2nd Call for Proposals of the Interreg V-A Cooperation Program "Greece - Bulgaria 2014-2020" and specifically, in Priority Axis 2 "A sustainable and climate-friendly cross-border area" and in the Investment Priority 6c "Preservation, protection, promotion and development of the natural and cultural heritage".

The central goal is the protection, development and promotion of mines and quarries in the cross-border area of Greece and Bulgaria and their transformation from places of traditional arts and professional activity, to safe, attractive and functional destinations for the local population, visitors and tourists.

The two areas where rehabilitation interventions and promotion actions will be implemented are the Municipalities of Pilea-Hortiatis and Madan.

In this section a brief report is made of the main characteristics of Greece-Bulgaria cross-border area, as well as the Municipalities of Pilea-Hortiatis and Madan as a first acquaintance with the intervention areas, while in a special section of the present study the existing resources - historical, cultural, environmental - of both the Municipality of Pilea-Hortiatis and the Municipality of Madan, are presented.

### 2.1. The cross-border area of Greece and Bulgaria

Taking as a fact that the Greece-Bulgaria cross-border area is the eligible area of the homonymous Interreg Cooperation Program, it covers an area of 40,202 km<sup>2</sup> having a total population of 2.7 million inhabitants, while it includes 4 NUTS II Regions and 11 NUTS III Regional Units III<sup>3</sup>.

Table 1: The area of the Interreg V-A Cooperation Program "Greece - Bulgaria 2014 – 2020"

	Region	Regional Units
<b>Greece</b>	Eastern Macedonia and Thrace Region	Drama   Evros   Kavala   Xanthi Rodopi
	Central Macedonia Region	Thessaloniki   Serres
<b>Bulgaria</b>	South-Central Region	Smolyan   Haskovo   Kardzhali
	Southeast Region	Blagoevgrad

In addition, being the south-eastern non-island region of the European Union (EU), the Greek-Bulgarian border region borders Turkey to the east and the Republic of Northern Macedonia to the west, and is located between three seas: the Black Sea, the Mediterranean and the Adriatic-Ionian Sea.

<sup>3</sup> The Nomenclature of Territorial Units for Statistics (NUTS) was developed by Eurostat aiming to provide a unified and uniform analysis of territorial units for the production of regional statistics in the European Union.



Figure 1: The area of the Interreg V-A Cooperation Program "Greece - Bulgaria 2014 - 2020 (source: <http://www.greece-bulgaria.eu/>)

The residential structure of the area is characterized by the existence of ten cities of medium-large size (over 50,000 inhabitants) where 38.2% of its population lives, and 25 small cities (between 10,000-50,000 inhabitants).

It has a well-developed road network with the EGNATIA ROAD along the Greek cross-border area with important vertical axes for its connection with the Bulgarian cross-border area:

- Thessaloniki - Serres - Promachonas (Bulgaria – Pan-European Corridor IV)
- Ardania - Ormenio (Bulgaria – Pan-European Corridor IX)
- Komotini - Nymphaea - Greek-Bulgarian Borders (Bulgaria – Pan-European Corridor IX)
- Xanthi - Echinis - Greek-Bulgarian Borders (Bulgaria)<sup>4</sup>

Regarding the economy of the cross-border area, it is considered one of the poorest areas in the EU with the Gross Domestic Product (GDP) per capita below 50% of the average of the EU countries, while it is also characterized by large internal inequalities.

<sup>4</sup> <https://www.egnatia.eu/en/projects/kathetoi-axones/oi-kathetoi-axones-kai-h-simasia-tous/>

In particular, the cross-border regions of Bulgaria show a much lower level of economic growth (below ¼) than the corresponding regions of Greece.

Compared to the European Union of 28, the economy of the Greece-Bulgaria cross-border region is more agricultural, less industrial and more dependent on services. However, even in this sector it presents great heterogeneity with the Greek cross-border area being less agricultural and industrial and more service oriented.

According to the diagnostic analysis presented in the Operational Program Interreg V-A Greece-Bulgaria 2014-2020, in terms of the dominant economic sectors, the peripheral units of the cross-border area could be categorized as follows:

Table 2: Dominant economic sectors by regional unit

Regional Units	Dominant economic sectors
Blagoevgrad   Haskovo	Industry and Trade
Smolyan   Kirdzhali	Industry and Agriculture
Evros   Drama   Thessaloniki	Public Administration and Industry
Xanthi   Rodopi	Public Administration and Agriculture
Kavala   Serres	Industry and Public Administration

It is also worth noting that 59% of the Gross Value Added (GVA) produced in total in the cross-border area, is produced in the Regional Unit of Thessaloniki. All other regional units show low percentages, with Haskovo, Smolyan and Kirdzhali producing 1-2%

In this context and taking into account the particular environmental and historical-cultural characteristics of the cross-border region, tourism and especially ecotourism is considered to be the main lever for the development of the region. However, it has a small number of accommodations compared to its population and specifically 43 accommodations per 100,000 inhabitants, when the average in the EU. is 111. In addition, the available accommodations are unequally distributed among the regional units with the majority of beds being located in the Regional Units of Thessaloniki, Kavala and Smolyan.

## 2.2. The Municipality of Pilea - Hortiatis

The Municipality of Pilea-Hortiatis belongs to the Regional Unit of Thessaloniki of the Region of Central Macedonia. It is located in the central part of the Regional Unit of Thessaloniki and in the Urban Complex of Thessaloniki, at a distance of 8 km to its northeast. It borders with the Municipality of Lagada to the north and northeast, with the Municipality of Thermi to the south and southeast, and to the west with the Municipalities of Kalamaria, Thessaloniki, Neapoli - Sykeon and Pavlos Melas.

It was formed in accordance with the provisions of Law 3852/2010 "Kallikratis Program" based in the Municipality of Panorama, while Hortiatis has been designated as the



historic seat of the Municipality. Its total population amounts to 70,653 inhabitants and consists of three (3) Municipal Units (MU):

- Municipal Unit of Panorama with a population of 17,546 inhabitants
- Municipal Unit of Pilea with a population of 34,678 inhabitants
- Municipal Unit of Hortiatis with a population of 18,429 inhabitants

The Municipal Unit of Hortiatis includes the Municipal Communities of Asvestohori, Filyro and Hortiatis and the Local Community of Exohi. It is the eastern part of the suburban zone of Thessaloniki.

The total area of the Municipality is 155.8 km<sup>2</sup> with a 52.14% of its total geographical area covered by mountains, which characterizes it as a mountainous Municipality. The maximum altitude is recorded in the Municipal Unit of Hortiatis and is 1,201 m, while the minimum altitude is located in the Municipal Unit of Pilea and is equal to 0 m (sea level).

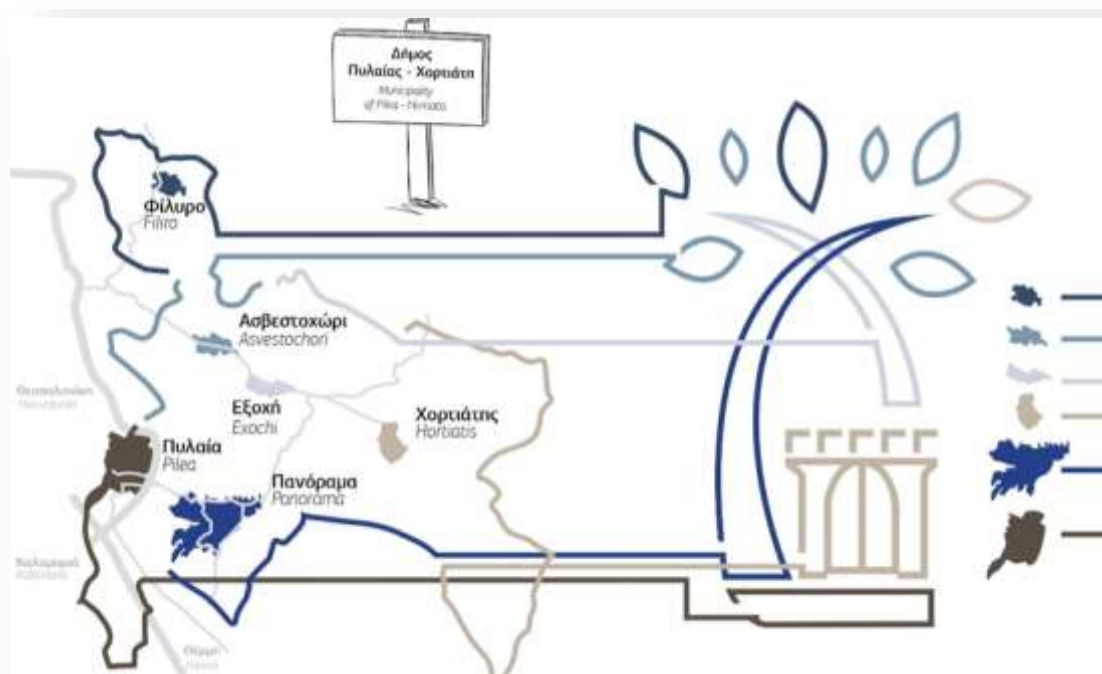


Figure 2: The Municipal Units of the Municipality of Pilea-Hortiatis with the individual Municipal Departments (source: pilea-hortiatis.gr)

The Municipality of Pilea-Hortiatis includes mountainous, semi-mountainous and coastal areas, with forests, pastures and cultivated areas that allow the development of different ecosystems, including mineral extraction areas and protected areas of environmental interest. A part of it is by the Thermaic Gulf to the southwest, while the eastern part includes mountainous areas with strong natural terrain and remarkable natural resources including Mount Hortiatis, Sheikh Sou and Kouri forests and the Filyros grove.

Most of the Sheikh Sou Forest - which has long been characterized as the "green" or "natural" lung of Thessaloniki - grows within the boundaries of the Municipality of Pilea-

Hortiatis, as well as the forest of Mount Hortiatis, the lowland forest of Kouri in Asvestohori and the grove of Filyro.

Within the boundaries of the Municipality of Pilea-Hortiatis there are two (2) protected areas with particularly high environmental value:

- Hortiatis as a Special Protection Zone which is part of the wider protected area with code GR 1220009, and
- The Cedar Hill or Sheikh Sou as "Protected Natural Landscape" or "Landscape of Special Natural Beauty", with code AT 4011119.

The physical reserve of the Municipality also includes the coastal zone in its south-southwestern part with a coastline length of approximately 4.5 km. However, the accessible zone extends to a length of only 1.5 km. Part of the coastal area hosts recreation and trade areas, as well as secondary sector activities. As a result the area has lost its ecological character. However, to its east a free zone, owned by the Municipality, extends which has not been altered by anthropogenic activities.

Last but not least, the Municipality of Pilea-Hortiatis has a rich historical and cultural reserve, important cultural infrastructure and remarkable cultural life. In fact, a significant number of cultural and sports clubs are active in the area.

### 2.3. Study Area of the Municipality of Madan

The union of 44 settlements resulted to the Municipality of Madan which is one of the ten municipalities in Smolyan Province and borders the Municipal Districts of Smolyan, Rudozem, Zlatograd, Nedelino, Ardino and Banite.

With a total area of 175 km<sup>2</sup>, the Municipality of Madan is located in the southeastern part of the Western Rhodope mountains and occupies part of the Upper Arda region along the rivers Madanska, Arda and Cherna, while its bioclimatic elements are characterized as more favorable for the development of tourism and leisure activities in general (compared to the climate of the other mountains of Bulgaria) thanks to the mild but with a lot of snow winters and cool summers.

With a population of 10,168, more than 50% (5,233) of them live in the municipal centre, the city of Madan. The housing network is typical of mountainous areas with scattered settlements, 43 larger or smaller villages, and a city that functions as an economic, administrative and educational centre (Madan).

Traditionally, the main sector of Madan's economy has been industry, with the predominant activity being ore mining, while the timber and clothing industries, as well as transportation, are also developed. The agricultural sector occupies a small part of Madan's economy, where the main agricultural products are potatoes, beans and tobacco.

Finally, the city of Madan is 275 km from Sofia, 120 km from Plovdiv, 60 km from Kirtzali and 30 km from Smolyan.



### 3. Place Branding and Marketing

The need to develop, promote and consolidate the comparative advantages of places and cities has been identified with the concepts of place branding and marketing design, which are particularly important tools of urban management with multiple benefits for cities and places in general. The global economic crisis, which is still effecting negatively in Greece, has further strengthened the need to promote and develop a recognizable local branding. Nowadays, both globalization and rapid image exchange, lead to the demand of values like authenticity and uniqueness. Cities are looking for new ways to grow and become competitive, underlining their comparative advantages.

#### 3.1. Definitions of Marketing and Place Branding

There are many different interpretations and approaches regarding the definitions of marketing and place branding, and the two terms are incorrectly identified in many bibliographic references.

In order to define place marketing, more than one definition should be presented. The following are the most commonly used and most recognizable definitions in the literature:

*«Place marketing is the activity, the set of institutions and processes for the creation, communication, delivery and exchange of offers that have value for consumers, customers, partners as well as for society at large" (American Marketing Association, 2015).*

*The key elements of marketing are an exchange (the participants in this exchange and the content of what is being exchanged), the exchange process (how the exchange takes place) and the relationship between the participants in this exchange (Kotler & Dubois 2004)*

*We define place marketing as "The coordinated use of marketing tools supported by a common customer-oriented philosophy, to create, communicate, deliver and exchange offers in cities that have value for customers-visitors of the city and the city community in general" (Eshuis, Klijn, & Braun, 2014, pp. 153-154).*

*"Place branding refers to the development of names for geographical locations, such as regions, cities or communities, usually with the aim of creating a trend of positive correlations about the site and distinguishing it from the rest." (Eshuis & Klijn, 2012).*

Increased emphasis is placed on the economy of experiences and the effort made by managers and authorities of a place to meet the multidimensional expectations of their visitors. Achieving a positive image for a city or a place in general, is considered a key prerequisite for achieving success for a place, in almost all areas of activity, such as tourism, exporting products and services and creating an investment climate by promoting investments. That is why the responsible authorities of a place are looking for appropriate policies, methods and tools to upgrade their characteristic and comparative advantages and at the same time to create an attractive brand.

The two main areas of interest in place marketing are culture and tourism because they tend to be based on planning and initiatives mainly due to the economic benefits they can bring to a place. Cities and places, in general, can shape their image and identity, in order to increase the attractiveness of their external environment, based on the profile they already have and / or wish to create (Karachalis, 2015). Basically, the two main sectors that are most interested in site marketing are culture and tourism. This is because they tend to be based on planning and initiatives mainly due to the economic benefits they can bring to a place. Cities and places, in general, can shape their image and identity, in order to increase their attractiveness to their external environment, based on the profile they already have and / or want to create (Karachalis, 2015).

Respectively, an important and distinct role is played by the concept of place brand: according to the American Marketing Association the brand is a name, a term, a sign, a symbol or a combination of these, designed to identify the goods or the services of a salesperson or group of salespeople and differentiate them by giving them recognition by competitors (Keller, 2002). In the case of places or cities, the sellers are the city authorities at local and regional level, as well as the residents themselves who care about their place and seek its promotion.

Keller 1993, Zenkur, and Braun 2010 emphasise the name or brand of a place as a network of various correlations in the consumers' minds related to the visual, verbal, and behavioural expression of a place. It is expressed through the goals, the communication, the values, the general culture of those who care about a place, as well as the overall strategic planning.

Finally, according to Defner et. al. 2012, **"place branding" means the attribution of a specific spatial identity in a region or city, in order to form a central idea for its characteristics and spatial peculiarity**". Essentially, it turns out that the identity of a place is the construction of a brand of a city or a place to display and promote its special features and highlight its comparative advantages, in order to acquire its own unique and recognisable identity and distinguish from other places. **It refers to a strategic plan for improving the image of a city or a place and promoting its special features in order to become well known.**

Place marketing and branding definition analysis leads to the conclusion that place marketing defines the appropriate strategy in order to achieve, in the best possible way, the development, improvement and promotion of the brand of a city or a place in general.

### 3.2. Historical Review of Place Branding and Marketing Development in Greece and at international level

The word "brand" derives from the older word "brander" which means "to burn" - recalling the practice in which producers "burned" their brand or brand in their products.

Scientifically, at a bibliographic level, Kotler & Levy in their article (1969) proposed, the concept of marketing to non-corporate organizations, to be expanded. In bibliographies, it is regularly been referred that this was the time that the term "place" entered the academic field of marketing. Also, Hunt's study of the image as a factor in the tourism development (1975) is often cited as an example of the pioneering academic interest in the term "place".

Place marketing began to emerge as a new tool for space management and design in the 1970s, as the urgent need to develop and promote the comparative advantages of sites and cities arose. This need was the result of the fact that globalization was evolving rapidly and cities were eager for a sustainable future in an unprecedented competitive global environment. It is now becoming clear for the first time that the marketing of a place and the establishment and promotion of a strong and recognizable place brand is a necessary and constant goal of the authorities, and later of the inhabitants, of a place or a city.

The first bibliographic references are made in the early 70's and by 2016 a total of 1172 published articles in scientific journals are recorded. In fact, in the 1970s the state of New York was the first to develop a branding strategy with the slogan and logo "**I love NY**", a strategy that is considered a study model until today, as it is referred in bibliography **as the first international example of establishing a place-city name (Maynadier, 2009)**. City identity promotion and development practices have evolved since then and many places have diligently embarked on marketing and place brand development strategies.

There are many examples in Europe, such as Barcelona (Belloso, 2011), Amsterdam with the brand program "Iamsterdam" (Michalis Kavaratzis, 2008) - with a common milestone that both started in 2003, the Lyon program with "OnlyLyon" that was created in 2007 (M. v. Chanoux, 2013; M. Chanoux & Keramidas, 2013) and Berlin with the successful "Be Berlin" brand campaign that started in 2008 (Müller, 2013).

Internationally, the list of sites that have developed similar branding strategies is endless. Some successful efforts have been reported in Costa Rica ("Pura Vida"), Malaysia ("True Asia"), South Africa ("South Africa: Live to the Ability!"), in the Kazakh capital Astana (Low & Yermekbayeva, 2012), in Bogota (Kalandides, 2011) etc. (Renaud Vuignier, 2016).

In Greece, until recently, it was difficult to identify something similar or integrated place brand and marketing strategies. However, it is often noticed that trends prevailing in urban centres worldwide, like interventions for the revitalisation of degraded areas, efforts to functionally reconstruct the urban environment, the pervasive mood of

"festivaling" the urban life, have not affected Greek cities so much (Gospodini and Bieratos, 2006).

However, during the last decade, more and more Greek Regions and Cities are invested in the establishment and promotion of their identity (branding) and seek to use it in a coordinated way through the planning and implementation of a variety of actions both to promote their tourism product and for strengthening their economy in general. Typical examples are promoting local agri-food products, boosting their sales and exports, or even attracting investment.

The first successful initiative of establishing a city branding, was the city of Thessaloniki in 2012 with a visual and verbal message that undoubtedly reflects the multiculturalism, the strong culture of hospitality that the city has, but also its creativity and artistic sensitivities. The sign consists of a heart-mosaic with mosaics in shades of red, blue and yellow and the slogan "Many stories, one heart"<sup>5</sup>.



A year later, in 2013, the Region of Central Macedonia created its own visual and verbal message "Very Macedonia", while for years in the promotional campaigns in tourism the central message was dominated by the question "Can you miss this?"<sup>6</sup> to give way to the prompt "Do something Great!" during a process of re-branding<sup>7</sup>.

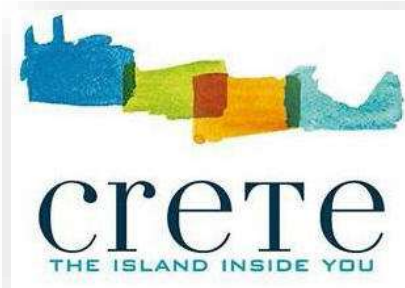
The same time (2013) the Brand "Mythical Peloponnese"<sup>8</sup> appeared and is still used in the tourist promotion by the Peloponnese Region, and respectively the Brand "Incredible Crete" was developed by the Region of Crete and since 2020 a new tourist promotion campaign started with the central slogan "sense the authentic".

<sup>5</sup> <https://www.voria.gr/article/many-stories-one-heart-by-thessaloniki>

<sup>6</sup> <https://money-tourism.gr/very-macedonia/>

<sup>7</sup> <https://www.makthes.gr/nea-toyristiki-kampania-ghia-tin-kentriki-makedonia-ksilwnei-to-very-macedonia-375562>

<sup>8</sup> <https://www.athinorama.gr/travel/news/article.aspx?artid=1000100>



In 2013, the Region of Western Greece presented, for the first time, its Brand consisting of an olive wreath, an abstract representation of the Rio-Antirrio Bridge, a blue circle and the slogan "Full of Contrast"<sup>9</sup>.



In 2014, the Region of Epirus presented for the first time its own Strategic Plan for Tourism Promotion with the central message "Epirus - Breathtaking Greece - for all seasons"<sup>10</sup>.



It is noted that in the vast majority, the Greek Regions developed initiatives to establish a strong and representative brand that makes them recognizable in both domestic and foreign markets, in the same period (2013-2014). In addition, some of them are already undergoing rebranding processes in 2020 in order to adapt their tourism development strategy to the new conditions created in tourism by the global pandemic crisis Covid-19.

<sup>9</sup> <https://www.pde.gov.gr/gr/polumesiko-yliko/item/2034-pde-identity.html>

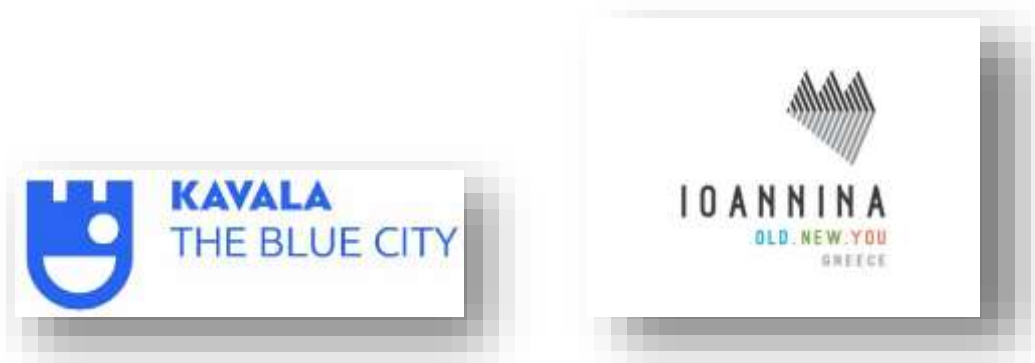
<sup>10</sup> <https://news.travelling.gr/2014/06/epirus-breathtaking-freece-seasons/>

At a city level, the example of the Municipality of Thessaloniki was gradually followed by other municipalities, including:

- Delphi (2014) with the central message "Delphi: The centre of the world" and visual identity "two concentric handmade circles [that] undertake the work to communicate the power that the "Centre of the World" exudes today worldwide"<sup>11</sup>.



- Kavala with the destination brand "Kavala - the blue city" (2016)<sup>12</sup>.



- Ioannina with the destination brand "old.new.you" (2016)<sup>13</sup>.
- Heraklion (2019), where the visual brand was developed through a collaboration of the Municipality of Heraklion with the Cultural Association DIAZOMA, which held a competition for this purpose. The foundation of the new image is the Signal, inspired by the emblematic, well-known "Horns of the Bull of Knossos" which, as if united with their shadow, creatively form the letter "H", a common protogram of the brand name of Heraklion both in Greek and English (Heraklion

<sup>11</sup> <http://www.dimosdelfon.gr/index.php/arxiki/83-greek/pressgr/342-i-nea-touristiki-taftotita-tou-dimou-delfon>

<sup>12</sup> <https://www.kavalanews.gr/5344-i-kavala-kleinei-mati-stoys-episkeptes-neo-logotipo-toyristikis-provolis-fotografies.html>

<sup>13</sup> <https://www.tovima.gr/2016/03/07/finance/nea-stratigiki-ioannina-old-new-you-greece/>

/ Ηράκλειο). The irregular, organic forms with the intense, Greek colours that fill the mark and create other new colours, symbolise many characteristics of the personality of Heraklion (Brousalis D. Palladian Group / DASC)<sup>14</sup>.



Among the Kallikratis Municipalities that created and established a strong visual brand from a very early age is the Municipality of Pilea-Hortiatis. Although it was not created aiming at tourist promotion, the design and the elements that compose the logo highlight the special characteristics of the municipality and the municipal units, projecting a place where history, culture and nature are a vivid and integral part of its modern development, as well as a visitor attraction.



### 3.3. Modern Trends in Marketing and Place Branding

In recent decades, the formation of a place branding has concerned both the academic world and, mainly and primarily, the organisations and people active in development and especially tourism planning at national and regional level.

<sup>14</sup> <https://designmag.gr/heraklion-trst/>



In 2010, Zenker and Braun (Zenker, S. and Braun, E., 2010), based on Keller's (1993) concept of "a network of place-level correlations formed in the perception of consumers", defined place brand "as a network of place-level correlations formed in the perception of people based on the visual, verbal and behavioural expression of the place and the stakeholders acting in it. These correlations differ in their impact within the network and their importance in defining people's behaviour and attitudes towards the place."

According to this definition, the identity of a place is not composed of its "inherent - physical characteristics", but of how people perceive these characteristics and it is these emerging perceptions that lead to brand influences such as readability (Anholt, 2007; Azevedo, 2009; Bhattacharya & Sen, 2003; Zenker & Braun, 2010 in Perri, 2018) or satisfaction (Bruhn & Grund, 2000; Zenker, Petersen et al., 2009; Zenker & Braun, 2010 in Perri, 2018).

Respectively, branding is defined in general - whether it concerns products, services, organisations or places - as a name, a term, a design, a symbol or all the previous, and also other characteristics that might be identified with a specific product, service, organisation or place and differentiate it from all other respective ones, addressing to its elements of uniqueness and / or special attractiveness to the consciousness of the visitor - "consumer" (based on the definition of the American Marketing Association for the brand).

However, it should be emphasized that a marketing and branding strategy is not related to advertising or sales, since the place does not function as a "product". It is the creation and use of communication tools in order for a city, a region or a country to improve its image and reputation, to attract visitors, investments or new residents and to awake feelings of identification and pride in the existing residents. At the same time, it includes the attempt to reverse or cancel any negative elements concerning its image. Therefore, the importance of branding is obvious as long as Greece is concerned, in the current economic situation (Defner, Karachalis and Metaxas, 2012), while the shaping or reshaping of a place branding is a key tool of place marketing.

At this point we should answer the question of what is sought today internationally by defining and establishing the place branding:

- **the inclusion of all the special features of the place** (of its material and intangible heritage, its past, present and future) **and their imprinting in a single image, in a particular narrative, in an integrated strategy** that aims to strengthen of its recognisability and uniqueness
- **its connection with places that have similar or complementary characteristics** with which it is called to compete, to co-operate and to interact, in order to enhance its competitiveness, attractiveness and number of visitors.
- **utilizing the place branding as a tool of social cohesion and local economic development:** entities and people of the place connect, collaborate, design together and utilise the unique identity of their place to promote their products, services, businesses and organisations



And it is precisely this last element that makes shaping the place branding a **participatory bottom-up process**. Obviously, the participation of scientists and experts in the design of the branding is crucial, however, **the participation of local bodies and stakeholders is equally required and necessary for the success of the project.**

## 4. Cross-border identity of a place and identity of areas with geographical peculiarities

In recent years, with the strengthening and promotion of cross-border co-operation, place branding in many cases goes beyond its original local, regional or national character and becomes transnational or, more properly, wider cross-border. The collaborations and investments made, in recent years, in the European cross-border authorities through the Interreg Programs have contributed significantly in strengthening this direction. In fact, in many cases, they made it possible to establish and configure a successful unified cross-border place branding, that succeeds in:

- Becoming the main development tool to enhance the sustainable and balanced economic development of the areas where it was implemented,
- Strengthening the social cohesion of areas, that previously did not exist or existed in a rudimentary structure,
- Achieving the mitigation of various cultural, linguistic and other contradictions,
- Removing the feeling of geographical exclusion to the inhabitants of these areas with multidimensional local and regional benefits.

This chapter includes a brief overview of the evolution of cross-border branding through the emergence of the most successful cases according to the international literature, while also presents a series of good practices of cross-border cooperation towards the development of a single branding, selecting areas with important geographical features (mountainous, remote, etc.).

### 4.1. Analysis of Cross-Border Branding and Branding of Areas with Geographical Peculiarities

In recent decades, through various formations with predominant the one of the Euroregion, cross-border cooperation has been developed and established throughout Europe, while the Interreg Program in particular has made a decisive contribution in this direction. Realizing as their main responsibility the restraint of the population and also attracting new residents, investors and visitors, the cross-border areas recognize the cross-border place branding as an important tool in this direction. At the same time, both political leadership and place branding experts have developed a wide variety of cross-border place branding strategies. However, the literature on the challenges specifically addressed in the development of cross-border place branding is still very limited. Hospers (2006) only states that in addition to the physical and legal boundaries, the "Mental Borders" must be crossed in order to create a truly single cross-border area and thus the branding of this area makes sense.

However, it is worth firstly answering the question what cross-border areas are and how they created. From a regulatory point of view, cooperation initiatives at local level are seen as a process of strengthening the role of the regions vis-à-vis the central state. In the

same context, the cooperation of local actors on both sides of the border marks the transition to a new era, where the development of cross-border policies is now taking place at regional level, and not at national level as in the past, especially in the fields of transport and spatial planning. Seeing with particular interest the emerging trend, the European Commission has gradually developed funding tools to facilitate these local and regional initiatives.

As a result of the above, cross-border areas could be defined as potential areas, inherent in geography, history, ecology, ethnic groups, economic potential and so on, which however are disrupted by the sovereignty of the governments that govern each side of the borders<sup>15</sup>. We could add that the cross-border regions of Europe, which for years lagged behind due to their geographical location, have recently been relocated to their central states using financial tools such as Interreg.

However, as noted by Hospers (2006), many of the (cross-border) areas involved in branding initiatives are merely "ideal" spaces with little to do with historical or socio-cultural reality, as perceived locally. Moreover, while we would expect that the initiatives for the promotion of a single cross-border identity as a whole are bottom-up processes that take place at local level, in many cases it is understood that national or international (European) organizations play key roles. In the spirit of this finding, Perkmann (2003) defines the cross-border area as the institutionalized cooperation - to a greater or lesser extent - between competent "sub-national" authorities on both sides of the border. Perkmann also considers that the majority of cross-border collaborations arise in the effort of local to take advantage of financial opportunities provided by the European Union, such as the Interreg Program. Accordingly, the ever-increasing interest in cross-border branding is significantly related to the above cooperation initiatives. Especially in cases of remote and / or less developed cross-border regions where economic growth is one of the main pillars of their strategy, cross-border place branding is used to give content and substance to cross-border cooperation.

In 2013, Witt and Braun (Witt, J. and Braun, E., 2013) in chapter 8 of the book *Inter-Regional Place Branding: Best Practices, Challenges and Solutions* by Zenker and Jacobsen, in an attempt to interpret and analyze interregional and cross-border place brands in Europe, classify cross-border branding initiatives into four categories:

- The first category includes the cases where there is a recognizable cross-border identity (brand), but its name and related promotional material have not been widely communicated to the target audience.
- The second category concerns the cases where there is a visual and verbal identity (logo and slogan) which is already widespread in the target audiences.
- The third category refers to the cases where while there are fully developed branding strategies, they are not implemented systematically.

<sup>15</sup> Definition «a potential region, inherent in geography, history, ecology, ethnic groups, economic possibilities and so on, but disrupted by the sovereignty of the governments ruling on each side of the frontier» (Council of Europe 1995 - reported by Perkmann 2003, p.156)

<sup>16</sup> Original definition «... a more or less institutionalized collaboration between contiguous subnational authorities across the borders» (Perkmann 2003, p.156)

- The fourth category includes cases of cross-border areas with branding strategies, which, however, have not reached a satisfactory level of implementation.

In addition, Witt and Braun (2013) give us a picture of the geographical dispersion of cross-border branding cases with the Regions of Germany and Switzerland being involved in the largest number of cross-border brands, namely in 6 Germany and in 5 Switzerland. Respectively, regions of Austria, Czech Republic and Sweden participate each in three (3) cross-border brands, followed by Belgium, Denmark, Finland, France, Hungary and the Netherlands.

In the same article, Witt and Braun (2013) report the case of the Oresund Region (Denmark-Sweden maritime cross-border region) as the first systematic place-branding development strategy in 1999 (Witt, J. and Braun, E., 2013). This bibliographic review shows that with the active involvement of local authorities, academics and other stakeholders on both sides of the two countries' maritime borders, the creation of a functioning cross-border area has been achieved. This success benefits, until today, the increased employment rate, entrepreneurship, research and development and all sectors across the country and for all residents of the cross-border area, offering benefits at both regional and national level.

In the following years, based on this model, the promotion and creation of other such strong brands was sought with indicative cases those of the Arctic Circle, the Baltic Sea region, Helsinki-Tallinn, etc. In their work, Witt and Braun recorded and examined seventeen (17) cases of cross-border branding development, including the Rhodope-Aegean region (which covers the Greek-Bulgarian border). These studies show that:

- 10 out of 17 cases of cross-border branding development were institutionalised Euroregions.
- 6 had made significant progress in implementing their branding strategy, 5 had communicated their brand wider to the target groups and 5 had an already recognized identity.
- 13 out of 17 had as main motivation (for the cross-border branding creation) the attraction of investors and 12 out of 17 the attraction of tourists.

It should be noted that according to the studies' results, in addition to attracting investors and visitors-tourists, the next motives for the development of cross-border branding were the retention of the local population in their place and the attraction of students.

Nearly 20 years after the creation of the first cross-border place branding in Europe, there is a growing tendency for policy makers and decision-makers to keep on developing initiatives and actions in order to create a unified cross-border brand, in cross-border areas, both in local and regional level, acknowledging the recorded benefits.

## 4.2. Cross-border Branding in Europe: Initiatives and Good Practices Developed and acknowledged

Although it is understood from the literature review above that there is a number of cases of cross-border branding development in Europe, in this paragraph we have chosen to present initiatives and good practices where cross-border cooperation is focused on cultural and environmental heritage and tourism development.

### 4.2.1. Two countries One destination

The border area of Galicia (Spain) and northern Portugal is a relatively isolated area with limited access and a special geographical terrain. At the same time it maintains a very rich natural and cultural heritage with the river Duero (or Do Douro in Portuguese) being its main connecting feature and main resource for exploitation.



Figure 3: The Border Region of Galicia (Spain) and Northern Portugal, with the river DUERO (DO DOURO in Portuguese) (source: <http://www.interregeurope.eu/>)

The central support entity for cross-border cooperation and development in the region is EIXO Atlantico. It has been active in the region for more than 25 years having members 35 local authorities in Galicia and Northern Portugal (including Porto, Braga, etc.), EIXO Atlantico's strategy for tourism has the central motto "Two Countries, One Destination" and focuses on the promotion of local tourism, primarily utilising the internal market of 7 million inhabitants of the Euroregion, where through actions it highlights and promotes the identity of the region, encouraging citizens to move around for a total of 52 weekends a year. Joint exhibitions and seminars, with common tourism promotional material, are the main support tools for the promotion of cross-border tourism, while within the framework of the Interreg Program since its implementation in 2000, significant investments have been made for its cultural, environmental and tourist promotion.

#### 4.2.2. Valga-Valka Twin Cities: one town, two states

The Latvian city of Valka and the Estonian city of Valga are considered twin cities, as they are one city separated by the Estonian/Latvian border, using the slogan "1 city, 2 states". Until 1920 there was one city but from 1920 and during the Soviet period it was divided. With the extension of the Schengen Agreement and the abolition of the Estonian-Latvian border in 2007, all border crossings were eliminated and the road between the two parts of the cities was opened.

During the period 2005-2007, in the framework of the project "Valga-Valka: 1 town, 2 states", a joint development plan was prepared and implemented, with a common marketing strategy and a place branding, while the Valga-Valka Joint Secretariat was established. In the following years, mainly utilising the Interreg Program, existing and/or new common infrastructures were improved; the most important project was the renovation of the Valga-Valka railway station and its interconnection in 2012-2013, with trains from both countries (Estonia and Latvia). Now, residents and tourists can change trains at a common station. Continuing their cross-border co-operation, another major project was decided, that of creating a single common urban space with squares and sidewalks, which will be completed in the near future.



Figure 4: The cross-border area of the Valga-Valka twin town. One town, two states (source: <https://visitvalgavalka.com/>)

#### 4.2.3. Three million people, four countries - One regional brand

With a focus on a common water resource - Lake Constance - the nine regional authorities of Liechtenstein, Germany, Switzerland and Austria adjacent to the lake created a single brand identity under the name "FOURCOUNTRYREGION BODENSEE" as a result of a participatory process within the project "International Economic Area Lake Constance" (2010) and with the aim of establishing and developing their cooperation in a variety of sectors including education, employment, entrepreneurship, tourism and



protection of the natural environment. It is an identity that has been established in the consciousness of the citizens of the four countries around the lake, who perceive their life in this single cross-border area as an opportunity. And this is easily understood through the testimonies of dozens of people who live, study and work in the area as presented on the official website <https://www.vierlaenderregion-bodensee.info/en/>.



Figure 5. The visual identity of the cross-border area around Lake Constance  
(Source: <https://www.vierlaenderregion-bodensee.info/en/services/about-us.html>)

#### 4.2.4. Regio Insubrica: A border that unites

The Labor Community Regio Insubrica with the slogan "a border that unites" includes six provinces on the Italian-Swiss border around the three pre-Alpine lakes and aims to promote cross-border dialogue and co-operation in the region, with a common starting point - across national borders – the common history, culture and language (Italian). To achieve its goals and with a bottom-up approach, the Labor Community Regio Insubrica has set up and operates on a regular basis four thematic labor banks - (i) area, environment and mobility, (ii) local actors, (iii) economy, work and education; and (iv) tourism, culture, sport and leisure - inviting public and private actors, as well as associations operating in the region, to a joint dialogue. In addition, for specific projects and actions, it sets up "fixed-term" working groups on a case-by-case basis<sup>17</sup>.

<sup>17</sup> <https://www.regioinsubrica.org/>



Figure 6: the map of the cross border area Regio Insubrica  
(Source: <https://www.regione.piemonte.it/web/pinforma/notizie/al-piemonte-presidenza-della-regio-insubrica>)

#### 4.2.5. Pirineos-Pyrénées: two countries, one place... one unique experience

The European Territorial Cooperation Group "Espace Pourtalet" has established a single tourist destination in the Pyrenees in the framework of the project InturPYR "Tourism innovation for a unique destination in the heart of the Pyrenees". The project is implemented within Interreg PROCTEFA programme shaping a comprehensive place branding and marketing strategy (<https://www.pirineospyrenees.com/>).

In particular, the objectives of the project were:

- the creation of a single tourist destination in the heart of the Pyrenees, based on its special characteristics: a sustainable and quality destination, which will offer sports and nature activities all year round, a destination accessible to all,
- encouraging the exchange of practices between tourism professionals,
- the creation of cross - border tourism products and their promotion and
- the international promotion of the Pyrenees as a single cross-border destination.





Figure 7: The visual identity and the slogan of the Pirineos-Pyrénées region (Source: <https://www.pirineospyrenees.com/>)

### 4.3. Cases of Marketing and Place Branding in Areas with Geographical Peculiarities

#### 4.3.1. The case of Alba Iulia in Rumania<sup>18</sup>

The Alba Iulia (RO) practice gives voice to a challenge faced by many small or medium-sized cities from Europe: how to gain visibility in a changing economic context while promoting its cultural heritage. With a long and rich historical and cultural heritage, Alba Iulia built an integrated branding approach, directly linked with the city's strategic planning process.

Starting with the creation of a modern visual identity (logo) and verbal message (slogan) for the city and then with the development of a branding manual addressed to the local economic actors, Alba Iulia became the first Romanian city that developed a coherent marketing strategy, as well as a comprehensive travel toolkit consisting of a tour guide, digital application, website and social networking pages to promote tourism.

Through a participatory process and with the commitment of the institutions and companies of the city in the implementation of the marketing strategy, it was achieved to secure sufficient resources for the utilization and promotion of the cultural heritage with the most important the funding of 60 million euros for the restoration of its Acropolis. Moreover, increased its population (thanks to the creation of new employment opportunities) by 10,000 inhabitants in five years, and the number of visitors by 65% during the same period.

<sup>18</sup> <https://urbact.eu/city-branding-making-invisible-visible>

As part of the above transformation, in 2012 it received the "European Destination of Excellence" award and in 2018 it was recognized as the first "smart city" in Romania.



Figure 8: The digital transition of Alba Iulia

(Source: <https://hub.beesmart.city/city-portraits/alba-iulia-smart-city-solutions-for-a-digital-city>)

#### 4.3.2. The case of Landsbyggare in Sweden<sup>19</sup>

Landsbyggare is located in the High Coast of Sweden. The primary goal of its marketing strategy was to activate businesses and non-governmental organizations operating or wishing to operate in Landsbyggare, with an emphasis on people between the ages of 25-50.

The strategy to reach this goal has been a mix of place branding and place development, based on three pillars:

- Skills development and networking of organizations and entrepreneurs, organization of seminars, community building and development of innovation. Establishment of the annual Landsbyggare of the Year award for individuals and entrepreneurs who contribute to the creation of a more vibrant and creative countryside.
- Inspire and broaden the target group of people that potentially want to move to the High Coast of Sweden, through social media campaigns, focusing on the experience of people who already live and work in the area.
- Formation of positive opinion and perception of rural areas in the High Coast of Sweden in the context of organizing workshops, participating in conferences and exhibitions, etc.

<sup>19</sup> <https://placebrandobserver.com/eva-jilken-interview/>



Figure 9: The case of Landsbyggare in Sweden  
 (Source: <https://www.leaderhogakusten.se/landsbyggare/inspireras/>)

#### 4.3.3. The case of Bled in Slovenia<sup>20</sup>

Bled is a lakeside town of about 8,000 inhabitants on the Slovenian-Austrian border, 50 km from Ljubljana. It is an attractive tourist destination both in the domestic tourism market and internationally.

Its tourist identity and strategy has been developed on the principles of sustainability, and is considered one of the greenest destinations in Europe.

For several years, Bled has been investing in and supporting green tourism as part of its wider vision for the sustainable development of the city, and was awarded the Gold Label of the Green Plan for Slovenian Tourism. Also, in 2019 he received the title of the second best place with sustainable development in Europe in the context of his participation in the international non-governmental project Green Destinations, while since 2008 is a member of the Pearls Group that aims at sustainable mobility.

What stands out in the case of Bled is the practical commitment of residents, businesses and organizations to adopt an essentially environmentally responsible way of life, which is reflected in every aspect of their daily lives: sustainable transport and limiting the use of cars, reducing the use of plastics and reducing of litter, swimming only in the parts of the lake that are allowed so as not to destroy its flora.

Finally, in the context of tourism marketing, Bled has developed the "Ask me, I am local" action in which locals become guides for eight hours a day providing basic information

<sup>20</sup> <https://www.bled.si/en/inspiration/green-bled/>

about the sights, restaurants, transport links, etc. to guests and visitors especially during the summer months, while finally informing them about the basic rules of "environmental" behavior during their stay in the green Bled.



Figure 10: The case of Bled in Slovenia

#### 4.4. Comparative evaluation of good practices and their connection with the case of the Municipalities of Pilea-Hortiatis and Mandan

Studying the Greek cross-border area, despite the individual initiatives of utilisation of common cultural and environmental resources, (eg the cases of cross-border co-operation focusing on Nestos and the Rhodope Mountains on the Greek-Bulgarian border, Axios-Vardar on the Greek-Democracy of Northern Macedonia border, Prespa Lake as a resource distributed between Greece, Albania and Northern Macedonia), until today no complete cross-border brand and marketing strategy has been recorded on Regional or inter-regional level.

However, after about two decades of cross-border co-operation between the Greek and Bulgarian institutions, the transfer of good practices such as that of the Spanish-Portuguese border (Duero-Douro) and the French-Spanish border (Pirineos-Pyrénées) could contribute to promoting a single tourist destination in the Greek-Bulgarian cross-border region, which shares important resources such as the Rhodope Mountains and the Arda River.

Observing the Municipalities of Pilea-Hortiatis and Madan on the map, one finds that they are separated by a distance of several hundred kilometers within the border area of Greece-Bulgaria, but they are united by a special industrial heritage integrated in their rich cultural and natural environment, capable of being used as a highly attractive tourist resource.

Given that these are two Municipalities where tourism has not developed significantly, the process of planning and developing their tourism strategy can begin by utilizing good practices of other cities and regions with similar characteristics.

The case of Bled with a clear focus on green and environmentally responsible tourism could be a source of inspiration for both municipalities that also have rich natural resources, while, as in the case of Bled, are not far away from the large urban centers of the regions.

Similarly, the case of Landsbyggare in terms of the practical commitment of local actors, entrepreneurs and citizens to their participation in local development, shaping the place identity and attracting visitors, but also new residents and investors, could undoubtedly be applied in the case of Madan but also in the mountain villages of the Municipality of Pilea-Hortiatis.

Finally, the case of Alba Iulia would be worth further study and engage those involved in design in the Municipality of Madan as a model for the rebirth and integrated development of a place that for many years was degraded. The utilization of the endogenous potential of the city, as well as the special cultural heritage contributed decisively to the success of the project, which will remain in the perception of all as a collective achievement.



## 5. Quarries and Mines as a part of Geological and Industrial Heritage

### 5.1. Geological heritage and geotopes

The Earth's surface has proven to be a dynamically evolving system, consisting of elements and processes that are in constant interdependence and interaction. Rocks, fossils, geomorphs and landscapes are the result of this interaction of endogenous and exogenous processes that originate from the interior of the earth, the hydrosphere and the atmosphere. These data are evidence and presumption of the long-term geophysical evolution of the Earth's surface. All these abiotic elements make up the Geological and Geomorphological heritage of the earth.

Geological heritage<sup>21</sup> is a relatively new concept, which presupposes the adoption of a comprehensive conception of nature, but also a different conception of the approach to the environment in general.

**Geological - geomorphological heritage is the set of geotopes, deposits, forms and processes, which compose the geological history of each region.** The geological - geomorphological heritage is still described as geology and geomorphology in their natural space. The concept-perception of the preservation of the geological-geomorphological heritage is a cultural concept.

The **"geotope"** is the basic unit of geological and geomorphological heritage. The term "geotope" is introduced for the first time in the German bibliography as a loan from the Greek words "Land" and "place" and in analogy with the use of the already established term "habitat". The term geotop (Geotop, German) is synonymous with the English term geosite (Geo - location). **Geotopes are the Geological Geomorphological Heritage and compose the geological history of each region.** Geotopes are typically referred to as the "books of the Earth". In every place on our planet there are geological locations of geotopes that tell us the history of the Earth in the given geographical area. The places that constitute our geological heritage compose the unique geological history of each region and display its geodiversity. Each of these geological recordings narrates a snapshot of the geological processes of the long natural history of the earth.

Geotopes as a concept have a dynamic meaning and are as many as we can highlight and interpret with the appropriate information, educational and informative material. Interpretation is therefore a crucial concept for the development of geotopes, their conservation and management. In other words, geotopes and geoparks include in their definition, not only the geological and geomorphological element, which is reflected in nature, but also their interpretation, promotion and management, concepts with which their protection and conservation is connected.

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<sup>21</sup> <http://igmegeoheritage.weebly.com>

The subject of the geological heritage preservation is the preservation of the geotopes, ie places from which the geological history of a region is deduced. The preservation of the geological heritage is directly related to the forms of conservation of both the natural and the built environment. Its emergence is a fundamental need and its integration into any strategies of integrated nature conservation and environmental protection is essential for their sustainability.

The evaluation of geological monuments from a scientific, educational, cultural or aesthetic point of view implies their classification into one of the following five categories:

- World,
- European,
- National,
- Regional, and
- Local interest.

Geodiversity is a more general concept and means that the use of natural resources must be done prudently, in accordance with the basic principles of sustainability. These principles are based on the recognition that we must meet the needs of the present, while ensuring that future generations have the same opportunity.

For the majority of citizens, however, even with specialisation in environmental sciences or general ecological sensitivities and interests, the concept of natural heritage seems very narrow and is limited to biological and ecological definitions and processes. The preservation of geological heritage and geodiversity, despite its proven importance, is often neglected or taken for granted so it is considered unnecessary to be studied in educational programs.

The idea of preserving the geological heritage aims to preserve the natural and cultural elements of our geological heritage, which include:

- **The location:** natural resources in place,
- **Prints and maps:** historical archives of natural and human history,
- **The object:** collections of minerals, fossils and rocks.

Main reasons for the preservation of geological heritage	
<b>For science and research</b>	Raw materials for the science of Geology are rocks, minerals and fossils. Accessing and reviewing such sources (eg physical sections and sites) as science and technology advance is essential to researching and formulating or confirming a scientific theory. Their loss hinders the development of science. Geotopes are a constant source of new data and added knowledge, a laboratory of nature, which takes place in parallel with the progress of geological science and the development of new scientific techniques
<b>For education</b>	Geotopes are also useful in education. They are a very good experiential tool and the necessary natural "laboratory", both for teaching geology, and for students awareness and environmental

	<p>education at all levels of education, but also for lifelong adult education.</p> <p>The experiential approach and the study of geological characters in their place facilitates the understanding and creation of the necessary receiving representation of more general and more complex geological processes. It is much easier for the student to understand what a rift is if he sees it in its natural place, than from descriptions and photographs in a sterile bibliographic approach. Geological heritage education and involvement in its conservation encourages the development of a positive attitude towards nature as a whole. It also helps to gradually eliminate indifference, eliminating the risk of irresponsible destruction and loss of important geological features. Conservation of geotopes can help to make geology and geological heritage known, provided it is included in nature conservation programs and plays an important role in educating the general public.</p>
<b>For culture and ecology</b>	<p>The concept of heritage itself, as well as the conservation and protection of geotopes has a strong cultural dimension. Geotopes are important for culture and ecology because:</p> <ul style="list-style-type: none"> <li>▪ They are the fundamental background and an important parameter of monuments, cultural landscapes and habitats.</li> <li>▪ They contribute to the interpretation of chosen sites for the creation of archaeological and cultural monuments, as well as to the interpretation of the creation and development of habitats.</li> <li>▪ They also contribute to the interpretation of myths and legends, which are often due to natural phenomena, unexplained with the knowledge of earlier times (geomythology).</li> </ul> <p>For local and national museums, the geological sites preservation makes it possible:</p> <ul style="list-style-type: none"> <li>▪ the gradual completion of their collections with reference samples,</li> <li>▪ the presentation of the locally found minerals, fossils and rocks, in combination with their place of origin, and</li> <li>▪ the preservation of specimens of natural and cultural heritage.</li> </ul> <p>For casual collectors and amateur geologists, the locations provide:</p> <ul style="list-style-type: none"> <li>▪ opportunities for collecting rocks or fossils at designated locations, provided that such collection is compatible with codes for responsible and environmentally friendly behavior;</li> <li>▪ opportunity to gain new experiences and knowledge.</li> </ul>



<b>For alternative tourism and geotourism</b>	<p>Geotopes can be destinations for a quality themed tourism or hubs of wider geographically connected sites: this case explains the creation of geoparks. A geopark combines activities for scientific research and extensive environmental education. It also enables the development of the local economy by creating new jobs, as well as new economic and sustainable approaches, linked to the particular characteristics of the geotope. Finally, it favours the creation of new directions in tourism ("geotourism"), trade and the arts ("geoproducts", such as the making of original handicrafts or imitation fossils and souvenirs), related to geology.</p> <p>Initiatives for the creation of geoparks and their management status must integrate the conservation of the geological heritage into a comprehensive policy for local or regional socio-economic sustainable development.</p> <p>Geoparks are areas that include a sufficient number of sites with special geological features, recognised and of significant scientific value, rarity and beauty that reflect the geological history of an area. Their interest may be in addition to geological, and ecological, archaeological, historical, or cultural. Through them, the preservation and protection of the elements of geodiversity is sought, in combination with the sustainable development of the region.</p> <p>Greece has five geoparks - the Lesvos Geopark, the Psiloritis area, the Vikos - Aoos National Park, the Helmos - Vouraikos National Park and the Sitia area - recognized as "UNESCO World Geoparks", with a program of the Organization which includes a total of 120 geoparks in 33 countries worldwide.</p>
<b>For aesthetics and leisure</b>	<p>The geotopes must be preserved for reasons of aesthetic elevation and recreation, which offers their natural beauty and enhances its interpretation. These factors are very important for man, his spiritual rest and pleasure. In order to preserve the geological heritage, amateur groups and associations can be created with activities related to rocks (eg discovery of a rock, adoption of a geotope, educational excursions and recreational excursions).</p>
<b>For self-worth or the value of existence</b>	<p>All the values mentioned above and the reasons for their protection belong to the anthropocentric conception of nature, which its critics consider to be technocratic or utilitarian. The naturalistic conception, on the other hand, argues that, whatever benefit arises for man, we must support the preservation of nature for its very value, that is, for its existence</p>

Recently In Greece, there has been increased mobility for the promotion of geological heritage and the management of geotopes, mainly through the work of the official state

entity which is the Institute of Geology and Mineral Exploration - IGME. Its work is multidimensional and concerns the effort of the systematic registration of geotope with criteria of their geo-scientific, educational or tourist value, the identification of georoutes, the global and European network promotion and integration of Geoparks, the selection of areas as potential geoparks etc.

## 5.2. Conservation and Promotion Policies

Geological heritage conservation and promotion policies are an integral part of an institution, a region or state strategic planning. Geotypes need to be selected, recorded and some of them protected, either through legislation and policy planning, or through public awareness, student environmental education, etc. In these various forms of conservation, non-governmental organisations and researchers may involve and the scientific institutes that deal with this subject, but even more the local government of every degree, the local communities, the local - national environmental organisations and citizens of all ages with an emphasis on young people and children..

In Europe, the idea of geodiversity is much more widespread (in relation to Greece), although we can not say that it has reached the level of biodiversity or other forms of conservation (eg archaeological, cultural, ecological). It was not until the early 1980s that France legally established protected areas with the main object of protecting the geological heritage, called the "Réserve Naturelle Nationale Géologique" (Geological Reserves), following the law in 1976 on the protection of nature where there is a report on the protection of palaeontological stocks. The preservation of the geological heritage, in some countries, is now integrated into the policy of conservation and protection of the environment, as an essential environmental component. The nature conservation approach is thus holistic and there are relevant policies of states and organisations.

In Greece, the term "geotope" appears relatively recently, where during the discussion of a law on biodiversity protection, following a proposal by the Museum of Natural History of the Petrified Forest of Lesvos, the relevant terminology was first introduced in a law of the Greek state. In particular according to law 3937/2011, "Geotopes are the geological-geomorphological structures that constitute natural formations and represent important moments in the geological history of the earth, are important witnesses of its long evolution or show recent natural, geological processes that keep on evolving on the surface of the earth". Earlier, Law 1650/1986 had already referred to specific categories of geological and geomorphological appearances as objects of protection, but without describing the process of their characterization. Along with the legislative developments,, in recent years, a serious and systematic effort is being made to promote the geological heritage and the management of the geotopes.

Greece, due to its geographical location, in the area of convergence of two tectonic plates, presents a variety of forms and formations, which are considered valuable for conservation for world science and research. Also, in Greece, geotopes of unparalleled aesthetic, cultural, ecological value and irreplaceable scientific importance are located. Unfortunately, there are cases where these places with valuable information about the distant past of our place are irreparably destroyed by ignorance.

The first attempt to record natural monuments in Greece was made in 1982, by the Institute of Geology and Mineral Exploration - IGME. The result of the registration was the creation of a list of about fifty places ("geological monuments", according to the existing legislation at the time), which was registered with the Ministry of Culture. This recording, without being systematic, had very advanced proposals, but without continuity. In 1995, a new activity was launched at IGME, which was widely disseminated and continues systematically to this day, in various areas of geological heritage conservation.

Finally, at international level, the conservation policies of the International Organisations include a wide range of Institutions and Companies dealing with issues related to the conservation of geological heritage and geotopes. The most important of these are UNESCO, the International Union of Geological Sciences (IUGS), ProGEO, the European Geoparks Network, the GeoSEE Task Force and the Council of Europe.

<b>Bodies and organizations dealing with the conservation of geological heritage and geotopes internationally</b>	
<b>UNESCO</b>	The United Nations Educational, Scientific and Cultural Organization (UNESCO) support Member States in creating national geoparks, with the ultimate goal of including them in the UNESCO Global Geoparks Network. This initiative belongs to the UNESCO Directorate of Geosciences and provides Member States with support for sustainable management and enhancement of their geological potential.
<b>International Union of Geological Studies</b>	The International Union of Geosciences (IUGS) established the Geosites Program in 1994. The aim of the Program was to activate the global geological community and its participation in the provision and utilization of data to support national and European initiatives for the protection of geological resources for scientific and educational purposes <sup>22</sup> . Since then, it has been systematically cooperating with UNESCO in implementing actions and initiatives in this field.
<b>European Geoparks Network</b>	The European Geoparks Network was established in 2000. It consisted of four (4) areas with significant geological potential, belonging to respective European countries: France (Upper Provence Geopark), Greece (Lesvos Fossil Forest Geopark), Germany (Gerol Geopark), Spain (Maestrazgo Geopark). This network, which currently has 16 members in 9 countries of the European Union, implements the idea of geoparks in Europe in collaboration with UNESCO ProGEO.

<sup>22</sup> <https://geoheritage-iugs.mnhn.fr/index.php?catid=7&blogid=1>

<b>ProGEO</b>	The European Association for the Conservation of Geological - Geomorphological Heritage (ProGEO) started its activity in 1988. It is the only European scientific association with the objective of preserving the geological heritage. It has working groups in most European countries and organises many international conferences.
<b>GeoSEE Task Force</b>	The GeoSEE Task Force is a coordinating body, in a way, with members - representatives from UNESCO, IUGS, the European Geoparks Network, ProGEO, the International Union of Geographers (IGU), as well as representatives of organisations for the conservation of geological heritage from Oceania and Africa.
<b>Council of Europe</b>	The Council of Europe is known for its initiatives on both the conservation of the natural and man-made environment and the quality of human life. With regard to geological heritage in particular, the Convention on Biodiversity, signed in Rio in 1992, and the creation of a text of recommendations, encouraged Member States to preserve their geological heritage (May 2004).

### 5.3. Geotourism and Sustainable Urban Development

Geotourism is a new form of thematic cultural-environmental tourism that can be developed in areas with important geological monuments that can attract visitors-tourists of special interest.

The basic principles on which the idea of geotourism is based are:

- To promote the value of the geological heritage of an area and to contribute to the protection and preservation of the natural environment and the special characteristics that it has as a main element and not as a competitor of the development process.
- To bring to the fore the comparative advantages of an area, which form its special physiognomy and identity and to highlight the potential of rural areas, contributing to the balanced development between urban and rural areas.
- To connect the elements of the natural environment with the geological heritage, the landscape, as well as the cultural monuments of each area.
- To be, in this way, a tool of an integrated social and economic development of the region with the activation of the local human resources.

The most important characteristics of geotourism (as a form of ecotourism) are:

- It is not limited to certain forms of tourism but addresses to any tourist activity.
- It does not exclude any change in the environment nor does it imply reducing or stopping tourist activities so far. It accepts the changes caused by tourism activities

as long as they do not harm any of the main elements of tourism, the natural environment and the human social life.

- It does not accept expanding and intensive tourism activity, at any cost.
- It does not require large investments, while it does not damage but complements the already prevailing tourism development practices.
- It does not aim at short-term benefits for the few, but at long-term benefits for the many, based on sustainable development (K. Hadjivgeris, 2005).

The principles of geotourism based on local sustainable development	
Integrated approach to tourism management	The development of geotourism will take into account the limitations of the geological, natural, social and cultural environment's ability to accommodate visitors. To accomplish that, the impact of tourism activities must be systematically studied, managed and assessed to take into account the environmental, economic and social needs of the host region.
Conservation of resources and reduction of waste	Geotourism will be managed in such a way as to minimise the use of natural resources (water, energy), to reduce the production of associated waste and to promote the use of sustainable means of transport (environmental efficiency strategy).
Participation in the work of preserving and upgrading the natural and cultural heritage	Geotourism will create new development opportunities suitable for the environment and the local character such as the conversion of abandoned buildings. Where appropriate, plans will be established to encourage those who benefit from tourism to participate on a voluntary basis in the preservation and upgrading of geological, natural and cultural heritage.
Involvement of the local community	The local community should be involved in the decision-making process for the development of sustainable geotourism and the management of tourism activities.
Support the local economy	Geotourism will contribute to the local economy by promoting local employment and using local products or skills. Geotourism can create additional demand in some traditional sectors and local resources by creating new added value.
Local employment support and upgrade	The preservation and promotion of the local heritage in a tourist product, requires highly trained human resources, while utilising the local traditional know-how.
Development of a suitable and quality tourism product	The activities will be based on the inherent characteristics of the area, encouraging the appreciation and enjoyment of the geological, natural and cultural heritage and requiring development on an appropriate scale, based on specific quality and authenticity standards.

Training and interpretation	Tourism products or facilities should aim to provide education and interpretation, especially for the benefit of young people and students in order to encourage people to understand and learn more about geology and the general environment through the use of modern media.
Responsible marketing and promotion	Marketing and promotion activities of geotourism will help increase visitors' awareness of land conservation and environmental protection and will strengthen the respect for the traditions and customs of the area (Katotriatou E, 2002).

#### 5.4. Geotourism and Rehabilitation of Quarries

Mining and quarrying meet vital economic and social needs. However, these are activities that cause drastic changes in the landscape and environment of areas rich in minerals and ores as they can drastically change the natural landscape.

The installation of such an activity results in an interruption of the continuity of the landscape, which begins with the removal of vegetation and ends with the complete deformation of the terrain caused by the creation of excavations and the deposition of sterile materials.

In Greece, due to the abundance of decorative rocks and inert material, intense quarrying activity has been developed from antiquity until today. The historical value of ancient quarries requires their preservation, but the environmental problems created by the operation of modern quarries need to be resolved in the best possible way.

The lack both of environmental awareness and a strict legal framework led to the uncontrolled operation of numerous quarries which were created very close to the cities. The continuous expansion of the residential area in many cases "trapped" the old quarries in the urban environment, where they were then forcibly abandoned, without even taking basic remedial measures.

Traces of this activity have been imprinted on the environment and have altered its characteristics. In many large and smaller Greek cities, abandoned quarries create many and complex problems. In addition to visual pollution, many of them are sources of contamination due to their operation as uncontrolled landfills, while they also present an increased risk due to the high steep slopes.

Exploitation of old quarries is a multidimensional problem: in addition to eliminating the problem and prioritising the needs that should be met, environmental, legal, technical and economic factors must be taken into account.

Both the Greek and the international experience in the development of techniques for the utilisation of abandoned quarries, which is constantly expanding, includes a wide range of solutions from simple earthworks and tree plantings to their utilisation for landfills, parking lots, craft parks, theaters, etc. The desired solution is the optimal choice or combination of solutions based on the special conditions and the resources of each region (Papaioannou M, 2016)

#### 5.4.1. The Environmental Impacts of Abandoned Quarries

After the completion of the mining activities, there are often phenomena of abandonment of these areas. This is usually due to expiration, licenses and non-compliance with environmental conditions. Especially in the very old quarries where the start of the mining activities was not accompanied by an environmental study, the phenomenon of abandonment was even greater.

A key reason for rehabilitating a quarry is the negative environmental impact of the abandonment, after the quarry has ended. Quarrying processes have negative effects on the environment, which focus mainly on visual pollution, alteration of the terrain, possible groundwater pollution, safety problems, lack of aesthetic continuity, etc.

Quarries and mining areas, which remain unrepaired, damage the land extensively, and can adversely affect the natural and man-made environment.

Different types of rocks and different mining methods can damage the soil and topography in different ways. The condition of the soil after extraction can be classified into the following four categories:

- cliff,
- steep slope,
- roof and
- square,

concepts that indicate the damage caused.

The removal of natural flora and fauna and the failure to rehabilitate the area can lead to soil erosion, damage to ecosystems, and soil and groundwater pollution. In addition, the exposure of rocks, without taking into account the surrounding environment, inevitably creates "eye sore" (surface eye) and aesthetic devaluation of the landscape.

Abandoned landfills, used uncontrollably as municipal landfills, can cause groundwater and surface water pollution as well as fires. At the same time, they can create conditions dangerous to the health of the neighboring areas population.

At the same time, abandoning the quarries poses many safety risks such as rock falls, landslides, and unprotected areas. The removal of the soil material does not allow the natural restoration of the area resulting in negative effects on the flora and fauna of the area (Tsochatzi D, 2017).

#### 5.4.2. Quarries restoration

The process of rehabilitating a quarry depends on many parameters and is a complex problem involving environmental, economic, legal and technical factors.

The term "restoration" has many different meanings and can refer to the undisturbed redefinition of the original ecosystem, including biological, chemical and physical elements (restoration), the return of disturbed areas to a stable state, which does not create adverse environmental effects (reclamation) (eg return of disturbed quarry areas



to designated land use after extraction, as required by the permit), or appropriate site design to accommodate a new use (rehabilitation)

The restoration of mines and quarries requires the construction and design of the topography for the renewal of a functional ecosystem capable of being able to maintain itself. Ensuring the stability of the long-term topographic reconstruction is a primary goal from both ecological and mining-mechanical point of view. Shaping the relief plan is without a doubt the most expensive part of any mining restoration project (Tsochatzi D, 2017).

The reuse, regeneration and more generally the reintegration of abandoned inactive quarries is an urgent need with the potential to bring significant benefits on several levels. Pathogens of the modern city such as dense construction, lack of free spaces and green spaces, etc. can be improved through the renovation of inactive industrial spaces, mainly due to their size and dimensions that make them suitable for hosting a wide range of new uses. When choosing this type of use, the viability of the project is important, the respect for its cultural value but also the mildest possible exploitation of the industrial landscape, as the interventions should be reversible with minimal socio-economic, cultural and environmental impact.

More specifically, it is important for the renovation to be compatible with the respective space, with the style and the architecture of the industrial spaces, to strengthen the historical memory, to respect its cultural value and the character of the environment in which it belongs. Depending on the case, such uses can be a variety of cultural and educational functions, multipurpose spaces, entertainment and sports facilities or a combination, as well as parks and green spaces (Papoutsas K, Kallimassioti S, 2019).

The quarry rehabilitation plan should be based on a clear set of objectives that reflect legislative requirements (as a top priority) and include local social, economic and environmental (including biodiversity) assessments for the future use of the site. Objectives must be technically and economically viable and the basic principles for setting them include:

- Land use sustainability after closure.
- Economic sustainability and potential positive economic impacts for local communities.
- The examination for the needs of the interested parties, both internal and external.
- The reintegration of space into the surrounding area - how the quarry should "blend" with the environment.
- Opportunities to restore and enhance biodiversity.

The objectives of the rehabilitation plan should be based on the specific characteristics of the mining area and should reflect:

- Legislative requirements in the region,
- Health and safety issues,
- The environmental and social characteristics of the quarry and the surrounding area,
- Biodiversity in the region,

- A quarry business plan - the technical achievement of the rehabilitation objectives will be affected by the way the quarry operates,
- The condition of the quarry area in the existing operating area,
- The characteristics of the area (geology and hydrogeology),
- The effects of its operation,
- A land use plan after closure.

Depending on the nature of the exploitation and the conditions created, restoration can serve productive purposes, be of a protective nature and facilitate recreation or even contribute to the establishment of wildlife.

So the characteristics of the area and the quarry create a multitude of options for future use. Indicatively, the creation of open theaters, museums, settlements, agricultural crops, landfills and fields, botanical gardens and even places for hiking, cycling or alternative sports such as mountaineering, climbing, sloping, etc. offering the option of constructing swimming pools, artificial lakes, wetlands and water-based recreational activities.

The criteria by which the design of the restoration will be decided arise from the analysis of the data, the possibilities and the constraints associated with the characteristics of the landscape and the environment. The assessment of these future solutions in an area can be done with:

- Site analysis to determine whether restoration is mechanically or environmentally feasible.
- "Cost/benefit" analysis to determine the return on investment of capital and the social, environmental and economic consequences of rehabilitation.
- Creative application of the principles of landscape architecture to achieve the degree of efficiency with which the benefits will be maximised and the conflicts with the environment will be minimised.
- Public meetings, where the opinion of the citizens (or at least groups – associations) that have special sensitivities and conflicting interests will be requested (Papaioannou M, 2016).

The restoration process is necessary not only because the morphology of the soil has been destroyed, but also because the natural, geochemical and environmental characteristics of the area have been differentiated. At the same time, the abandonment and non-regeneration of the quarry often leads to undesirable results both for the environment and the society.

The extraction process and the restoration process are two (2) completely independent processes; however the paradox is that the restoration planning should be done from the beginning of the quarry operation, so that the reuse of the sterile materials has been foreseen.

### 5.4.3. Quarry restoration methods

Alternative restoration plans according to Zervos (2013), can be grouped into the following main types of uses:

- Physical rehabilitation (revegetation, reforestation, etc.),
- Leisure (parks, sports facilities, outdoor theaters, etc.),
- Agricultural use (permanent or seasonal),
- Residential use (permanent or seasonal),
- Commercial use (shopping malls, warehouses, etc.),
- Industrial use (light or heavy),
- Landfills,
- Public benefit buildings (research or educational institutes, school groups, etc.)

Uses also could be the following combinations:

Main types of uses within the planning of a quarry rehabilitation	
Multiple land use	More than one use of the same category applied in the same area (eg use of a recreation area for sporting or cultural events).
Complex land use	More than one type of land use applied in the same area (eg the use of the same space for recreation but also for commercial use)
Temporary land use	Land use applied for a limited period of time until the conditions (natural or socio-economic) allow the installation of the final use (eg the use of an inactive Quarry as a landfill before the configuration as a recreation area)

In most cases, the restoration of the landscape of a mining area takes from 3 to 4 years and depends on the extraction method used, the parent material, the climate, the topography and the soil of the area. The recovery process consists of stages, each of which depends on the successful outcome of the previous stage (Lubke, 1993):

- Regeneration and shaping of the surfaces to be restored.
- Soil cover with plant soil, especially where the material is rough.
- Planting by mechanical means (hydroseeding) or manually.
- Planting trees and shrubs.
- Fences of the restored areas to protect the vegetation from grazing.
- Plant maintenance through irrigation and fertiliser supply where required.
- Management and monitoring of landscape restoration works in conjunction with production processes.

### 5.4.4. Institutional framework for quarry rehabilitation

In Greece, for the first time, there is a conversation about restoration of areas due to ore mining in 1968, but without issuing specifications for the entire Greek area. Then, with the Joint Ministerial Decision (JMD) 60039/8707/1979, the entrepreneur conducting the

operation is obliged to submit proposals for the possible reduction of the change of the basic characteristics of the environment, without again issuing specifications for these measures.

The first serious effort for the issuance of impact specifications and restoration of the quarry area is made in the year 1980, with the issuance of JMD 183037/5155/80 in application of Law 998/79 "On the protection of forests and forest areas in general". With the issuance of this decision, the environmental impact studies and their treatment are determined based on the specifications mentioned in the above JMC.

With the current legal framework:

- The quarry operators must rehabilitate the quarries in which they operate in accordance with the provisions of the Decision of Approval of Environmental Terms (AEPO) and the environmental conditions of each project. This restoration is carried out gradually within the time provided in the issued exploitation license.
- The operators of the inert substances quarries operating outside the quarries are obliged, by law, to submit, before the issuance of the exploitation license, a guarantee letter of obligations fulfillment, arising from the approved environmental restoration studies. In case of non-compliance with the above obligations, regardless of other sanctions, the letter of guarantee is forfeited in favour of the State.
- The restoration of the quarry environment is carried out by the operator, according to a special study, the specifications and schedule of which are defined in the JMC No. Δ10 / Φ68 / οικ.4437 / 1-3-2001. These quarries will cease to operate after the end of the time defined by the special study, within which the restoration is completed. This time may not exceed three (3) years.
- Failure to carry out the quarries rehabilitation, as defined in the approved environmental terms, implies the imposition of sanctions provided for in the provisions of Law 1650/1986 as in force and other applicable provisions regarding non-compliance with environmental terms. The environmental inspections for the control of the compliance of the quarries with the approved environmental terms and the current environmental legislation are carried out by the competent authorities according to the law, as defined in article 20 of Law 4014/2011, as in force.
- In particular, for the quarries that operate within forests and forest areas, according to article 36 of L. 4280/14 (which replaced article 52 of L. 998/79), it is provided that, in case the restoration of the natural landscape and the forest vegetation is particularly difficult, the exploiter is obliged to reforest an area of five times the area that will be indicated to him by the forest service. The non-compliance of the obligor with the above implies the imposition of the relevant expenses for the restoration to him. In case a letter of guarantee has been submitted, the procedure of forfeiture of the letter of guarantee is followed and deposit of the amount in favour of the Green Fund in the special code "Special Forest Agency", the amount would be available exclusively for restoration (Papaioannou M, 2016).

## 5.5. Good Practices for the Development of Visitable Infrastructure and Tourist Infrastructure in Quarries and Mines Internationally

The presentation of good practices for the restoration of quarry-mining sites and their transformation into visitable tourist destinations allows us to understand the mechanism of development and implementation of such operations as well as their long-term imprint on the local and perhaps national economy.

There are many different approaches to the restoration of quarry-mining sites that have been followed in Greece but mainly internationally. The following are typical examples of rehabilitation at both international and national levels.

### 5.5.1. Andreas Papandreou Park - Keratsini

The area where the "Andreas Papandreou" park is located today was an important complex of quarrying activities. Specifically, it was the Selepitsari quarry in the southern part of Mount Egaleo. For many years the area had been abandoned and was a source of infection. Its location at the southwestern end of the city allows it to attract a large number of visitors. The main goal of the project was its inclusion in a set of interventions in order to create a supra-local pole. Today the park is one of the most important green areas of the Municipality of Keratsini with an area of 43 acres.

The project was formed in three (3) phases of construction, in 1991 the works began, in 1995 the main building installations took place and was completed in 1998. The proposal concerned the restoration of the abandoned quarry and the creation of a space for relaxation, recreation and sports.

The park is bordered by the quarry fronts that in the northern part reach a height of 140 meters. On its northern borders is a football stadium, while on its eastern side is a 400-seat summer cinema. Other uses of the park that are mainly aimed at children of different ages are the sundial, the outdoor chess, the labyrinth with planting, the playground and an artificial lake. At the same time there are open green spaces, sidewalks and a refreshment room and there are services within the park that attract supra-local interest. Specifically, the Weightlifting Center and the Vocational Training Center of the Municipality of Keratsini in which a variety of cultural events and festivals take place.

The reuse of the inactive Selepitsari quarry did not focus so much on highlighting the industrial activity, as on adapting it to the landscape without altering it. As a supra-local pole of sports, leisure and culture activities, the park has helped to stimulate the local economy, as well as to attract people of all ages with significant social and environmental benefits.



Figure 11: View of Andreas Papandreou Park (source: [https:// www.pesydap.gr](https://www.pesydap.gr))

### 5.5.2. The Fokida Mining Park – Vagonetto

The Fokida Mining Park – Vagonetto<sup>23</sup> is located in Diaselo, Giona and Parnassos. The idea for its creation was born from the people who worked in the mines and wanted to preserve and exhibit the memories of the place - now inextricably linked to the bauxite mining process.

Its construction was started in 1998 by S & B Industrial Minerals SA. at the company's premises and has been operating since September 2003. At Vagonetto, one of the most impressive Theme Parks in Europe, we follow the footsteps of the miners in the underground galleries with bauxite deposits.

The aim of the Fokida Mining Park is, not only to present the operating areas of a mine, but to inform, entertain and educate the new generations on the history of bauxite exploitation and the people who worked in it, honouring and promoting its mining history. The tour of the Vagonetto gives the visitor the opportunity to get acquainted step by step with the bauxite mining process.

Digital technology audiovisual systems reproduce the history of the miners and the mining methods inside an old mine in the heart of Giona. The story of bauxite mining, the raw material for aluminum production, is set in six different languages with the help of high-tech individual tour guides.

At Vagonetto the visitor can follow 4 routes:

The four routes of the Fokida Mining Park - Vagonetto	
1 <sup>st</sup> route	Exploration of underground galleries, where one can see the revival of the daily life of the miners and the evolution of the mining processes.
2 <sup>nd</sup> route	Exploration with the train used by the workers inside the mines, where one can visit the old mine.
3 <sup>rd</sup> route	Exploring for an exciting journey through time, to the centre of the earth.

<sup>23</sup> Βλ. <http://www.vagonetto.gr>



4 <sup>th</sup> route	Tour at the Outdoor Exhibition of Machinery used in bauxite mines
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Facilities at the Vagonetto are open for events, conferences and concerts, and there is also a refreshment bar. The Vagonetto is now a special, alternative attraction and is flooded with visitors all year round.



Figure 12: View of the Fokida Mining Park – Vagonetto (source: <https://onparnassos.gr/>)

### 5.5.3. Wieliczka Salt Mine – Poland

The Wieliczka Salt Mine<sup>24</sup> was founded in the 13<sup>th</sup> century and is the second oldest salt mine in Europe. In 1119, reference is made for the first time to the "white gold" of the region. Salt was mined continuously from medieval times and specifically from 1290 until 1996, when salt reserves were depleted. Since 1978 it has been included in the list of UNESCO World Heritage Sites.

The Salt Mine extends to nine (9) underground levels and reaches a depth of 327 meters, with more than 2,040 rooms and 300 km of galleries, which are carved on solid volumes of salt, as well as underground lakes.

Gradually the use of the Salt Mine changed and it was transformed from an industrial factory into a world-famous tourist attraction, a place of unusual events and a health center.

In 1950, the Wieliczka Salt Mine was turned into a museum and began to welcome visitors. The tour of the spectacular areas of the salt mine lasts about two hours, always accompanied by a guide. However, the part that is open to the public is only 1% of the total, includes three levels and a path with a total length of 2 km. There are 22 booths to visit.

The most important attraction inside the mine is the Museum, located on the third floor of the salt mine and at a depth of 130 meters. For a number of years, the salt miners made impressive works of art from salt, which still adorn the halls of the salt mine.

Particularly impressive and richly decorated is the "Chapel of the Blessed King" (Figure 20), a cathedral measuring 54 m by 17 m and 12 m high. The construction of this

<sup>24</sup> <https://www.wieliczka-saltmine.com>



underground temple took more than 30 years (1896 - 1927), while 20,000 tons of solid salt were used. All the objects inside the temple, from the chandeliers to the items of religious worship, are made entirely of mine salt. Salt chandeliers hang from the roof of the church, the Holy Table and a Crucified One dominate the hall, while the walls are decorated with salt reliefs of biblical representations.

In the areas of the Salt Mine there is also a sanatorium for patients suffering from diseases in which it is good to stay in an environment rich in iodine.

The Salt Mine is visited by over 2 million tourists every year.



Figure 13: View of the Wieliczka Salt Mine (source: <https://www.wieliczka-saltmine.com/>)

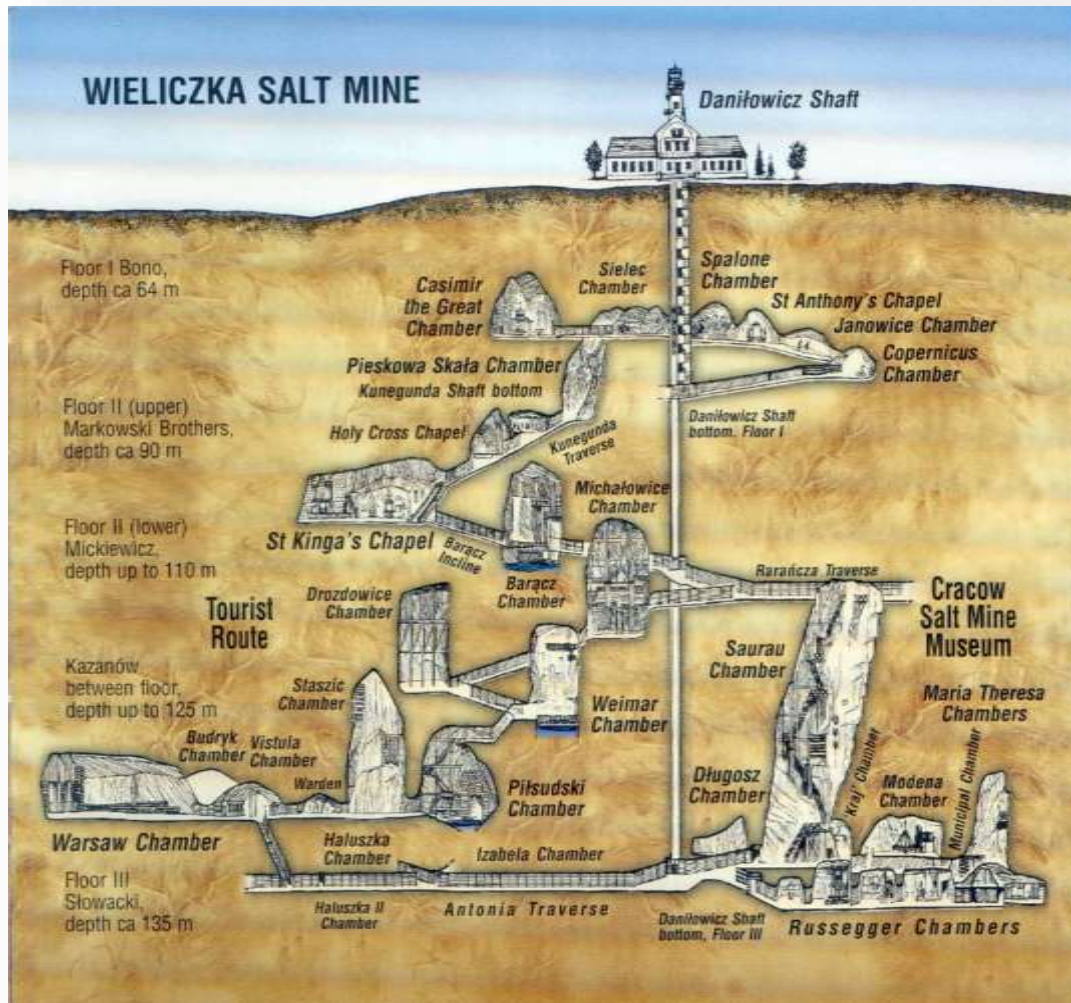


Figure 14: Map of the mine (source: <https://www.wieliczka-saltmine.com/>)

#### 5.5.4. Bibemus Quarries - France

The other molasses quarries in Bibemus<sup>25</sup> supplied the city of Aix en Provence with the stone that is so characteristic in many of its monuments (Figure 22). Bibémus is essentially a rocky plateau that has been used as a stone quarry for a long time.

The use of quarries dates back to antiquity and the stones were used to build Aix in the 17<sup>th</sup> and 18<sup>th</sup> centuries. At the time of Cezanne, quarries were practically abandoned. The painter rented a small hut where he kept his canvases and often stayed. In this landscape he painted between 1895 and 1904 11 oil paintings and 16 watercolors, including world-famous works, such as "The Red Rock".

In addition to the view of nature depicted in the painter's works, the landscape contains the very unusual pattern of orange rocks in geometric shapes, from which Cezanne

<sup>25</sup> <https://www.aixenprovencetourism.com/en/fiche/2644/> ka <https://www.myprovence.fr/en/travel-guide/entertainment/cultural-places/aix-en-provence/19812-the-bibemus-quarries>

designed impressive works that promoted cubism. Essentially, cubism was born on this rocky plateau of 7 hectares.

Today Bibemus quarries reveal all their iconographic grandeur through a built path around the shed where the artist stored his works and sometimes slept.

Around Cezanne's Shed, the path in the shade of tall pines allows the visitor to discover the patterns painted by Cezanne, the famous red rocks, the geology of the plateau and the quarry stones used to build monuments from antiquity to eighteenth century. The area can be visited only with an organised tour which lasts one hour.



Figure 15: View of the Bibemus Quarries (source: <https://www.cezanne-en-provence.com/>)

#### 5.5.5. The underground city of wine in Moldova

Another successful development of an inactive mine is the old limestone mine that closed in the late 1960s and is located at Milestii Mici in Moldova. It is not just a simple cellar but an entire city that bears the internationally recognised name "The underground city of wine". The spaces of the old mine were transformed into a vast cellar, with the transformation of the tunnels into wine cellars where the temperatures in the underground space, which extends for 240 km, remain constant at -10 degrees Celsius but also the constant humidity creates the ideal conditions for the maturation to the perfection of the wine.

About half the space is covered with two million bottles, winning the title of the largest collection of wines in the world based on the number of bottles, and gained a place in



the Guinness Book of Records, becoming even more famous and increasing its attractiveness to tourists.

Visitors-tourists use their own vehicle for an hour-long tour with a special escort and pass by a natural underwater waterfall ending up in a tasting room about 60 meters below ground level.

Also, each "street" is named after a specific grape variety, such as Pinot or Cabernet Sauvignon. There, visitors slowly drive special vehicles or bicycles into the labyrinth, where normal traffic rules apply.

The Milestii Mici of Moldova can be proud of being the largest cellar in the world, in a country with a long tradition in winemaking, dating back thousands of years. The benefits besides local are obviously national, greatly enhancing the country's national identity in the global tourism market.



Figure 16: The Cricova wine cellar in Moldova in a former limestone mine (source: <https://www.travelstyle.gr/>)

#### 5.5.6. Quarry Garden - China

Quarry Garden is located in Shanghai, China. It is part of the Chenshan Botanical Garden, which is the largest botanical garden in the city and has 26 theme parks. The Quarry Garden covers an area of 10 acres and was a quarry for the extraction of inert substances. The quarry operated from the early 1950s to the mid-1980s, with mining operations taking place on both the east and west sides of the mountain. The works significantly affected the landscape, destroying large areas of vegetation resulting in the degradation of the environment. About 20 years later it was designed and built which is

an important part of the botanical garden being one of the most important attractions in Shanghai.

The project is an important example of reuse from a quarry to an open public space with an ecological character. This is a project that does not seek to hide the mining activities but instead aims to highlight them. Based on the plans, the space is divided into 3 parts: the lake area (the Lake Area), the viewing area (the Platform Area) and the water area (the Deep Pool). The main goal of the Quarry Garden design was the integration of the damaged landscape due to the mining activities, in a modern park. The designers took advantage of both the altitude differences and the presence of water and created paths with stopping views, highlighting as much as possible the landscape as a former quarry area. Visitors following a specific course, properly designed, have the opportunity to explore and at the same time discover different aspects and forms of the landscape through different perspectives.

The creation of the Quarry Garden is a successful strategy for the Shanghai economy. It is one of the most important tourist attractions, hosting hundreds of tourists every day. It is also an important core of cultural interest, highlighting the area based on oriental culture.



Figure 17: View of the Quarry Garden (Source <https://www.asla.org/>)

## 5.6. Comparative evaluation of good practices and their connection with the case of the Municipalities of Pileá-Hortiatís and Madan

In recent decades there has been an increasing trend of utilization of inactive quarries and mines, with many of them having been transformed into places of entertainment, sports and leisure. Some of them acquired very special uses such as the InterContinental Shanghai Wonderland hotel, which was built on an old abandoned quarry with a total depth of 88 meters, just 35 kilometers southwest of Shanghai in China and the "underground city of wine" as a result of the exploitation of the inactive limestone mine at Milestii Mici in Moldova.

Both the Greek and the international experience regarding the development of techniques for the utilization of abandoned quarries, which is constantly expanding,

includes a wide range of solutions from simple rubble and tree planting to their utilization for landfills, parking lots, storage parks, theaters, etc. The question is the optimal choice of solution or combination of solutions based on the special conditions and the availability of each area.

However, the renovations of the spaces in Greece remain, as a rule, fragmentary, focusing on meeting the needs of the local community by utilizing these spaces, with benefits that remain at the local level. However, both Andreas Papandreou Park in Keratsini and the Fokida Mining Park "Vagonetto" are two very successful practices which can be a source of inspiration for both the Municipality of Pilea-Hortiatis and the Municipality of Madan. The idea of creating single open spaces for multiple uses could be applied in both municipalities.

Respectively, by studying the international good practices, the Municipalities of Madan and Pilea-Hortiatis could make great use of elements and features that emerged after the exploitation of the Bibemus quarries in France and the Wieliczka Salt Mine in Poland.

## 6. Presentation of the Municipality of Pilea-Hortiatis and the Municipality of Madan

The Municipalities of Pilea - Hortiatis and Madan are the two areas where the rehabilitation interventions and actions will be implemented (quarries in the case of the Municipality of Pilea Hortiatis and mines in the case of the Municipality of Madan).

The Municipality of Pilea-Hortiatis is located in the Region of Central Macedonia and is a suburban municipality of the city of Thessaloniki. The Municipality of Pilea-Hortiatis was founded during the local government reform of 2011 with the merger of three municipalities that have now become municipal units, Pilea, Hortiatis and Panorama, while the seat of the Municipality is Panorama. It combines an urban, mountainous and coastal landscape, as it extends from the coastal area of Pilea to the mountainous area of Hortiatis, where the inert quarries are located (Asvestohori, Exohi, Filyro).

The municipality of Madan is located in the southeastern part of the Western Rhodope Mountains along the valleys of the rivers Madanska, Arda and Cerna. It consists of 44 settlements - 1 city (administrative center - the city of Madan) and 43 villages scattered in the mountains. Traditional economic activity in the area has always been ore mining.

The present section presents in detail the two municipalities, with particular emphasis on their historical, cultural, natural and tourist resources.

### 6.1. Current Situation Analysis in the Municipality of Pilea-Hortiatis

The Municipality of Pilea - Hortiatis belongs to the Regional Unit of Thessaloniki (RUoT) of the Region of Central Macedonia. Its seat is Panorama, while the martyrdom village of Hortiatis has been defined as its historic seat. It includes three Municipal Units, namely the Panorama of Pilea and Hortiatis. The latter also consists of four municipal communities - Asvestohori, Exohi, Filyro and Hortiatis.

#### 6.1.1. Population

The Municipality of Pilea-Hortiatis has a population of 70,653 inhabitants, while the distribution of the population in the individual Municipal Units is as follows:

- Municipal Unit of Panorama, 17,546 inhabitants,
- Municipal Unit of Pilea, 34,678 inhabitants, and
- Municipal Unit of Hortiatis, 18,429 inhabitants.

#### 6.1.2. Geography, morphology and climatic characteristics

It is located in the central part of RUoT at a distance of 8 km to its northeast. It borders with the Municipality of Lagada to the north and northeast, with the Municipality of Thermi to the south and southeast and to the west with the Municipalities of Kalamaria,



Thessaloniki, Neapoli - Sykeon and Pavlos Melas. It includes the Municipal Units of Panorama of Pilea and Hortiatis. The latter is the eastern part of the suburban zone of the city. In part, it is at the Thermaic Gulf to the southwest, while in the eastern part it includes mountainous areas with intense natural relief and remarkable natural resources (Mount Hortiatis, Sheikh Sou, Kouri forests and the Filyro grove).

The total area of the Municipality is 155.8 square kilometers and it is located in mountainous, semi-mountainous, coastal areas with forests, pastures and cultivated areas that allow the development of different ecosystems, mineral extraction areas and protected areas.

The Municipality of Pilea - Hortiatis is characterised as a mountainous Municipality. It is occupied by mountainous areas at a rate of 52.14% of its total geographical area. The maximum altitude value is presented in the Municipal Unit of Hortiatis and is equal to 1,201 m., while the minimum altitude value is presented in the Municipal Unit of Pilea and is equal to 0 m. The settlements of Asvestohori, Exohi and Filyro are located on the hill of Asvestohori, at an altitude of about 600 m. The altitude on the hill of Profitis Ilias (738 m.) of the settlement of Asvestohori is high. The altitude of the settlement of Panorama is 380 m.

Within the geographical boundaries of the Municipality, large forest areas are being developed that supply oxygen to the Urban Complex of Thessaloniki. Most of the Sheikh Sou forest grows within the boundaries of the Municipality, as well as the forest of Mount Hortiatis, the lowland forest of Kouri in Asvestohori and the Amadria forest in Filyro. Also, the Municipality is crossed by the stream of Dendropotamos, in a direction from the southeast to the northwest, continuing to Asvestohori. In Filyro, on the borders of the settlement, there is a grove in its northwestern part and a stream that passes between the two demarcated parts of the settlement.

Within the boundaries of the Municipality of Pilea - Hortiatis there are two (2) protected areas of particularly high environmental value:

- **Hortiatis as a Special Protection Area** which is a part of the wider protected area with code GR 1220009, and
- **The Cedar Hill or Sheikh Sou as "Protected Natural Landscape" or "Landscape of Special Natural Beauty"**, with code AT 4011119.

The Municipality also includes the coastal zone in its south-southwestern part. The length of the coastline is about 4.5 km. However, the accessible zone extends to a length of only 1.5 km. Part of the coastal area hosts places of recreation and trade, as well as activities of the secondary sector, so the area has lost its ecological character. However, at east extends a free zone owned by the Municipality, which has not undergone any alteration by anthropogenic activity.

### 6.1.3. Historical identity and heritage

During the Turkish occupation, Panorama was called Arsakli or Aksakli, it was administratively part of the nahiye (province) of Kalamaria and as it is recorded in various

sources, it was a place of residence for Muslims<sup>26</sup>. The testimonies of the first refugees, who were a few families from Asia Minor and Eastern Thrace<sup>27</sup>, state that the refugees found the settlement uninhabited, the Turkish mahalades half-destroyed, with two or three shacks left by the British soldiers and used during the Balkan wars as shelters (1913-1914)<sup>28</sup>.

The settlement was destroyed in the war of 1912 and its Muslim inhabitants moved further south to the Karagatsia area near the old "Chain" factory in the present-day area of Harilaou<sup>29</sup>. From there they moved to Turkey, in compliance with the terms of the Treaty of Lausanne for the population exchange.

During the years 1918, 1920<sup>30</sup> and until 1926 it received a significant number of refugees, mainly Pontians from Georgia (where they had temporarily settled at the end of the Russo-Turkish war in the late 19th - early 20th century), and from Trabzon and Argyroupoli respectively, and gradually experienced great residential development<sup>31</sup>. At that time, due to the still small population of the settlement, it was administratively included as settlement Arsakli in the Community of Kapoutzides (Pilea)<sup>32</sup>. The renaming from Arsakli to Panorama took place in 1928<sup>33</sup>.

With the end of the First World War, the area became a holiday destination for the people of Thessaloniki. In the 1930s, the refugees gave the new settlement its new name, due to the panoramic view of Thessaloniki and the Thermaic Gulf<sup>34</sup>.

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26 Historical Archive of Macedonia, file 69.5 & "Blog of Santa Pontians - Testimony of Socrates Dori".

Archived from the original on November 12, 2013. Retrieved January 30, 2014

27 "Pontian Santas Blog - Testimony of Socrates Dori". Archived from the original on November 12, 2013. Retrieved January 30, 2014

28 N. & A. Telidi, 2005, p. 7

29 Lazaros Panagiotidis, 2005, p. 74

30 "Pontian Santas Blog - Testimony of Socrates Dori". Archived from the original on November 12, 2013. Retrieved January 30, 2014

31 N. & A. Telidi, 2005, p. 6

32 Government Gazette 81/A / 1928 (p.1097) available at [https://www.eetaa.gr/metaboles/fek/1918/fek\\_152a\\_1918.pdf](https://www.eetaa.gr/metaboles/fek/1918/fek_152a_1918.pdf)

33 Government Gazette 152 / A / 1918 (p.608) available online at the address [https://www.eetaa.gr/metaboles/fek/1928/fek\\_81a\\_1928.pdf](https://www.eetaa.gr/metaboles/fek/1928/fek_81a_1928.pdf)

34 Manolis Manoledakis, 2007, p. 162



Figure 18: Stone Primary School of Panorama.  
It was built by the first refugees in the 1930s.

Over the years and specifically since the mid-1970s the community began to grow and turned into a luxurious suburb of Thessaloniki. Important evidence in the area testify human presence in different periods of history in three sites of prehistoric settlements: on the hill of Analipsi, on the mound located in Eleorema, as well as the ruins of an early Christian basilica with remarkable floor mosaics. The archeological finds in the area of Platanakia and the eight Byzantine watermills that operated with a hydromillic system (due to the large slope of the ground), are a typical "craft complex", a valuable presumption for industrial archeology.

The archeological finds in the area of Platanakia and the eight Byzantine watermills that operated with a hydromillic system (due to the large slope of the ground), are a typical "craft complex", **a valuable presumption for industrial archeology.**

The history of **Pilea** is long and rich.

The name Strefa or Strepsa is mentioned by Thucydides<sup>35</sup> and meant a city - gate of Thrace that included Thessaloniki until 480 BC. Approximately when acquired from Macedonia. In the 5th century BC Strepsa is mentioned as an area of military operations near Halkidiki.

The guards of the East Gate had created a settlement that fought valiantly against the Ottomans, who with the conquest of Thessaloniki named it "Kaputzilar" from the Turkish

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35 Pilea - Portal of sustainable development, culture, values

word "kapou" which means door. Throughout the Ottoman rule, it belonged administratively to the nahiye of Kalamaria<sup>36</sup>.

Kapoutzida, which was originally in the area of Triandria - Ano Toumpa, was the nearest village of Thessaloniki on its eastern side. The relocation to its current location is estimated at the end of the 18th century, and was due to the appearance of snakes, a species called shuttles and was venomous<sup>37</sup>. Tradition says that the inhabitants, terrified by the multitude of echidnas, not knowing where to settle, left a dove which flew and sat on a tree. There was built the today's church of Prophet Elias, who was the patron saint of the old settlement. With center the temple, the new settlement was developed in the surrounding areas.

Viticulture<sup>38</sup> was a traditional occupation of the inhabitants who produced the famous black Kapoutzidian wine. While at the beginning of the 20th century, the occupations of the Kapoutzis included the cultivation of okra, animal husbandry, women's handicrafts and other activities necessary for the now large settlement such as: grocers, butchers, shoemakers, tailors, blacksmiths, doctors, etc.

Its current name was established in 1927<sup>39</sup> and indicates the eastern entrance-exit gate to and from Thessaloniki.

The residents of Pilea actively participated in the Macedonian Struggle, in the Asia Minor Campaign, but also in the war of '40 where they organized in the Resistance against the German Occupation. Vlachs from the Megala Livadia of Paiko moved to Pilea in the 1940s when the Germans destroyed their settlement<sup>40</sup>.

Important finds in the area confirm anthropogenic activity from prehistoric times:

- Toumba of Pilea which refers to the Neolithic era and is located east of today's Pilea,
- Toumba Keys which refers to a Macedonian tomb located east of the area of Finikas,
- the Harilaou Macedonian tomb in the area Trochiodromika,
- the Ancient Bridge dating to 120 BC,
- the Tiled Roof,
- the foundations of the Early Christian Basilica,
- the ruins of the monastery of Agios Panteleimon on the borders of Pilea and
- the municipal community of Asvestohori, the Byzantine Watermills of Pilea etc.

Newer "preserved" monuments related to the occupations of the inhabitants of Pilea, testify the intense activity of the past:

- The old Silk factory Metaxourgio "Benozilio" on the northeast side of the settlement that dates back to 1886. It consists of 3 old buildings, about 1,000 m<sup>2</sup>, while the surrounding area is about 6,000 m<sup>2</sup>.

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36 Blog of the historian - archaeologist Nikolaos Papaikononou

37 Guide of the Municipality of Pilea, 1992, p. 12

38 Nikolaos Schinas, 1886, issue C, p. 512

39 Government Gazette 81 / A / 1928 (p.608) available online at [https://www.eetaa.gr/metaboles/fek/1928/fek\\_81a\\_1928.pdf](https://www.eetaa.gr/metaboles/fek/1928/fek_81a_1928.pdf)

40 Official Website of the Vlachs of Greece. Archived 2015-07-17 on Wayback Machine. Article on "The Megala Livadia of Paiko"



Figure 19: The old Silk Factory "Benozilio"

(Source: Urban Exploration - 1880s Industrial Building (Thessaloniki – Greece available at <https://www.youtube.com/watch?v=TdVBq6A20nQ&t=9s>)

- Prasakaki Tower is built in the middle of the 18th century; the mansion house of fortress architecture was the home of Dr. Prasakakis<sup>41</sup>.
- Villa Heitmann is a newer building of 1938 and was the home and traditional winery of Hans Heitmann.
- The preserved bell tower of Prophet Elias church dates back to 1854 and has been characterised as a work of art, etc.

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<sup>41</sup> Ioannis Prasakakis was born in Chios in 1800 and died in 1884 in Thessaloniki. Prasakakis was not only a doctor, friend of Adamantios Korais, he was also a landowner. He was still one of the most important figures of the Greek revolution of 1821. The preservation of the body of young men and the fact that he encouraged the people of Pilea to buy the lands in which they worked as collaborators, connected his name, in the consciousness of the inhabitants of Pilea, with their liberation from the Tsiflikades and the beginning of free cultivation in their place (Source: <https://parallaximag.gr/thessaloniki/chartis-tis-polis/agnostos-pyrgos-stin-akri-tis-polis>)



Figure 20: Holy Temple of the Prophet Elias founded in the 18th century.  
On the left is the preserved bell tower of the church

The Municipal Unit of **Hortiatis** is an area that has a remarkable historical and cultural background.

**Asvestohori** was originally founded by decree of the Sultan around 1580-1600 under the name "Neohori", in the middle of an uninhabited wooded area between Thessaloniki and Hortiatis, where there were Byzantine mills and aqueducts for the water supply of Thessaloniki. Through the area also passed a bypass of the Egnatia Highway, from which the Post Office transportation was sooner, from Durres to Thessaloniki and Istanbul. In order to guard the aqueducts and remittances, the area was felled and in its center, the first of the five final outposts was established. The first inhabitants lived on the guard's salary and according to oral testimonies came from ancient Greece, others from Mani or from exiles in Asia Minor, while families from the wider area gradually settled.

Written testimonies document that around 1680-1700, part of the inhabitants turned to the production of lime, while it is not known how the necessary know-how was acquired. Thus, the Turks renamed Neohori to Kirets-Kioi, which means Asvestohori. After 1780, when the guards were fired from the government service, lime production prevailed, as there were plenty of raw materials, namely limestone rocks and holly as fuel. In the area we can still observe the brick chimneys, samples of an early industrial architecture that compose a comprehensive set for the protection and promotion of the remarkable industrial heritage of lime production<sup>42</sup>.

During the Turkish occupation, the village belonged to the famous mukata of 12 Mademochorion, the rich self-governing consortium that exploited the mines of Northern Halkidiki. The inhabitants were bilingual and spoke a peculiar mixture of Greek with Slavic endings. This original settlement was gradually strengthened, with the relocation of residents of other areas and especially with the settlement, at the end of the 18th

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42 Zacharopoulou G., 2006



century, due to the persecution of Christians by Ali Pasha, of several families of Vlach origin from the area of Agrafta, who were integrated into the local society and established the most perfect administrative system of the time, the Demogerontia. Later, in the 1940s, Vlachs from the Megala Livadia of Paiko moved permanently to Asvestohori, when the Germans destroyed their settlement<sup>43</sup>.

After the liberation of the area by the Turks, in 1912, began the organized development of lime industry in the area, assisted by the reconstruction of Thessaloniki after the great fire of 1917, thus contributing to the strengthening of local economic development.

In 1918 it was recognized as the Community of Asvestohori<sup>44</sup>, as it remained until 1997, when with the "Kapodistria Plan" the Municipality of Hortiatis was founded and Asvestchori was designated as the seat of the municipality.

In the Municipal Community of Asvestohori there are remarkable monuments such as: the Church of St. George, of the early 19<sup>th</sup> century, a three-aisled wooden-roofed basilica and an 18<sup>th</sup> century windmill at the entrance of the settlement. In the stream between Asvestohori-Retziki there is a stone bridge, through which the road leading to Thessaloniki passed. On a rocky hill, following the road that leads to the quarries, there is an archeological site of the late Roman and Early Christian times. Finally, on a hill in the Kouri forest having a unique view is the traditional chapel of Prophet Elijah, built in 1919. The area of Asvestohori presented significant activity in the production of lime. This characteristic branch of the local economy left a remarkable legacy that consists of a large number of buildings which reflect the entire evolution of lime production<sup>45</sup>.

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43 Official Website of the Vlachs of Greece Archived 2015-07-17 on Wayback Machine. Article on "The Megala Livadia of Paiko"

44 Government Gazette 81 / A / 1928 (p.1097) available online at the address [https://www.eetaa.gr/metaboles/fek/1918/fek\\_152a\\_1918.pdf](https://www.eetaa.gr/metaboles/fek/1918/fek_152a_1918.pdf)

45 Operational Program of the Municipality of Pylea-Chortiatis 2016-2019





Figure 21: Church of Agios Georgios, Asvestohori  
(Source: <https://agiosgeorgiosasvestohori.gr/photographs-new/>)

**Filyro**, during the Turkish occupation, was a poor village inhabited by Turks who moved there from the depths of Asia Minor, while it was a place of rest for the Turks of Thessaloniki. In fact, its name was Yalitzik, probably due to the good climate and its wooded mountains, as in Turkish it means a country place. The few Turkish inhabitants left the village after the liberation of Thessaloniki in 1912, while from 1870 the village had started to be inhabited periodically by Vlachs who came from the Megala Livadia of Paiko, who due to their livestock occupation lived in the village during the winter months, taking advantage of the mild climate of the area. The first permanent residents were refugees who came from Pontus in 1914, while in 1920 settled also others from Caucasus. During the Second World War, Vlachs also settled in the village as the Germans burned the Megala Livadia.

An important element Filyro's physiognomy has always been its rich natural environment, while recently discovered a prehistoric mound of important Archaeological interest.



Figure 22: Chapel of Agios Nikanoras, Amadria Forest  
(Source: Thehes.gr)

Finally, the **Local Community of Exohi** is developing geographically around the area where Papanikolaou Hospital is located. In a brief historical review, towards the end of the First World War in the current location of the hospital, the British Army built a number of stalls for the on-site treatment of the wounded. In 1920, after their abandonment by the British Army, these stumps became the basis for the establishment by the Greek state of the "Tuberculosis Hospital of Asvestohori". The dry climate of the area due to its limestone rocks and the Kouri forest right next to the hospital contributed to this<sup>46</sup>. The countryside settlement created in 1930, opposite the hospital, by relatives of patients with tuberculosis who were treated, but also by the patients themselves who recovered and settled there, both for reasons of health and social isolation<sup>47</sup>. Due to the fact that the inhabitants who founded the settlement were directly related to tuberculosis, the first name given to the settlement was "Tuberculosis Settlement". Later it was renamed "Sanatorium Settlement" and until 1949 it belonged administratively to the community of Asvestohori from which it was detached by establishing the "Sanatorium Community"<sup>48</sup>. Four years later (1953) it was renamed the Exohi Community<sup>49</sup>.

46 Athanassiou Aim., 2011

47 Operational program of the Municipality of Hortiatiss, 2007, p. 22

48 Government Gazette 14 / A / 1949 (p.90) available online at [https://www.eetaa.gr/metaboles/fek/1949/fek\\_14a\\_1949.pdf](https://www.eetaa.gr/metaboles/fek/1949/fek_14a_1949.pdf)

49 Government Gazette 86 / A / 1953 (p.567) available online at [https://www.eetaa.gr/metaboles/fek/1953/fek\\_86a\\_1953.pdf](https://www.eetaa.gr/metaboles/fek/1953/fek_86a_1953.pdf)

Among the important monuments that testify the anthropogenic past of the settlement are the Old Gate - entrance and some mainly stone buildings of Papanikolaou Hospital, as well as the British Military Cemetery "Kiretschkioi - Hortakioi WWI Military Cemetery", south<sup>50</sup>.



Figure 23: British Military Cemetery "Kiretschkioi - Hortakioi WWI Military Cemetery" in the Countryside  
(Source: <http://wikimapia.org/5356557/el/Βρετανικό-Στρατιωτικό-Κοιμητήριο-Εξοχής-Κιρεκίοι>)

The first name of **Hortiatis** was Kissos - a pre-Greek Thracian name from the years of Herodotus. According to Strabo, the king of Thrace Kissev (or Kissis) built at the foot of the mountain his capital, Kissos. The existence of settlements in the area is confirmed by the archaeological findings at the top of the mountain where there was an ancient castle of the 4th century BC.

From Roman times, the area supplied water to Thessaloniki. During the Byzantine era, the area experienced new prosperity with the establishment of brilliant monasteries, most importantly the Monastery of Hortaitou, the ruins of which are still preserved today. Also, from the Byzantine Era, the small church of Metamorfoseos tou Sotiros, an island octagonal type of the 12th century, survives, being one of the rare examples of this architecture in Northern Greece. The Turks destroyed the Monastery but the village survived. The Italian traveler Lorenzo Bernardo in 1591 mentions it as Cortaci and the Turkish traveler Evlia Celebi in his 17th century tours. The village was liberated in 1912 along with the rest of Macedonia.

The story of Hortiatis was marked on September 2, 1944, when the village was completely destroyed by the Germans in retaliation for the death of a German soldier in a clash with members of the Greek resistance, a fact that is widely known as the

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<sup>50</sup> Operational program of the Municipality of Hortiatis, 2007, p. 43



Massacre of Hortiatis. In the tragic Holocaust 149 villagers died and more than 300 houses were burned, while it is included in the list of martyr villages of Greece.

In the Municipal Community of Hortiatis are also located:

- The Roman Aqueduct located at the entrance of the settlement Hortiatis.
- The windmills- located in the area where according to tradition the old settlement of Paliochori is located.
- The groundwater abstraction systems (qanat), which besides the aqueduct were a source of water supply. The largest is located at the chapel of Agia Paraskevi and was built in the early 18<sup>th</sup> century.
- The post-Byzantine bridge located to the northwest of the village, west of the Roman aqueduct; it is made of stone and has not yet been completely unearthed. It was part of a cobbled road that led from Hortiatis to Panorama and Thessaloniki.



Figure 24: Roman Aqueduct of Chortiatis  
(Source: [https://el.wikipedia.org/wiki/Ρωμαϊκό\\_Υδραγωγείο\\_Χορτιάτη.jpg](https://el.wikipedia.org/wiki/Ρωμαϊκό_Υδραγωγείο_Χορτιάτη.jpg))

#### 6.1.4. Natural Environment

The Municipality of Pilea-Hortiatis has a rich natural environment with mountainous, semi-mountainous, coastal areas, forests, pastures and cultivated areas that allow the development of different ecosystems, mineral extraction areas and protected areas.

##### Environmental and Geological Resources

###### Mountains

- Mount Hortiatis (1,201 m.) at the foot of which the homonymous settlement is built

	<ul style="list-style-type: none"> <li>▪ Hill of Asvestohori (600 m) where the settlements of Asvestohori, Exohi and Filyro are located</li> </ul>
Forests	<ul style="list-style-type: none"> <li>▪ Part of the suburban forest "Sheikh-Sou or Kedrinos Lofos" is located in the Municipal Units of Pilea and Hortiatis (5,100 acres and constitutes 17% of the total forest area).</li> <li>▪ "Ascension Grove" of 100 acres</li> <li>▪ "Municipal Forest of Panorama".</li> <li>▪ Forest "Hortiatis", Municipal forest "Kouri" and "Alsos Filyrou" with total area of 9,100 acres, located in Hortiatis</li> </ul>
Protected areas	<ul style="list-style-type: none"> <li>▪ Hortiatis as a Special Protection Zone (SPA) which is part of the wider protected area with code GR 1220009 (no. DG / 2193 / 9.10.73 and DG / 405 / 11.5.92 / 17.1.94 (Government Gazette 561 / τ.Δ ' / 6.6.94).</li> <li>▪ Kedrinos lofos or Sheikh Sou as "Protected Natural Landscape" or "Landscape of Particular Natural Beauty", with code AT 4011119. (no. 84) Y.A. and no.Γ / 1834/37917 (Government Gazette 549 / τ.Β ' / 9.8.84 Y.A)</li> </ul> <p>The protection zones "lakes Volvi - Koronia and wider area wetland system", were determined according to the Greek Government Gazette 248/t.D ' / 5.3.2004 (decision 6919/11.2.2004) and include the Municipality of Pilea-Hortiatis. Specifically, Zone B includes a small area to the north and east of the municipality, while Zone C includes significant areas of Asvestohori and Hortiatis.</p>
Natural Vegetation	<p>The natural vegetation is:</p> <ul style="list-style-type: none"> <li>▪ <u>In the Mediterranean vegetation zone "Quercetalia pubescentis",</u> which includes the two sub-zones Ostryo-Carpinion and Quercion-Confertae. This zone is hilly, sub-mountainous and starts from an altitude of 250 m reaching up to 1,100 m. The main species that appear in it are the broad-leaved oak (Quercus conferta) and the chestnut (Castanea sativa).</li> <li>▪ In the higher uncultivated parts of the hills and the lower parts of the mountains, as well as in the isolated hills of the lowland areas, the sub-zone "Ostryo-Carpinion" appears. This sub-zone includes the most prevalent sub-zones of Coccifero-Carpinetum and Carpinetum-Orientalis. (Dafis, 1973)</li> </ul>

	<ul style="list-style-type: none"> <li>▪ <u>In the mountainous subalpine vegetation zone “Fagetalia”</u> or equivalent zone of beech-fir forests and mountainous Mediterranean inland conifers with the dominant characteristic sub-zone “Fagion moesiaca” (Astaras and Silleos, 1984)</li> </ul>
Flora	<p>In this area we find the following formations:διαπλάσεις:</p> <p><u>Evergreen - broadleaf formation:</u> oaks (<i>Quercus pubescens</i>, <i>Quercus conferta</i>), kermes oaks (<i>Quercus coccifera</i>)</p> <p><u>Formation of conifers (mainly from reforestation):</u> trachea pine (<i>Pinus brutia</i>), Aleppo pine (<i>Pinus halepensis</i>), pine cone (<i>Pinus pinea</i>), cypress (<i>Cupressus</i> sp), cedar (<i>Cedrus</i> sp).</p> <p><u>Indicative species of shrubs:</u> hoary rock-rose (<i>Cistus incanus</i>), hawthorn (<i>Crataegus monogyna</i>), juniper (<i>Juniperus</i> sp), bramble (<i>Rubus canescens</i>)</p> <p><u>Indicative species of poales:</u> <i>Dactylis glomerata</i>, <i>Festuca</i> sp, <i>Hypericum perforatum</i></p> <p><u>Formation of riparian vegetation (azonal vegetation):</u> plane tree (<i>Platanus Orientalis</i>), poplar (<i>Populus</i> sp), manna ash (<i>Fraxinus ornus</i>), oleander (<i>Nerium oleander</i>), old man’s beard (<i>Clematis vitalba</i>), elderberry (<i>Sambucus nigra</i>)</p> <p>Formation of meadow vegetation: semi-cryptophytes, geophytes, perennial grasses</p> <p>Also, in the mountain mass of Hortiatis there are extensive chestnut groves as well as a beech forest.</p>
Fauna	<p>The wild fauna of the municipality is characterised by high biodiversity and shows species included in the "Red Book of Endangered Animals of Greece", Directive 92/43/EEC, the Berne Convention and the Presidential Decree 67/1981, which constitute their overall legal protection status in the EU and internationally. The fauna of the area has been limited due to the general degradation of the ecosystems and mainly appear the following:</p> <p><u>Mammals:</u> wild boar (<i>Sus Scrofa</i>), hare (<i>Lepus europeus</i>), stone marten (<i>Martes foina</i>), badger (<i>Meles meles</i>), weasel (<i>Mustela nivalis</i>), fox (<i>Vulpes vulpes</i>), jackal (<i>Canis aureus</i>)</p> <p><u>Rodents:</u> squirrel, mice, rats and hedgehogs.</p> <p><u>Amphibians:</u> frogs, toads</p>

	<p><u>Reptiles:</u> lizards, turtles, snakes (Dahl's whip snake, four-lined snake, eastern Montpellier snake, viper, water snake, sheltopusik)</p> <p><u>Birds:</u> predators (Eleonora's falcons, hawks), partridges (Alectoris graeca, Perdix aureaus), quails, turtle dove birds, owls, common wood pigeons, hooded crows, western jackdaw, swallows, nightingales, common blackbirds, hoopoes</p>
Pastures - Arable land	<p>In the Municipality there are officially registered arable lands and pastures mainly in the Municipal Unit of Hortiatitis in an area of 18,000 acres of a total 75,000 acres. These areas represent 1.12% and 6.27% respectively of the total areas of the Regional Unit of Thessaloniki.</p> <p>Rainy crops (cereals, almonds, olives) are concentrated in the less fragmented hilly areas and in the wavy plains with larger slopes.</p>

#### 6.1.5. Culture and sports

The Municipality of Pilaia - Hortiatitis has a rich cultural heritage, remarkable cultural and sports activity as it is highlighted through the annual programs of the Municipality, as well as by the actions of local cultural and sports clubs and associations, as well as modern cultural and sports infrastructure.

The following are the most important cultural infrastructures and cultural sites of the Municipality of Pilea-Hortiatitis:

Cultural infrastructure and cultural sites of the Municipality of Pilea-Hortiatitis	
Panorama	<ul style="list-style-type: none"> <li>▪ Panorama Cultural Center   Amphitheater "Stavros Kougioumtzis", "Litsa Fokidi" Hall, Lobby - Banquet Hall - Cafe / Catering "Terkenlis"</li> <li>▪ Municipal Gallery (inside the Cultural Center)</li> <li>▪ Municipal Conservatory</li> <li>▪ Municipal Library of Panorama</li> <li>▪ Municipal Summer Cinema Cine Panorama<sup>51</sup></li> <li>▪ Folklore Museum of Panorama</li> <li>▪ Cultural - Educational Center "G. &amp; Ch. Krassa "(private initiative)</li> </ul>
Pilea	<ul style="list-style-type: none"> <li>▪ Cultural Center "Stone School"   Municipal Library, Open "Garden Theater" and event hall inside the cultural center</li> </ul>

<sup>51</sup> Respectively, during the winter months, the Panorama Cinema Club hosts film screenings at the "Stavros Kougioumtzis" Amphitheater of the Panorama Cultural Center.



	<ul style="list-style-type: none"> <li>Folklore Museum of Pilea</li> <li>Parish Museum of Agios Prophet Elias</li> <li>Science Dissemination Center and Technology Museum NOESIS</li> <li>Outdoor amphitheater in the former City Hall square</li> <li>Municipal Conservatory - Pilea Branch</li> <li>Concert Hall of the Music High School</li> <li>Municipal Summer Cinema Cine Pilea</li> </ul> <p>Also, within the Municipal Unit of Pilea there are 2 multicinemas</p>
Asvestohori	<ul style="list-style-type: none"> <li>Asvestohori Cultural Center</li> <li>Asvestohori Film Club</li> <li>Municipal library</li> <li>Elementary and High School Theater Stage</li> <li>Bioclimatic building of UMCA Asvestohori Branch</li> </ul>
Filyro	<ul style="list-style-type: none"> <li>Cultural Center of Filyro (formerly Filyro High School)</li> <li>Outdoor theater in the forest of Amadria</li> </ul>
Hortiatis	<ul style="list-style-type: none"> <li>"Ioannis Manoledaki" Hall</li> </ul>

It is noted that in the Municipality of Pilea-Hortiatis there are a total of thirty two (32) cultural institutions, in their majority associations and movements of citizens, of which twelve (12) in Panorama, seven (7) in Pilea and thirteen (13) in the Municipal Unit of Hortiatis (Asvestohori 4, Exohi 1, Filyro 4 and Hortiatis 4).

In the Municipality of Pilea-Hortiatis the Municipal Enterprise and / or the local cultural bodies, organize numerous events

Cultural events and institutions in the Municipality of Pilea-Hortiatis	
Panorama	<ul style="list-style-type: none"> <li>Christmas celebrations</li> <li>Easter   Meetings of Byzantine choirs in the Holy Temples, Hagiography Exhibitions</li> <li>Art exhibitions, Choir meetings</li> <li>Meetings of traditional bands and cultural institutions, music concerts and / or theatrical performances</li> </ul>
Pilea	<ul style="list-style-type: none"> <li>Flower exhibition</li> <li>Dance meetings, presentation of art workshops</li> <li>Meetings of traditional bands, music concerts</li> </ul>
Asvestohori	<ul style="list-style-type: none"> <li>Musical events, artistic events, etc.</li> <li>Local Festivals</li> </ul>
Exohi	<ul style="list-style-type: none"> <li>Celebration of Clean Monday</li> </ul>
Filyro	<ul style="list-style-type: none"> <li>Cultural music events in the Amadryas Forest</li> <li>Celebration of local churches</li> </ul>

Hortiatis	<ul style="list-style-type: none"> <li>▪ Memorial events in honor of the "Chortiatis Holocaust"</li> <li>▪ Celebration of local church</li> </ul>
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In the field of sports, the Municipality of Pilea-Hortiatis systematically invests in the creation of new and increasingly modern sports infrastructure, as well as in the continuous modernization and equipment of the existing infrastructure. The following table shows the most important of these, as well as important sports infrastructure that are within its boundaries, although they do not fall under the competence of the municipal authority:

Sports infrastructure and sports facilities of the Municipality of Pilea-Hortiatis	
Panorama	<ul style="list-style-type: none"> <li>▪ Panorama Olympic Sports Center</li> <li>▪ Municipal Swimming Pool</li> <li>▪ Elias Triantaphyllidis Sports Center</li> <li>▪ Basketball and tennis courts</li> <li>▪ Park - playground,</li> <li>▪ 5*5 soccer field</li> <li>▪ Traffic Education Park</li> </ul>
Pilea	<ul style="list-style-type: none"> <li>▪ Municipal Sports Center of 40,898 sq.m.</li> <li>▪ "Antonis Karabourniotis" Stadium</li> <li>▪ Several Gyms at schools</li> <li>▪ PAOK SPORTS ARENA Stadium of the basketball team of the Panthessaloniki Athletic Club of Istanbul (PAOK)</li> <li>▪ Closed SIEMENS Gym</li> <li>▪ Equestrian Club in Pournari</li> <li>▪ Scattered open basketball courts</li> </ul>
Asvestohori	<ul style="list-style-type: none"> <li>▪ Soccer field</li> <li>▪ Indoor Fitness Center with basketball, volleyball and mini soccer courts</li> <li>▪ Fitness room</li> <li>▪ Open basketball court</li> </ul>
Exohi	<ul style="list-style-type: none"> <li>▪ Basketball court</li> </ul>
Filyro	<ul style="list-style-type: none"> <li>▪ Soccer field</li> <li>▪ Open basketball court</li> </ul>
Hortiatis	<ul style="list-style-type: none"> <li>▪ Soccer field</li> <li>▪ Open basketball court</li> </ul>

Also, in the Municipality of Pilea-Hortiatis there are a total of twenty four (24) sports organizations, most of them clubs, associations and clubs, of which twelve (12) in Panorama, seven (7) in Pilea and five (5) in the Municipal Unit Hortiatis (Asvestohori 2, Filyro 1 and Hortiatis 2).

Below are the most important sporting events and institutions organized by the Municipality of Pilea-Hortiatis:

Sports events and institutions in the Municipality of Pilea-Hortiatis	
Panorama	<ul style="list-style-type: none"> <li>▪ Hosting of the Panhellenic Road Cycling Championship</li> <li>▪ Sports camp</li> <li>▪ Children's camp</li> <li>▪ 3x3 Tournaments</li> <li>▪ 5,000 m road race of the Lions association in collaboration with the Municipality of Pilea - Hortiatis (first time in 2015)</li> <li>▪ Awarding of volunteer teams</li> <li>▪ Football tournaments</li> </ul>
Pilea	<ul style="list-style-type: none"> <li>▪ Sports camp</li> <li>▪ Road race 15,000m of the association "Pyli" in collaboration with the Municipality of Pilea –Hortiatis (since 2012)</li> </ul>

Finally, in all Municipal Units are implemented on an annual basis "Sports Programs for All", the Program "Child and the Sea" and "Children's Camp".

#### 6.1.6. Education and infrastructure of formal and non-formal education

In addition to the sufficient number of public primary and secondary education structures (primary, high school and lyceum), in the Municipality of Pilea-Hortiatis is located the largest number of private schools of the Thessaloniki Urban Complex, including (i) the American College, (ii) the Arsakeia-Tositseia Schools of Thessaloniki, (iii) the Protypa Ekpaideytiria of Thessaloniki, (iv) the Aristotle College, (v) the Kalamari College, (vi) the German School, (vii) the "Apostolos Pavlos" Schools, (viii) the Montessori Education etc.

Also within the boundaries of the Municipality of Pilea-Hortiatis there are the Institute of Technical Seismology and Earthquake Constructions (ITSAK), the Higher School of War and **CEDEFOP, the only decentralized organization of the European Union based in Greece and subject to European policy development and implementation. vocational education and training.**

#### 6.1.7. Health and welfare infrastructure and services

Within the Municipality of Pilea-Hortiatis there is a significant number of health and social welfare units, among which:

In Panorama,

- the polyclinic "Agios Loukas" and
- the Neuropsychiatric Clinic "Agios Georgios"

In Pilea,

- the "INTER-BALKAN MEDICAL CENTER",

- the private obstetric clinic "GENESIS"
- the Nephrology Center of Thessaloniki and
- the rehabilitation and recovery centre Euromedica "AROGI" Thessaloniki

In Exohi,

- **the General Hospital of Thessaloniki "G. Papanikolaou"** in the Community of Exohi, which has more than 650 beds and 25 clinics and departments serving a large number of cases from all over Northern Greece.

The welfare institutions include: the "DEAF FOUNDATION OF NORTHERN GREECE", the branch of the "CENTRE OF SOCIAL WELFARE OF CENTRAL MACEDONIA" (formerly "Agios Dimitrios"), the legal entity under private law for the protection of girls "MELISSA", the "HELLENIC CHILDREN'S VILLAGE" in Filyro etc.

Also, remarkable initiatives have been developed by the Municipality itself in the fields of health and welfare, including the establishment and operation of the KEP in Panorama with preventive medicine services, the Telemedicine Program addressed mainly to citizens with mobility difficulties, the dementia station, the "Help at Home" program, as well as the innovative "E-Help at Home" program.

Finally, by the end of 2024, is expected to be completed the construction of the **University Pediatric Hospital of Thessaloniki in Filyro** - with a donation from the Stavros Niarchos Foundation - which will be the only one for all of Northern Greece.

#### 6.1.8. Tourism

From the 19th century until recently, Asvestohori, Filyro, Panorama and Hortiatiss, had been established in the perception of the residents of Thessaloniki as resorts while the inhabitants of these communities renting apartments for the entire summer period. Although this tourist activity has now disappear, the suburban settlements of the Municipality of Pilea-Hortiatiss remain a pole of attraction and an occasion for daily getaways, mainly for the people of Thessaloniki.

#### Accommodation

Within the Municipality of Pilea-Hortiatiss there are three (3) hotel units:

- the hotel NIKOPOLIS 5 \* (99 beds) in Pilea
- the hotel PANORAMA 4 \* (50 beds) and
- the hotel PEFKA 3 \* (50 beds) in Panorama

In addition, in the settlement of Exohi there are units of rented rooms and apartments that serve the accommodation needs of the relatives of the patients' at Papanikolaou Hospital, while recent apartments are available for rent through the Airbnb platform mainly in Panorama and Hortiatiss.

#### Conference facilities

Aiming at its gradual establishment as a conference tourism destination, the Municipality of Pilea-Hortiatis utilizing its cultural infrastructure in all areas of the Municipality created a network of municipal conference venues which includes:

In Panorama

- the "Stavros Kougioumtzis" Amphitheater,
- the "Litsa Fokidi" Hall and
- the Lobby - Banquet Hall - Cafe / Catering "Terkenlis",

in Hortiatis the "Ioannis Manoledaki" Hall and in Asvestohori the Cultural Center of Asvestohori.

As part of its strategy to attract conferences and following the modern, international requirements for holding conferences, the Municipality offers to the participants the privileged use of all its facilities, such as the municipal swimming pool and sports facilities in general, free admission to the municipal cinemas, etc as well as the organization of proposed excursions, in the beautiful forest paths of the municipality and in cultural and archaeological sites of Thessaloniki and the surrounding areas in collaboration with professionals.

In addition, to the above municipal conference infrastructure are added those of the hotels (NIKOPOLIS, PANORAMA), the Center for Dissemination of Sciences and Museum of Technology (NOESIS), as well as the Educational and Cultural Center "G. & Ch. Krassa" able to further strengthen the profile of the municipality as a destination for conference tourism.

#### Catering & Gastronomy

Throughout the Municipality of Pilea-Hortiatis and especially in the Community of Hortiatis, since the 70's there is significant gastronomic activity with many restaurants (mainly traditional taverns) that host daily visitors and excursionists from the area and the city of Thessaloniki (Business Program of the Municipality of Pilea Hortiatis, March 2016). Respectively, the number of confectioneries in Panorama is important, having even connected their name with the "Panoramas Triangles", which are integral elements of the gastronomic identity of Thessaloniki, but also of Central Macedonia. In addition, in Panorama there are several restaurants of international cuisine, while in Pilea they have made their appearance several ouzeri (fish taverns) contributing to the diversity of the gastronomic experience in the area.

#### 6.1.9. Economic Activities

In all the Municipal Units there is small to negligible activity in the primary sector and minimal in the secondary sector with a presence mainly in Pilea with units such as ION (chocolate factory), KLIMATECHNIKI etc. Regarding the tertiary sector in all Municipal Units there is an organised local market, with a number and variety of commercial enterprises that mainly serve the needs of the residents. Commercial stores are

registered, service stores, bank branches, offices, pharmacies and doctor's offices, as well as all social infrastructure units.

Based on the records of the Municipality:

- In the MU of Panorama 210 stores of commercial activity are registered,
- In the MU of Pilea there are ~ 680 shops and ~ 25 entertainment and leisure businesses (theatres, cinemas, amusement parks).
- In the MU of Hortiatis there are ~ 300 stores

In the out-of-town-plan area of Pilea there is a large development of shopping centres which have a variety of urban activities and gather a lot of people, operating as hyperlocal poles. Four (4) large units are recorded: "APOLLONIA", "FLORIDA", "MEDITERRANEAN COSMOS" and "MACEDONIA". In the commercial sector there are also the department stores "THE MART" (the well-known former MAKRO), "PRAKTIKER", "IKEA", "JUMBO", as well as a large number of commercial agencies and other stores of rare trade. The high-tech enterprise park "TECHNOPOLI" and the European Centre for the Development of Vocational Training (CEDEFOP) are also located in the same area.

## 6.2. Development and European Initiatives in the Municipality of Pilea-Hortiatis

The Municipality of Pilea - Hortiatis has a rich participation in a variety of national and international initiatives, in order to achieve its strategic goals for the benefit of its citizens. The list of projects it implements is very large and includes projects of important infrastructure (renovations, sports facilities, energy upgrades, etc.), modernization of services with emphasis on digital governance, citizen service, support for vulnerable social groups, etc., while also seeking to participate in European projects promoting innovation and networking at European level.

At the national level, the Municipality participates with a high percentage of absorption in the NSRF Programs 2014-2020, while utilizing other financial sources such as the Green Fund and the Local Leader Program.

Below is a brief overview of the most important European projects - recently completed or in progress - in which the Municipality of Pilea-Hortiatis participates:

### ENVIRONMENT - ENERGY



The project is officially entitled "GReen procurement And Smart city support in the energy sector" (GRASP) and is co-financed by the European Regional Development Fund (ERDF) (75%) and National Resources (by 25%), under the European program "Europe in the Mediterranean 2007-2013" (MED). The municipality of Pilea - Hortiatis participates as a partner, while the leading partner and general coordinator is the University of Patras.

The main purpose of the project was to strengthen the dynamics of "smart" cities in the Mediterranean, for the organization and development of "smart" and "green" e-procurement processes, with emphasis on

renewable energy sources and energy efficient solutions, through the development of an online system for managing the supply of products and services.



The project is officially entitled “Eco-aware Persuasive Networked Data Devices for User Engagement in Energy” (GREENSOUL) and is financed 100% by the European Commission within the HORIZON Program.

The GreenSoul project aims to achieve greater energy efficiency in public buildings by changing the behaviour of its users. It was tested in six pilot buildings in different climatic zones, which had different installations and different uses, ensuring the analysis of GreenSoul impacts at different state and building levels.

Through the project, an integrated ICT platform was designed that informs users about their energy habits, studies the ecological behavior of the users, analyzes the effectiveness of different persuasion methods and provides socio-economic data to prove the feasibility of the proposed changes. In addition, technical interventions were carried out in the buildings which were accompanied by training and mobilization programs for the users through the use of advanced technologies and applications for mobile phones. **The Municipality of Pilea-Hortiatis installed "smart" sensors in the City Hall.**

Finally, for the actions implemented in the framework of the project, the Municipality of Pilea-Hortiatis was awarded for innovation and the strategy of energy upgrading of public space with the "Gold" first prize at the BEST CITY AWARDS 2018.

Its implementation was completed on 31.10.2019.

More information available on the website: [www.greensoul-h2020.eu](http://www.greensoul-h2020.eu)



The project is officially entitled “Groundwater REsource managemENT for non-Potable water pURposes, baseMent protection, and heating - Pilot application” (Green Pump) and is co-financed by the European Regional Development Fund (ERDF) (85%) and National Resources (by 15%), in the framework of the Interreg V-A Cooperation Program "Greece-Bulgaria 2014-2020".

The project aims to optimise the utilisation of shallow aquifers, primarily for energy purposes (heating, air conditioning and, in some cases, hot water for domestic use) and then for minor water uses, such as toilet cisterns and garden watering.

For the Municipality of Pilea-Hortiatis the project concerns:

- the construction of a pilot installation in the Municipality of Pilea-Hortiatis and specifically in the 1st GEL of Pilea for utilization of groundwater to cover the needs of cleanliness and irrigation and
- the organization of a Monitoring Program of such systems.

More information available on the website: [www.greenpump.eu](http://www.greenpump.eu)

## HEALTH - SOCIAL CARE



The project Vicinity - «VICINITY - Open Virtual Neighborhood Network for connecting Internet Objects» was financed 100% by the European Commission within the HORIZON Program.



In the framework of the project, the results of the action "Services of the Social Network for the Citizens of the Municipality of Pilea - Hortiatitis \ e-Help at Home" were utilized and extended.

The Municipality of Pilea - Hortiatitis implemented pilot applications in two sectors A. Assisted Living at Home and B. Preventive Medicine, Physical Exercise, Nutrition.

Within the project were installed Sensors (presence detectors and entry-exit sensors) and panic buttons of new IoT technology in nursing homes of the municipality, free Internet for the operation of the system, as well as "Smart Fridge" and "Smart Oven" were installed.

Throughout the project, it was also implemented the "URBAN MARATHON" competition, an original playful competition for collecting points using new technologies and free monitoring by a nutritionist.

Its implementation was completed on 31.12.2019.

More information available on the website: [www.vicinity2020.eu](http://www.vicinity2020.eu)



The project entitled "ACTivating InnoVative IoT smart living environments for AGEing well" (ACTIVAGE) was financed 100% by the European Commission within the HORIZON Program..

As part of the project, more than 7,000 people across Europe and 1,221 in Greece tried a wide range of digital services to enhance and promote an active and secure lifestyle. During the project, the possibilities offered by the internet were exploited and new lifestyles were created to help the elderly people who participated to function independently. At the same time, the stakeholders that took part in the project collaborated with the aim of creating the first European system of internet communication via devices in 7 European countries.

The Municipality of Pilea - Hortiatitis offered its citizens the service of independent living and home security that supported and facilitated the elderly with automation functions such as opening and closing the main entrance of each house, the ability to detect the movement of the elderly in rooms of the house and informing the persons indicated by the elderly person in case of emergency if the movement showed that the elderly person is in danger.

Its implementation was completed on 31.12.2019.

More information available on the website: [www.activageproject.eu](http://www.activageproject.eu)

#### SOCIAL ENTREPRENEURSHIP



The Municipality of Pilea-Hortiatitis participates to the project entitled: "Enhancement of social entrepreneurship through the establishment of support structures in the CB area" (Growing Social), which is co-financed, in the framework of the Interreg V-A Cooperation Program "Greece-Bulgaria 2014-2020".

The project aims to create structures to support social entrepreneurship in the border area of Greece - Bulgaria, through the establishment of two Local offices of social entrepreneurship (one in the Municipality of Pilea-Hortiatitis) and an incubator of social enterprises (in Technopolis), as well as to raise awareness and inform the local community. .

Through the project, a Social Entrepreneurship Office operated in Asvestohori, which was staffed - at the expense of the project - by two specialized external collaborators and equipped with the necessary technological equipment.

More information available on the website: [www.growingsocial.eu](http://www.growingsocial.eu)

Source: <https://www.pilea-hortiatis.gr/web/guest/municipality/europrojects>

To the above projects is added the Terra-Mine project (Interreg VA Cooperation Program "Greece-Bulgaria 2014-2020"), as well as the participation of the Municipality in the WiFi4EU Program – “Promoting internet connectivity in local communities” under the mechanism "CONNECTING EUROPE (CEF) - WiFi4EU", thanks to which the Municipality proceeded to the procurement of WiFi Wireless Network Equipment and the installation of a completely new public WiFi network in the Municipal Communities of Panorama, Filyro and Hortiatis, as well as the upgrading of the existing WiFi Panorama.

Finally, at the national level, the Municipality of Pilea-Hortiatis has achieved the integration and implementation of remarkable projects such as:

- **The planning and implementation of upgrade and modernization interventions for the development of the Asvestochori Quarry area - "Argyro" Quarry area (NSRF 2014-2020, OP "Transport Infrastructure, Environment and Sustainable Development").** The interventions to be implemented are described in detail in the next paragraph.
- **The renovation and utilization of the building that housed the Intercultural School of the Municipality of Pilea for the housing of an exhibition and teaching spaces of the Children and Play Education Center (NSRF 2014-2020, EPANEK),** in order to form a model center for children and play education with suitable arrangements for the utilization and hosting of the collection of Marianna and George Vildiridis, creating a cultural infrastructure that will attract visitors and host educational programs aimed at children and adults.

The aim of the project is to combine museum exhibition, teaching and other related activities with the architectural and environmental upgrade of the valuable shell of the modern school, creating a unique cultural infrastructure that will attract visitors and host educational programs aimed at children and adults.

The combination of the educational function in a permanent toy exhibition space, is an innovative proposal for the utilization of the former school building. Reusing the abandoned building has great added value as it contributes:

- in the effective utilization of the property of the Municipality and in the promotion and dissemination of the cultural heritage,
- to highlight the unique collection of toys and
- in the creation of a green building for the exhibition, learning, experiential acquaintance with the game and its evolution.
- Configuration of "Litsa Fokidi" hall (funding by FILODIMOS and own resources).
- The elaboration of the Strategic Plan for Sustainable Urban Mobility with funding from the Green Fund, which is expected to be completed within 2021.
- Landscaping of Agia Glykeria square, Triantaphyllides park in Pilea, as well as green spaces in its extension (financing: Central Macedonia Regional Development Plan).

- The renovation of P. Mela Street Park in Asvestohori (funding RDP 2014-2020, Local Leader Program).
- The **construction of an indoor Gym in Hortiatis** (funding by FILODIMOS and own resources). After the completion of the indoor municipal gym, it will host games and trainings for local schools and local teams for the sports of basketball and volleyball. Its study was based on Integrated Energy Planning with zero energy consumption for lighting, heating, ventilation and cooling. According to the specifications of the General Directorate of Sports, it will be fully accessible for people with limited mobility (disabled) and will have 258 seats, locker rooms, toilets and administration areas, a doctor's office and a canteen.
- The reconstruction of the football stadium in Filyro (funding FILODIMOS and own resources).
- The production of an album dedicated to the Hortiatis Holocaust (funding RDP 2014-2020, Local Leader Program).

In addition, the Municipality implements a number of projects for the improvement and development of the municipal road network, flood control projects, as well as water supply and sewerage projects, energy upgrade projects and interventions in municipal buildings and schools, construction of new and maintenance of existing schools, etc.

Source: Report of the Municipal Authority of the Municipality of Pilea-Hortiatis for the year 2020.

The planning and implementation of projects and interventions in a number of sectors throughout the Municipality, highlights the Municipality of Pilea-Hortiatis in a modern municipality with a strong developmental physiognomy that systematically seeks its balanced spatial and sectoral development.

At the same time, the developmental character of the Municipality is expected to be further strengthened with the project of creating a Tourist Port in Pilea (Pilea Marina), which is gradually entering the implementation trajectory through PPPs (public-private partnerships).



Figure 25: Model of the tourist port of the Municipality of Pylea  
Source: [www.pilea-hortiatis.gr](http://www.pilea-hortiatis.gr)

### 6.3. Quarries of the Municipality of Pilea - Hortiatis

#### The quarry area of Asvestohori

The name of the area indicates the extensive presence of limestone, the exploitation of which began about 3 centuries ago and was the main work of most residents of the area. The history of these quarries begins during the Turkish occupation when the area was renamed from Neochori to Kirets-Kioi, ie Asvestohori, due to the inhabitants' occupation with the production of lime. Initially, the supply of quarrying products was limited to the area of Thessaloniki, but with the development of railways and maritime transport they expanded to the Balkans, Russia, Serbia, etc. After the fire of Thessaloniki in 1917, there was an increased need for binder cement, resulting in the intensification of lime production. Due to the continuous development, it was not long before many quarrying companies were established in the wider area of Asvestohori as well as towards Hortiatis and Pefka (old name Retziki), upgrading financially the whole area.

The spatial planning of the Regional Unit of Thessaloniki does not include quarry zones in the geographical area of the Municipality. However, the long-term operation of the quarries in the area has formed a special artificial environment (Tsochatzi D, 2017).

Table 3. Recording of quarries at the Municipality of Pilea - Hortiatis (1977-2010)

A/A	Community	Position	Exploiter	Ownership	Inert/or non
1	Asvestohori	Anemomylos	Ltd ANAGENNISI-D.SAKALI & SIA	Community	Inert
2	Asvestohori	Draganioti	OUARRIS-LIME KILN Ltd "I ENOSI"	Community	Inert
3	Asvestohori	Anemomyli	S.A. PROODOS	Community	Inert
4	Asvestohori	Kotsyfi	WORKING-PRODUCTIVE COOPERATION "I KYPSELI"	Community	Inert - Lime
5	Asvestohori	Agkelousi	"NEA OMONIA"	Community	Inert
6	Asvestohori	Argyro	"SPANDOS"	Community	Inert
7	Asvestohori	Argyro	"SITSANI"	Community	Inert
8	Asvestohori	Anemomyli	GHATZIKONTELIS	Community	Inert
9	Hortiatis	Adamiou	WORKING CO-OPERATION OF QUARRY WORKERS "O GIGAS"		Inert
10	Hortiatis	Adamia	CO-OPERATION "HORTIATIS"		Inert
11	Hortiatis	Adamia	LIME KILN "HORTIATIS"	Community	Inert
12	Hortiatis	Adamia	"KECHAGIAS"		Inert
13	Hortiatis	Adamia	"KREMMYDAS & SIA"	Community	Inert
14	Hortiatis	Adamia	MACEDONIAN LIME KILN		Inert
15	Hortiatis		MACEDONIAN QUARRIES Ltd.		Inert
16	Hortiatis	Aspri Petra	ASFALTOBETON S.A.	Community	Inert
17	Exohi	Aspri Petra	"I NIKI"E.S.P.E.	Community	Inert
18	Exohi	Aspri Petra	"MICHAILIDIS"	Community	Inert
19	Exohi	Aspri Petra	S.A."DIMITRAKOPOULOS"	Community	Inert
20	Filyro	Deve Kara	CHATZIKONTELIS	Community	Inert
21	Filyro		HEFAESTUS	Community	Inert
22	Filyro		CHOMATOURGKI	Private	Inert

The wider area of Asvestohori has been documented, based on internationally accepted criteria, as an irreplaceable historical, social, scientific, industrial and technological ensemble that clearly and completely describes the evolution of the world history of lime production because in a small area, representative and rare (eg Hoffman lime kilns) pre-industrial, early industrial and industrial lime kiln samples are gathered depicting the world history of lime production and it has developed a complete verticalisation in production, from mining to the final product, continuously until today.

The area has been a field of extensive exploitation for over 300 years and has to show a clear historical continuity and unquestionable experience throughout the range of the lime production process.

As the design and operation of the kilns remained almost intact and unchanged until the end of the 19<sup>th</sup> century, the pre-industrial lime kilns preserved in the area along with the wider area of the quarries completely cover the historical pre-industrial phase.





Figure 26. View of the Asvestohori quarries (source <https://thessalocation.gr/ta-latomeia-tou-Asvestohoriou-mnimeia-viomichanikis-klironomias/>)

Today in the wider area of MC of Asvestohori (beyond the intervention area) buildings of special architectural interest and cultural value are preserved, which can potentially be highlighted and utilised through the future creation of a special theme technology "park" with a network of routes of historical, environmental and cultural character that can reach up to the intervention area in question.

In recent decades, in the context of the effort to utilize the inactive quarries, the former "Argyro" Quarry has become a reference point for the summer events of Asvestchori, hosting concerts, theatrical performances, etc.

In fact, recently, with the inclusion of the project entitled "Upgrading and modernisation interventions for the development of the Asvestohori quarry area", the Municipality of Pilea-Hortiatis ensured the habilitation, restoration and utilisation project of the former Quarry "Argyro". The budget is € 2,347,360.00 and is funded through the Operational Program "Transport Infrastructure, Environment and Sustainable Development 2014-2020" - Cohesion Fund of the European Union.

The central idea of the proposed project is the utilisation of inactive quarries in this area for the future creation of starting points for thematic routes for visitors who wish to explore the history, culture and natural environment of the wider area of Asvestohori.

Upon completion of the Act, the site of the former Quarry, which is part of a wider area of vertical lime production, will have been restored, renovated and upgraded, including a cultural activity area, as well as leisure and promenade facilities. In particular, in the context of the project there will be:

- Restoration and fixing of the slopes created by the extraction,



- Highlighting of any residues of lime production activities (kilns, etc.),
- Water regulation,
- Construction of low traffic roads,
- Construction of a space for cultural activities (outdoor theatre, exhibition space and educational activities),
- Construction of auxiliary recreation areas,
- Construction of a promenade and similar activities,
- Lighting and other electromechanical equipment, for the operation of the total intervention area.

The expected results from the implementation of the Deed are the creation of an accessible and hospitable place where cultural and other events of information, dissemination and promotion will be organised to highlight the special features of the area, utilising the available cultural and natural resources.

The utilisation of the former quarry "Argyro" aims to create a reference place (in the form of a landmark) as a separate public space to which special importance is given to the cultural participatory activity and recreation of the citizens. In this way, a degraded, abandoned and environmentally damaged natural resource can be turned into a comparative advantage of the area with cultural, social and economic extensions for the benefit of the local community, but also the wider area of the Municipality of Pilea - Hortiatia and Thessaloniki as a place of attraction of thematic tourist interest<sup>52</sup>.

## 6.4. Description of the Current Situation in the Municipality of Madan

### Population

The population of the Municipality of Madan is 10,698 inhabitants (National Statistical Service, 2019). Almost half of them (5,233) live in the seat of the Municipality in the city of Madan - 5,233. Compared to the 2011 census, where the population was 12,188 inhabitants for the entire municipality and 5,791 for the city of Madan respectively, there is a steady downward trend.

### Geography, morphology and climatic characteristics

The Municipality of Madan is located in the southeastern part of the Western Rhodopes and occupies part of the Upper Ardennes region along the rivers Madanska, Arda and Cherna.

The total area of the municipality amounts to 175 km<sup>2</sup>, which is just 0.15% of the total area of Bulgaria. It borders the municipal districts of Smolyan, Rudozem, Zlatograd, Nedelino, Ardino and Banite.

The average altitude of the area is 700 m, which decreases to the continental-Mediterranean climatic area of the Municipality in the south-southeast.

<sup>52</sup><https://www.pilea-hortiatia.gr/web/guest/municipality/espa2014-2020/archive/34919>, Technical Data Issue, Municipality of Pilea-Hortiatia, November 2019

The environment is in excellent condition and the dense coniferous forests that cover the mountain ridges around the Municipality produce antimicrobial organic compounds, making the air particularly healthy for asthmatics.

The agriculturally exploitable area covers 35,703 hectares, of which 24,682 are arable lands, while the forest part of the Municipality amounts to 131,255 hectares with a predominant vegetation of deciduous and coniferous species to constitute 75% of all plant species.

The climate in the central parts of Rhodope, where the Municipality of Madan is located, is considered to be the most favourable climate for a variety of tourist activities. Its bioclimatic elements are characterised as the most favourable for tourism activities development and recreation in general, compared to the climate of the other mountains of Bulgaria. Respectively, the winter is long with heavy snowfall, but is characterized, in relation to the temperatures, as mild. The average monthly temperature for January is from 7° C to 2 °C. The snow on the high ridges lasts until the end of May, so the conditions are good for winter sports. The summer is particularly cool, with the highest average daily temperatures for July just 18 °C to 19 °C.

#### Historical identity and heritage

Madan is a mining village. According to various sources, the ore deposits were used by the Thracians, Romans, Saxons, Germans and Russians, who left their mark on the extraction of lead and zinc.

The extraction of lead ore began in the 4th-5th century BC from the local Thracian tribes. It is believed that the ancient name of Madan is believed to be Krushovo, and the locals call it Selo. The name "Madan" comes from a later period and is related to mining (madan is an Arabic word, maden - means mine). The oral tradition of the place says that the small village of Madan 200-300 years ago was a large settlement with a very developed primitive industry. Along the banks of the three rivers there were about 150 workshops and ironworks that used water to produce their products, referring to the well-known watermills<sup>53</sup>. The products produced by this local industry were varied, from forging nails to coffee grinders and weapons.

After its release and thanks to the rich reserves of lead-zinc, the development of modern ore mining began. The fastest growing area was the period 1947-1989, when Madan was established as an important industrial center.

Subsequently, with the decline in ore mining, negative economic and social impacts began to be observed and the efforts focused on the development of alternative sectors of economic activity in the region.

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<sup>53</sup>The Watermill is the first labour production machine that man has invented using natural, mild and renewable sources.



Figure 27. Panoramic view of the Municipality of Madan (<http://www.mineralsbulgaria.com/>)

### Financial Activities

The dominant component of the economic activity of the Municipality of Madan is industry, with special emphasis on the mining industry. Its economic profile is complemented by the timber industry, the garment industry and transports. The companies are mainly very small and small and their number has remained stable for the last 6 years.

The production of agricultural products occupies a very small part of the economy of the Municipality of Madan due to the mountainous land and the limited agricultural land. It mainly concerns the production of potatoes and legumes (beans), as well as the production of tobacco. However, the last is collapsing and creating serious challenges for the agricultural sector in the Municipality of Madan.

Services and tourism also have a share in Madan's economy, although its tourism resources have not yet been fully utilized. According to the National Statistical Service of Bulgaria, the Municipality of Madan has seven (7) accommodations with 139 beds in total.

### Utilization of the eco-cultural heritage of Madan

The mountainous terrain of the Municipality of Madan is presenting special diversity including, gorges, valleys, as well as some special clusters of rocks.

The first attempt to exploit the mines and the wider geological and natural heritage of the Municipality of Madan started more than 60 years ago and led to the creation of visitable mining sites as well as the creation of a museum and an exhibition space. Over time, the premises suffered significant damage resulting the need for maintenance and in some cases redesign of their use.

Below are mentioned 12 locations - natural formations of the Municipality of Madan that have geotouristic and generally environmental interest. They were recorded by the University of Mining and Geology "Saint Ivan Rilski".

#### Rhodope Crystal Mineralogical Museum

The "Rhodope Crystal" Crystal Hall is one of the largest attractions in Madan. It was founded in 1984 and is a member of the International Association of Mineralogical Museums. Exhibits more than 500 unique mineral samples. There are few lead-zinc deposits in the world where such distinct and beautiful crystalline forms can be found, this mineral museum also maintains a nationally and globally unique site.



Figure 28. «Rhodope Crystal» Mineralogical Museum (<http://www.mineralsbulgaria.com/>)

#### Museum of Mines and Ore Mining

In 1958, the Museum of Mining opened in Madan, which in the 1980s was renamed the Museum of Mines and ore mining. The museum presents the history of ore mining in the Madan ore field, which dates back to antiquity, as there are indications that individual deposits were discovered and developed by the Thracians. The name "Madan" comes from a later period and is associated with mining. Today's city dates back to antiquity

and mining has existed here for many many years . In such mines in the nearby village of Borieva were found coins from the 2nd century BC, as well as coins from Thassos from the 4th – 3rd century BC, so we can determine their age. In 2008 the Museum of Mines and Ore Mining was registered as a cultural organisation by the Ministry of Culture of the Republic of Bulgaria.

#### Spoluka village mining point

The site is a municipal property and for the time being it has not been developed as a tourist attraction. The future plans of the municipality of Madan are to turn it to a cultural and historical attraction, the restoration of which shall promote a unique tourist product for the whole country.

#### Bronze Age – Sharenka Cave

Sharenka Cave is a special kind of mining museum in the Rhodopes from the 6th century BC. Archaeological excavations in the cave have found traces and objects that prove its habitation by prehistoric people, as well as the extraction and processing of ores from the 6th century BC. until the 6th century AD. In the cave the visitor can see various objects found during the excavations, such as candles and figures of a prehistoric Thracian family. This is the first proven case in which a cave is used both as a habitat, and as a mine the smelting ore, mainly lead-zinc.



Figure 29. Museum - Cave Sharenkatou of the Municipality of Madan (<http://www.mineralsbulgaria.com/>)

#### Dupkata Cave

The Dupkata cave has a total length of 107 m and shortly after its entrance is divided into two branches/paths. The first, is very small and narrow, but the second leads to a large room where there is an underground lake. The cave shelters four protected species of bats. It is formed by marbles, which due to karst phenomena form stalagmites and stalactites under the influence of surface flow and underground water.



### The phenomenon of the Horse's Head rock

The phenomenon of the rock is called the "Horse's Head", due to its shape. The visitor can see this natural formation in the south of Leshtak village. There, a majestic rock in the shape of a horse's head rises above the river Arda. What is striking is the fact that the rock is located next to a huge abyss with a recorded depth of 100 m. The formation and the water reservoir were created under the influence of severe weather conditions and the erosion caused by the wind and mainly by the surface running water.



Figure 30. The Horse's Head rock phenomenon (<http://www.mineralsbulgaria.com/>)

### Mechodolsko Dere Waterfall

Three rivers flow through the municipality of Madan, the river Madanska, the river Cherna and the largest and most famous, the river Arda.

At Mechodolsko Dere there is a small but impressive waterfall, hidden among lush vegetation. The waterfall is on two levels, the upper water flow is about 1.5 m and the lower about 4.5 m. The reservoir into which the water falls looks like a round lake. Then the water continues along a narrow stone stream, which is no less picturesque than the waterfall itself. This is due to the type of rocks- migmatites, through which the river flows. Migmatite is a heterogeneous rock that is a mixture of metamorphic and magmatic rocks.





Figure 31. Mechodolsko Dere Waterfall (<http://www.mineralsbulgaria.com/>)

### Meander of the river Arda

The meander is a smooth curve of a river in the shape of a horseshoe (Figure 39), formed under certain factors. If a river in a mountainous area reaches an obstacle that cannot overcome, it surrounds it in the form of a meander. This is the origin of river Arda meanders, the waters of which flow into the municipality of Madan. The meanders of the river Arda are natural treasures of the Rhodopes. They are mysterious, beautiful and often difficult to access, but they worth to be looked for, discovered and enjoyed.



Figure 32. River Arda Meander (<http://www.mineralsbulgaria.com/>)

### Old bridge over the river Madanska

The bridge has two domes, with three smaller openings for water drainage. It is 40 m long, 3.4 m wide and 8 m high. It is made of carved stone and is made almost entirely of gneiss rock.

### Old bridge over the river Hadzhijska

This bridge is vaulted and made of dry stone. The two arches are of different sizes and are formed from well-processed pieces of gneiss, with a size of about 40 cm, while in the construction of the bridge are used various rounded pieces (gneiss, migmatites, amphibolites, marbles, rhyolites), taken from alluvial deposits of the river. This bridge is the smallest of the three, but perhaps the most colourful. The dimensions are: 19 m length, 2.2 m width, 2.5 m height.

### Old bridge over the river Batanska

The bridge is single-aisled with a vaulted arch. There are well-worked stones on both pillars, consisting of gneisses while rhyolites have been used to a lesser extent. The base is 9.2 m. It is of medium size compared to the other two bridges, ie: 22 m long, 2.6 m wide, 4.5 m high.



Figure 33. Old bridge over Batanska river (<http://www.mineralsbulgaria.com/>)

### Rocky and stone constructions and fortress of Koznik

The visitor from the village of Varba can reach the area "Kechikaya", which is located between the municipalities of Madan and Rudozem. There are preserved stone walls of buildings and the fortress wall. Here one can bow to the power of nature, as the wind and water have sculpted the rocks up to 50 m in size. Rocks, among which one can distinguish a man in a cloak ("Pope of Rome"), a sponge, a head or something else. The effects of the rocks were formed over a period of 40-30 million years. The pieces are mainly made of gneiss, granite and rarely quartz.

### Cultural activities

The traditions, arts and folklore tradition of the Bulgarian side of the Rhodope Mountains are among the most diverse and rich in the whole country, constituting a strong element of the identity of the municipalities of the region. A sufficient number of amateur groups are active in Madan to work for the preservation and promotion of the local cultural heritage and traditions of the area. The traditional costume from the village of Varbina, is known and popular for its rich decoration.

Also, some traditional arts have been preserved, such as the "abadzhiystvo" (manufacture of thick woven woolen fabric), carpentry, the profession of blacksmith, the art of weaving, "tepavitsi" (finishing equipment for textiles), etc.

Finally, an important pole of attraction is the local gastronomy with the traditional specialties of Rodopi such as cheverme, patatnik, portage, parenik, katmi etc.

## 7. External Environment Analysis

### 7.1. Basic Cultural, Environmental and Touristic Resources of the Greece-Bulgaria Cross Border Region

This paragraph attempts to provide an overview of the main environmental, cultural and tourist resources of the cross-border area of Greece-Bulgaria, in order to understand the dynamics of the wider area which includes the Municipalities of Pilea-Hortiatis and Madan.

#### Environment

The landscape of the cross-border area consists of densely forested mountains, river straits, valleys, plains, lakes, coastal wetlands, beaches and river deltas. The area includes the Rila, Pirin and Rhodope mountain ranges, with exceptional forests, the cross-border rivers Strymon, Nestos, Arda and Evros and more than 400 km of coastline.

The cross-border area is characterised by many and important natural resources, including a large number of protected natural areas (86 Natura 2000 sites, 5 Ramsar wetlands, etc.), and more specifically:

Table 4: The most important protected areas of the cross-border area of Greece-Bulgaria

The most important protected areas of the cross-border area of Greece-Bulgaria	
Ramsar wetlands	<ul style="list-style-type: none"> <li>▪ Evros Delta</li> <li>▪ Lake Vistonida - Porto Lagos Lagoon</li> <li>▪ Lake Mitrikou</li> <li>▪ Lake Ismarida and lake complex of Thrace</li> <li>▪ Nestos Delta</li> <li>▪ Lake Volvi</li> <li>▪ Lake Koronia</li> <li>▪ Lake Kerkini</li> </ul>
UNESCO World Heritage List	<ul style="list-style-type: none"> <li>▪ Pirin National Park</li> </ul>
NATURA 2000 Network	<ul style="list-style-type: none"> <li>▪ 86 locations in the Greek and Bulgarian cross-border area</li> </ul>
National Parks	<ul style="list-style-type: none"> <li>▪ Rila National Park</li> <li>▪ Pirin National Park</li> </ul>
Forests of stunning beauty	<ul style="list-style-type: none"> <li>▪ Nestos river valley</li> </ul>
Recorded natural monuments	<p>Greece</p> <ul style="list-style-type: none"> <li>▪ Haidu-Kula beech forest</li> <li>▪ Fraktou Forest</li> <li>▪ Virgin forest of Central Rodopi</li> <li>▪ Vrontos-Lailias mountains</li> </ul> <p>Bulgaria</p> <ul style="list-style-type: none"> <li>▪ Pirin National Park</li> </ul>
Important areas for bird species	<ul style="list-style-type: none"> <li>▪ 8 areas in Thrace</li> <li>▪ 10 areas in Eastern Macedonia</li> </ul>

	<ul style="list-style-type: none"> <li>▪ 24 regions in Central and Western Macedonia</li> </ul>
Biogenetic protected areas	<ul style="list-style-type: none"> <li>▪ Mount Haidu-Kula and surrounding mountain peaks</li> <li>▪ Virgin forest of Central Rodopi</li> </ul>

Source: Program "Greece-Bulgaria 2007-2013", own editing

## Culture

The cross-border area of Greece-Bulgaria has a rich history and a number of archeological sites and monuments (historical-cultural and religious) of different historical periods, while three (3) monuments are included in the UNESCO World Heritage List, namely:

- The early Christian and Byzantine monuments of Thessaloniki
- The archeological site of Philippi
- The Monastery of Rila

In addition, the recent excavations at the Casta Tomb at the archeological site of Amphipolis have turned the international scientific interest and the interest of tourists internationally in the Greek cross-border area. Among the archeological sites to be visited in the cross-border area, the following stand out also:

- The ancient and early Christian Amphipolis as a whole.
- The archeological sites of Abdera, where the ancient quarries (Xanthi) can be visited, Thassos, Samothrace, Arkadikos (Drama), Ismaros and Maronia (Rodopi), Makri and Traianopolis (Evros), Perperikos, Tatul (Kirtzali), Alexandrov (Haskovo), Beden (Smolyan) etc.
- The Roman Nikopolis (Nikopolis ad Nestum) in Gotse Delchev.
- The ancient theaters of Abdera, Thassos and Philippi.
- The ancient citadels of Abdera (Xanthi), Adriani and Platania (Drama), Elafochori and Kailon (Evros), Xylagani and Ergani (Rodopi) etc.

The area also has remarkable monuments of the Byzantine and Ottoman period such as:

- The Stavropegian Holy Monastery of Panagia Eikosifoinissa which is considered the oldest monastery in Greece.
- The medieval monastery of Agios Ioannis Prodromos in Kirtzali which dates between the 6th-8th century AD.
- The Church of the Assumption in the village of Uzundzhovo (the mosque - church) in Haskovo.
- The walls of Thessaloniki, Drama and Komotini, as well as the Castles of Nea Peramos, Kavala, Didymoteicho, Bialgrad and Mezek (Haskovo), Momina Kula (Blagoevgrad) and Ustra (Kirtzali).
- The old bridge - also known as the bridge of Mustafa Pasha that was built in the 16th century on the river Maritsa in Svilgrad (Haskovo). It is work of the famous Ottoman architect Mimar Sinan.
- The "Devil's Bridge" in Ardino, built between 1515-1518 by order of Sultan Selim I, is considered part of the road that connected Thrace with the Aegean coast.

Bridges - Roman, Byzantine and Ottoman - are also found in the Greek cross-border area from Thrace to Central Macedonia where two bridges are located in the Municipality of Pilea-Hortiatis (i) the Early Christian Bridge of Pilea (Kamara of Pilea)

that joins the Pilea with Hortiatia and (ii) the water bridge - the Roman Aqueduct of Hortiatia.

- The Mosque (1812) in Kirtzali, the Eski Mosque (14th century), the Charsi Mosque (18th century) in Haskovo, the Karatza Pasha Mosque (15th century) in Gotse Delchev, etc.

As far as concerns the highlighting of the pre-industrial and industrial heritage, the cross-border area has interesting thematic museums including:

- The silk museum in Soufli
- The Roma basket weaving museum in Komotini
- The water supply museum of Thessaloniki - pumping station of the Ottoman Company
- The tobacco museum in Kavala
- The historic listed buildings of the tobacco warehouses in Drama and Kavala
- The Museum of Mining and Mining in Madan, etc.

In addition, the cross-border area includes a variety of historical-archaeological museums, ethnological-folklore, but also thematic such as ecclesiastical, technological, photography and cinema museum in Thessaloniki, naval museum in Kavala, etc.

Of particular architectural, cultural and historical interest are the old cities of Xanthi, Kavala, Blagoevgrad, but also a number of traditional settlements along the Rhodope Mountains on both sides of the border.

Finally, important routes cross the border area with indicative:

- The footsteps of the Apostle Paul with stations in the Greek border area at Samothrace, Naples (Kavala), Amphipolis, Apollonia and Thessaloniki
- The Sultan's path, named after Suleiman the Magnificent, that starts in Vienna and ends in Istanbul via the Devil's Bridge in Ardino, the city of Kirtzali and surrounding villages.

Finally, throughout the year, theaters, museums, lyric scenes and thematic cultural events shape the cultural and artistic image of the area. In addition, the rich and widespread folk culture is expressed through traditional music events and numerous exchanges organized by local authorities, NGOs and other organizations.

## Tourism

The cross-border area has a significant competitive advantage: its multidimensional historical and cultural heritage lost over the centuries and its outstanding combination of natural resources. The terrain of the mountains, the coastlines, the rivers and the forests, the natural reserves, are a pole of attraction for tourists at any time of the year. The eligible area has the potential to welcome visitors with diversified interests and offer them alternative solutions for leisure and tourism.

Nonetheless tourism, either mass tourism during the summer season or alternative tourism is not equally developed in the eligible area. Major intraregional imbalances are observed.

The tourism industry is constantly developing and perspectives for additional progress are high.



Indeed, in some areas like Thessaloniki or Kavala, tourist infrastructure exists for mass and business tourism, but without particular interconnection between services and professionals of the tourism sector. On the other hand, during the past twenty years, especially in the Greek part of the eligible area (due to the available financial tools Development Law, NSRF, RDP, Leader), tourist infrastructure of all types (hotels, rented rooms, holiday homes, has increased significantly). agritourism units, etc.) has been increased.

In particular, the trend towards agritourism and ecotourism presents strong dynamics on both sides of the cross-border area and it seems to be capable of transforming entire regions into poles of agritourism and ecotourism interest.

The following special resources also attract visitors, like: Πόλος έλξης επισκεπτών στη διασυνοριακή περιοχή ωστόσο αποτελούν και άλλοι ειδικοί πόροι όπως:

- The natural thermal baths: Sandanski, Dobriniste and Banja (Blagoevgrad), Devin, Benden and Banite (Smolyan), Mineralni Bani (Haskovo), Samothraki (Therma), Traianoupoli (Alexandroupolis), Alexandroudas (K) and Agistro (Serres), Apollonia and Langadas (Thessaloniki) etc.
- The ski resorts (Pamporovo, Lailias-Serres, Falakro-Drama).
- The coastline from Alexandroupolis to Thessaloniki, as well as the islands of Thassos and Samothrace.

#### Accessibility

From the Greek side the area has significant transport infrastructure and is served by three ports of national / international importance (the port of Thessaloniki, the port of Kavala and the port of Alexandroupolis) and three main airports (the International Airport "Macedonia" in Thessaloniki, the airport "Alexander the Great" in Kavala and the airport "Democritus" in Alexandroupolis).

The Greek-Bulgarian border road stations located in the area are the following (a) the station of Promachonas in the Regional Unit of Serres, (ii), the Exohi station of Kato Nevrokopi in the Regional Unit of Drama, , the Agios Konstantinos station in the Regional Unit of Xanthi, the station of Nymfaia in the Regional Unit of Rodopi, and the stations of Kyprinos and Ormeni in the Regional Unit of Evros.

The most important transport infrastructure is the road network and overall connectivity has improved significantly in the past:

- with the construction of the Egnatia highway and many vertical axes that connect Greece with Bulgaria
  - Thessaloniki- Serres- Promachon (Bulgaria- Pan-European Corridor IV),
  - Ardania - Ormenio (Bulgaria - Pan-European Corridor IX),
  - Komotini-Nymfaia-Greek-Bulgarian Border (Bulgaria-Pan-European Corridor IX) and
  - Xanthi- Echinis -Greek-Bulgarian Border (Bulgaria).
- with the construction of large sections of A3 and A4 motorways in Bulgaria

In addition, in the Greek cross-border area there is a developed railway network from Thessaloniki to Serres, Drama and Alexandroupolis to Dikaia in Evros. While Thessaloniki is also connected with Sandanski, Blagoevgrad and Sofia, Skopje and Belgrade with modern railway infrastructure.

Finally, from the ports of Thessaloniki, Kavala and Alexandroupolis there are ferry connections to the islands of the North Aegean, Thassos (from the port of Kavala) and Samothrace (from the port of Alexandroupolis) and the Sporades (from the port of Thessaloniki during the summer months).

## 7.2. Basic Cultural, Environmental and Tourist Resources of the Region of Central Macedonia and especially of the Regional Unit of Thessaloniki

### Generally

The **Region of Central Macedonia** consists of seven spatial units (Imathia, Kilkis, Pieria, Pella, Halkidiki, Serres, Thessaloniki) and 38 municipalities after the implementation of the law "Kallikratis" in 2010 for the restructuring of the prefectures and local authorities of the country, occupies a total area 18,811 sq.km. (being the second largest Greek region) and has a population of 1,882 million inhabitants (2011 census). Respectively, the Metropolitan Unit of Thessaloniki includes 14 Municipalities, occupies a total area of 3,683 sq.km. (19.5% of the total area of the Region) and a population of 1.11 million inhabitants (58.9% of the total population of the Region).

Thessaloniki, due to its geographical location, is promoted as the "gateway" to Europe and the Balkans as it is a strong political, economic and industrial centre in Northern Greece. Its commercial port is important for the development of the region but also for the general socio-economic development of the country as a whole.

### Environment

Regarding its geomorphological characteristics, the Region of Central Macedonia is mountainous and its climate is Mediterranean, characterised by cold winters with heavy rainfall and snowfall while the summer is cool and humid. The Region has to highlight a plethora of water elements (rivers and lakes) with important elements of flora and fauna.

The region is rich in natural resources (forests, water resources, geothermal resources, etc.) and produces the 16.7% of GDP. 41% of its land is arable, 24% is pasture, 26% forest and 9% other uses. 42% of arable land is irrigated land. In the Region of Central Many habitats, water areas and other sensitive areas are protected by International, European and National conventions. The most important wetlands of the Region are:

#### The most important water resources of the Region of Central Macedonia

RAMSAR wetlands	<ul style="list-style-type: none"> <li>Axios Delta, Loudias, Aliakmonas, and the Citrus Salts in Pieria, the Volvi and Koronia Lakes, and the Kerkini Lake.</li> </ul>
Other important water resources	<ul style="list-style-type: none"> <li>Doirani, Pikrolimni, the estuary of Strymon, the estuary of the Gallikos river and the swamp Kalochori, Lake Vegoritida, artificial lake of Metallio, Mavrombara, the lagoon of Epanomi and Angelochori etc.</li> </ul>

Waterfalls	<ul style="list-style-type: none"> <li>▪ Waterfalls of Edessa</li> <li>▪ Skra Waterfalls and Emerald Lake</li> </ul>
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Also, the Region of Central Macedonia with a main mountain range the internationally recognizable Olympus in Pieria, has mountains and mountain ranges with great ecological and ecotourism interest: Mount Vermio (Imathia), Mount Vora (Pella), Mount Paiko (Kilkis), Krousia Ori and Beles (also in Kilkis), Pieria Ori, Holomonta (Halkidiki) and Chortiatis. While important caves within the Region are the Caves of Petralona (Halkidiki), Agios Georgios (Kilkis) and Alistrati (Serres).

### Culture

Also, the Region of Central Macedonia has a strong advantage of cultural resources dating back to prehistoric times and reaching down to modern history. The promotion of the cultural monuments of the area is achieved through the creation of networks. There are 23 recognized traditional villages in the Region. Especially for areas that have developed in mountainous or isolated areas, the development of co-operation and promotion networks is an important element. Also, in addition to the traditional villages, the Region has a large number of listed buildings and monuments, which most often have been the basis for urban development in accordance with specific rules of environmental protection and sustainability.

In addition, within the Region of Central Macedonia there are three (3) monuments listed in the UNESCO World Heritage List:

- Mount Athos,
- the early Christian and Byzantine monuments of Thessaloniki and
- the archeological site of Vergina.

An attempt to review the most important cultural resources of the Region of Central Macedonia (including those of the Regional Unit of Thessaloniki) is presented in the following table:

Historical and cultural resources of the Region of Central Macedonia	
Thessaloniki	<ul style="list-style-type: none"> <li>▪ White Tower</li> <li>▪ Rotunda and Kamara</li> <li>▪ Ancient Roman Agora</li> <li>▪ Ano Poli</li> <li>▪ Archaeological Museum, Museum of Byzantine Culture, State Museum of Contemporary Art, Water Museum, Photography and Cinema Museums, Jewish Museum of Thessaloniki, War Museum, Museum of the Macedonian Struggle, Folklore and Ethnological Museum, Olympic Museum of Thessaloniki, Municipal Gallery, etc.</li> <li>▪ Holy Temples of Agios Dimitrios, Agia Sofia, Agios Nikolaos Orfanos, Vlatadon Monastery etc.</li> <li>▪ Zeitlinik Cemeteries</li> </ul>
Imathia	<ul style="list-style-type: none"> <li>▪ Archaeological site of Aigai in Vergina</li> </ul>

	<ul style="list-style-type: none"> <li>▪ The School of Aristotle</li> <li>▪ The Barbuta district (or the Jewish Quarter) in Veria</li> <li>▪ Panagia Soumela</li> <li>▪ Byzantine churches of Veria</li> <li>▪ Old Metropolis of Veria</li> <li>▪ Holy Temples of the Resurrection of Christ, Ypapantis, Agios Savvas of Kyriotissa and Holy Monastery of Panagia Dovra</li> <li>▪ Step of the Apostle Paul</li> </ul>
Kilkis	<ul style="list-style-type: none"> <li>▪ Byzantine Castle in Gynaikokastro</li> <li>▪ Allied cemeteries in Christoni, Polykastro and Doirani</li> <li>▪ War Museums of Kilkis and Skra</li> <li>▪ Evropos</li> <li>▪ Palatiano</li> <li>▪ Monastery of St. Raphael, Nicholas and Irene</li> <li>▪ Holy Monastery of Panagia Goumenissa</li> <li>▪ Holy Convent of Saint Nicodemus</li> <li>▪ Church of Agios Georgios Goumenissa</li> <li>▪ Church of Agios Georgios on the homonymous hill in Kilkis</li> </ul>
Pella	<ul style="list-style-type: none"> <li>▪ Gazi Evrenos Mausoleum, Sheikh Ilahi Mosque and Clock Tower in Giannitsa</li> <li>▪ Skydra Old Railway Station</li> <li>▪ Archaeological site of Pella</li> <li>▪ The Varosi district in Edessa</li> <li>▪ Holy Monasteries of Agios Hilarion Moglenon, Archangel Michael and Agia Triada</li> </ul>
Pieria	<ul style="list-style-type: none"> <li>▪ Ancient Dion</li> <li>▪ Ancient Pydna</li> <li>▪ Ancient Livithra</li> <li>▪ Ancient Methoni</li> <li>▪ Maritime Museum of Litorchoro</li> <li>▪ Holy Monasteries of Agios Dionysios on Olympus and Panagia Makryrrachis and Holy Temples of the Assumption of the Virgin, Agia Triada, Agia Kori, Agia Paraskevi and Agios Athanasios in Ano Skotina</li> </ul>
Serres	<ul style="list-style-type: none"> <li>▪ Amphipolis</li> <li>▪ Fort Rupel</li> <li>▪ Acropolis of Serres "Koulas"</li> <li>▪ Zinzirli Mosque</li> <li>▪ Bezesteni (closed market)</li> <li>▪ Holy Monasteries of Panagia Eikosifoinissa, Timiou Prodromou, Panagia Vyssiani and Timios Prodromos Hermitage</li> </ul>

Chalkidiki	<ul style="list-style-type: none"> <li>▪ Ancient Stageira</li> <li>▪ Aristotle Park</li> <li>▪ Ancient Olynthos</li> <li>▪ Mount Athos</li> <li>▪ Holy Monastery of Zygos Ouranoupolis</li> </ul>
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Source: <https://visit-centralmacedonia.gr/>

## Tourism

The general strategy of tourism development both in Greece and in the Region of Central Macedonia concerns the 3S tourism (Sea, Sun, Sand) or as it is referred "Sun and Sea" tourism. The fact is strongly reflected in the number of arrivals and overnight stays, both nationally and regionally. According to the data of INSETE from the analysis of the main indicators: cost per visit, cost per night and average length of stay, it appears that the Regions that mainly accept tourism "Sun and Sea", are the South Aegean, Crete and Ionian Islands that have the highest values in all three indices.

This strategic choice, as mentioned, prevails in the promotion of Tourism at the Region of Central Macedonia level, which aims at the development of three tourism products, two 3S for the Regional Units of Pieria and Halkidiki and a City Break for the Metropolitan Unit of Thessaloniki. The exploitation of the specific resources, but also the strategy of their promotion is clear in the way it is reflected in the main tourist indicators and in the huge difference in the number of arrivals / nights and the average length of stay between these three regional units and the rest of Central Macedonia. It is therefore understood that the role of the other regional units of Central Macedonia is only auxiliary to the main tourism product and with the aim of diversifying the tourism product in the medium term to extend the tourist season by offering new tourism experiences.

Regional Unit	Main Product Categories						Supportive Categories	
	Sea & Sun	Cultural/ Religious Tourism	Marine Tourism	MICE	City Break	Health Tourism	Activities - nature	Wellness
Chalkidiki								
Thessaloniki								
Pieria								
Serres								
Imathia								
Pella								
Kilkis								

Figure 34: Main categories of tourist product in the Region of Central Macedonia (Source: INSETE)

### Accessibility

The region of Central Macedonia has a strong transport network (road and rail network) that connects it with the hinterland (Athens, Alexandroupoli, Didymoteicho, Serres, Drama) and the Balkans (Sandanski, Blagoevgrad, Sofia).

Egnatia Odos and PATHE are two of the main roads with many vertical roads connecting them in parallel with the international airport "Macedonia" and the port of Thessaloniki.

In addition, the Region has a strong advantage in terms of the transport networks that are developed in it with important highways that end in the pan-European corridors crossing the whole Region and reaching the borders. The international airport "Macedonia" is the second largest airport in Greece, located 14 km from the city of Thessaloniki and serves 3.5 million passengers each year.

## 7.3. Tourist Resources and Infrastructure in the Regional Unit of Thessaloniki, in the Region of Central Macedonia and in general in the cross-border Region of Greece-Bulgaria

### Tourist Infrastructure

The Region of Central Macedonia has 93,036 beds in total, with 50% and more of them in the Regional Unit of Halkidiki, while the Regional Unit of Thessaloniki has 15% of the total Region, according to official data for the year 2019.

Table 5: Hotel capacity of the Region of Central Macedonia 2019

REGION OF CENTRAL MACEDONIA							
Hotel capacity 2019							
Regional Unit		5*	4*	3*	2*	1*	Total
<b>Imathia</b>	Units	0	4	21	6	0	<b>31</b>
	Rooms	0	83	461	151	0	<b>695</b>
	Beds	0	169	964	286	0	<b>1.419</b>
<b>Therssaloniki</b>	Units	15	31	42	25	32	<b>145</b>
	Rooms	2.034	2.159	2.308	836	751	<b>8.088</b>
	Beds	3.839	3.944	4.461	1.588	1.507	<b>15.339</b>
<b>Kilkis</b>	Units	0	0	9	4	4	<b>17</b>



	Rooms	0	0	252	133	55	<b>440</b>
	Beds	0	0	515	353	103	<b>971</b>
	Units	0	7	32	16	9	<b>64</b>
<b>Pella</b>	Rooms	0	207	684	277	166	<b>1.334</b>
	Beds	0	430	1.396	606	337	<b>2.769</b>
	Units	4	21	62	125	163	<b>375</b>
<b>Pieria</b>	Rooms	598	1.290	1.713	3.317	3.280	<b>10.198</b>
	Beds	1.250	2.723	3.631	6.503	6.509	<b>20.616</b>
	Units	0	6	19	6	2	<b>33</b>
<b>Serres</b>	Rooms	0	299	457	179	95	<b>1.030</b>
	Beds	0	690	956	392	193	<b>2.231</b>
	Units	36	61	97	150	166	<b>510</b>
<b>Chalkidiki</b>	Rooms	6.675	6.294	4.204	3.745	3.518	<b>24.436</b>
	Beds	14.408	12.754	8.444	7.319	6.766	<b>49.691</b>
	Units	55	130	282	332	376	<b>1.175</b>
<b>Total</b>	Rooms	9.307	10.332	10.079	8.638	7.865	<b>46.221</b>
	Beds	19.497	20.710	20.367	17.047	15.415	<b>93.036</b>
	Units	55	130	282	332	376	<b>1.175</b>

Source: Hotel Chamber of Greece - Edited by INSETTE Intelligence

Respectively, in a total of 68,287 beds in rooms for rent in the year 2019 for the entire Region of Central Macedonia, approximately 15% of them are located in the Regional Unit of Thessaloniki.

Table 6: Rooms for rent in the Region of Central Macedonia 2019

REGION OF CENTRAL MACEDONIA						
Rooms for rent 2019						
Regional Unit		4K	3K	2K	1K	Total
<b>Chalkidiki</b>	Units	61	615	1.080	556	<b>2.312</b>
	Rooms	516	4.320	7.066	3.206	<b>15.108</b>
	Beds	1.325	10.181	17.222	7.634	<b>36.362</b>
<b>Pieria</b>	Units	7	184	458	448	<b>1.097</b>
	Rooms	61	1.875	3.859	3.246	<b>9.041</b>
	Beds	131	3.785	8.904	7.547	<b>20.367</b>
<b>Thessaloniki</b>	Units	12	105	282	121	<b>520</b>
	Rooms	127	1.055	2.137	790	<b>4.109</b>
	Beds	324	2.254	5.158	2.015	<b>9.751</b>
<b>Pella</b>	Units	8	55	32	2	<b>97</b>
	Rooms	51	324	161	10	<b>546</b>
	Beds	119	733	351	20	<b>1.223</b>
<b>Imathia</b>	Units	12	8	2	1	<b>23</b>
	Rooms	89	45	14	3	<b>151</b>
	Beds	197	106	33	9	<b>345</b>
<b>Serres</b>	Units	2	9	1	0	<b>12</b>
	Rooms	17	62	4	0	<b>83</b>
	Beds	32	138	8	0	<b>178</b>
<b>Kilkis</b>	Units	1	1	2	0	<b>4</b>

	Rooms	8	7	8	0	<b>23</b>
	Beds	16	14	31	0	<b>61</b>
<b>Total</b>	<b>Units</b>	<b>103</b>	<b>977</b>	<b>1.857</b>	<b>1.128</b>	<b>4.065</b>
	<b>Rooms</b>	<b>869</b>	<b>7.688</b>	<b>13.249</b>	<b>7.255</b>	<b>29.061</b>
	<b>Beds</b>	<b>2.144</b>	<b>17.211</b>	<b>31.707</b>	<b>17.225</b>	<b>68.287</b>

Source: MHTE - Edited by INSETE Intelligence

### Target markets

The most important markets nationally are Germany, the United Kingdom, France, the USA, Italy and Russia.

In the case of the Region of Central Macedonia the most important markets are:

- based on arrivals at Thessaloniki airport, Germany, Russia, Cyprus, Britain, Italy, Turkey and Belgium
- based in the neighborhood, Serbia & Montenegro, Bulgaria, Romania and the Republic of Northern Macedonia
- with other criteria, Israel and the US

Respectively, based on the international overnight stays in Thessaloniki, the markets that emerge in the top ten (10) top (in descending order from top to bottom) are Cyprus, Russia, Turkey, Italy, Bulgaria, USA, Serbia and Montenegro, Germany, Romania and Albania<sup>54</sup>.

### Tourist flows

The following table summarizes the basic data of tourist flows for the period 2014-2018 where it appears that Thessaloniki has the highest average occupancy throughout the year with a rate of 54.5% for 2018, slightly higher than the overall average in Region level for the same year.

Table 7: Region of Central Macedonia, data on arrivals, overnight stays and occupancy in hotel accommodation, 2014-2018

REGION OF CENTRAL MACEDONIA: data on arrivals, overnight stays and occupancy in hotel accommodation, 2014-2018		2014	2015	2016	2017	2018
Regional Units						
<b>Imathia</b>	Arrivals of foreigners	5.838	6.798	7.607	8.419	7.170
	Arrivals of natives	37.217	45.352	48.336	46.981	39.307
	Overnight stays of foreigners	13.405	16.415	20.455	24.578	17.650
	Overnight stays of natives	74.010	85.753	88.909	108.519	98.147
	Fullness	20,1%	22,1%	23,1%	28,0%	25,8%
<b>Thessaloniki</b>	Arrivals of foreigners	505.398	557.419	547.178	607.401	619.567
	Arrivals of natives	615.283	689.306	714.038	699.740	699.060
	Overnight stays of foreigners	1.067.034	1.146.885	1.234.236	1.385.705	1.344.422

<sup>54</sup> [http://regional-tourism-plans.insete.gr/packages/pkm/pdf/marketing\\_plan\\_central\\_macedonia.pdf](http://regional-tourism-plans.insete.gr/packages/pkm/pdf/marketing_plan_central_macedonia.pdf)

	Overnight stays of natives	1.177.883	1.322.745	1.401.725	1.364.814	1.349.494
	Fullness	46,0%	50,4%	53,9%	56,3%	54,5%
<b>Kilkis</b>	Arrivals of foreigners	3.279	7.230	4.167	3.472	4.477
	Arrivals of natives	10.872	10.944	9.199	9.160	7.904
	Overnight stays of foreigners	8.109	14.818	20.312	17.438	26.106
	Overnight stays of natives	19.673	20.171	25.985	18.246	15.858
	Fullness	11,4%	13,6%	18,6%	13,7%	13,4%
<b>Pella</b>	Arrivals of foreigners	4.221	5.142	3.409	4.649	4.785
	Arrivals of natives	39.672	43.483	41.294	42.943	41.564
	Overnight stays of foreigners	8.829	9.181	6.537	12.226	13.054
	Overnight stays of natives	74.936	80.110	79.382	85.021	97.018
	Fullness	16,0%	16,8%	17,6%	19,2%	22,7%
<b>Pieria</b>	Arrivals of foreigners	122.577	131.935	134.937	156.137	172.716
	Arrivals of natives	56.058	67.807	79.488	81.132	64.956
	Overnight stays of foreigners	774.134	777.152	778.190	924.326	1.008.322
	Overnight stays of natives	164.350	187.929	210.091	200.261	155.834
	Fullness	29,1%	32,8%	33,0%	37,2%	36,3%
<b>Serres</b>	Arrivals of foreigners	14.244	14.020	17.513	20.691	21.227
	Arrivals of natives	63.466	62.305	68.343	65.526	62.241
	Overnight stays of foreigners	25.947	24.036	35.921	80.660	37.456
	Overnight stays of natives	132.708	115.328	141.190	152.333	110.596
	Fullness	20,4%	18,6%	23,8%	30,9%	21,2%
<b>Chalkidiki</b>	Arrivals of foreigners	566.869	622.691	623.731	675.648	724.350
	Arrivals of natives	113.433	127.670	130.846	125.645	109.074
	Overnight stays of foreigners	3.952.966	3.920.566	3.838.574	4.247.573	4.218.016
	Overnight stays of natives	431.312	473.306	486.052	464.301	394.370
	Fullness	56,5%	53,9%	52,5%	54,8%	52,6%
<b>Total</b>	Arrivals of foreigners	1.222.426	1.345.235	1.338.542	1.476.417	1.554.292
	Arrivals of natives	936.001	1.046.867	1.091.544	1.071.127	1.024.106
	Overnight stays of foreigners	5.850.424	5.909.053	5.934.225	6.692.506	6.665.026
	Overnight stays of natives	2.074.872	2.285.342	2.433.334	2.393.495	2.221.317
	Fullness	44,4%	45,6%	46,3%	49,1%	47,1%

Source: EL.STAT- Edited by INSETI Intelligence, The data are obtained from part of the total available beds - the results are not estimated and displayed in 100% of the reference units due to the lack of information.

### Overview of tourist flows at cross-border level

According to the available data at NUTS 2 level (which means that not only the eligible area of the Program is included, but also the entire area of the Regions participating in the Program), there is a significant increase from 2014 (beginning of the current

programming period) regarding overnight stays in tourist accommodation. While in the case of the Bulgarian regions, the overnight stays were associated with an increase in arrivals, in the case of the Greek regions there was a decrease in arrivals, but the increase in overnight stays indicates a change in the profile of tourists.

Table 8: Arrivals Data at NUTS 2 level in the Greece-Bulgaria cross-border area for the period 2014-2019

2014-2019 Arrivals Data at NUTS 2 level in the Greece-Bulgaria cross-border area for the period 2014-2019								
	2014	2015	2016	2017	2018	2019	2014-2018	2014-2019
Southwest Region	843465	920015	1052806	1072617	1070429	1111206	27%	32%
South Central Region	761678	811856	918831	916764	965189	1026426	27%	35%
Eastern Macedonia and Thrace	369328	386153	394191	406249	388889	:	5%	
Central Macedonia	1233636	1337738	1315219	1377829	1207319	:	-2%	

Source: Eurostat, own editing

Table 9: Overnight stays data at NUTS 2 level in the Greece-Bulgaria cross-border area for the period 2014-2019

Overnight stays data at NUTS 2 level in the Greece-Bulgaria cross-border area for the period 2014-2019								
	2014	2015	2016	2017	2018	2019	2014 - 2018	2014 - 2019
Southwest Region	1799696	1846131	2039840	2315248	2410490	2408886	34%	34%
South Central Region	445786	472311	517317	577002	606896	606369	36%	36%
Eastern Macedonia and Thrace	1939169	2158765	1820586	2349007	2151610	:	11%	
Central Macedonia	10071849	10426966	10508584	11126503	11660054	:	16%	

Source: Eurostat, own editing

## 7.4. Indirect External Environment

### 7.4.1. Characteristics and Trends of Modern Tourism and Especially of Thematic Forms of Tourism

Mass or conventional tourism is currently facing strong criticism because of the problems it poses on many levels in host societies. The modern approach to tourism considers the development of alternative forms of tourism or otherwise thematic alternative tourism beneficial.

Alternative or thematic Tourism is the set of special types of tourist activities that aim at a different way of recreation. Alternative forms of tourism are also referred to as special or mild by others, as they address the adverse environmental and social impacts

of conventional tourism. The idea of preserving the environment and the resources of the tourist destinations has a primary place in the alternative tourism, by satisfying the needs of the local population from the possibility given to the places of destination to determine the rules of tourist development based on its special needs, ideas, characteristics and preferences and not of the Big tourism companies.

The multiplicity of alternative thematic tourism is its main feature as it contains a wide range of fields of application. Alternative tourism is therefore determined by the principle of sustainability, in the context of adequate competitiveness in the tourism market and in terms of economy and of course without its actions having negative effects on the environment and nature. However, it is not entirely sustainable - at least to the extent defined by mass tourism. It just has the same direction (goals) with sustainability and ecotourism which is the protection of nature and life and differ only in the specifications they set.

In the same axis the sustainable dynamic moves, which focuses on parallel actions to enhance employment and income of the local community, which is an integral part of this development.

In recent years, Greece has experienced an increasingly systematic approach to modern forms of tourism, which offer travelers the opportunity to enrich their leisure and activities, with specialized action programs, such as maritime tourism, health & medical tourism. medical, religious, ecological, sports, geotourism and conference tourism.

Our country is therefore a quality tourist destination not only for classic type holidays, but also for those who wish to make alternative vacations, looking for other specialised experiences offered by different types of thematic tourism in addition to relaxation and enjoyment of the sights.

In purely tourist areas, of course, such as Crete, although it is on top in tourist activities, mass tourism gives ground for development in other forms of tourism (alternative), as it currently covers 80% of these activities.

Greece, despite the fact that has not developed several of the forms of alternative tourism, has a comparative advantage in some of them, such as marine, therapeutic, agritourism and religious tourism, due to the special geographical, cultural and traditional characteristics.

#### 7.4.2. Tourism demand

Tourism - whether for leisure or business - is perhaps the main reason for continued international mobility. According to the World Tourism Organization (2020), so far and for the last 10 years, the global tourism economy has reported continuous growth, reaching 1.5 billion international tourist arrivals in 2019, while it was expected to reach 1.8 billion arrivals in 2030. In addition, again according to the data of the Organization for 2019, the figures show the very important contribution of tourism to the development of the world economy:

- \$ 8.9 trillion contribution to world GDP - 10.3% of world GDP
- 330 million jobs, 1 in 10 jobs worldwide
- \$ 1.7 trillion in "guest exports" (6.8% of total exports, 28.3% of global services exports)
- \$ 948 billion investment (4.3% of total investment)

The Covid-19 pandemic crisis highlighted the vulnerability of the tourism sector which strongly affects entrepreneurship and employment in tourism, with extensions in related sectors (transport, construction, agri-food businesses, etc.).

According to a recent World Barometer of the World Tourism Organization, the international arrivals decreased 81% in July and 79% in August 2020, the two months with the most international travel per year. The decline in the 8-months period until August corresponds to 700 million fewer arrivals compared to the same period in 2019 and translates into a loss of 730 billion dollars. This amount is 8 times higher than the losses recorded due to the global economic and financial crisis of 2009<sup>55</sup>.

Respectively in Greece, between July and September, the occupancy levels in the hotel industry did not exceed 30%, with an average occupancy rate of 23% per month (as opposed to 71% in 2019, during the same period), while according to ELSTAT data, the employment index in the tourism sector fell by 35.9% in the second quarter of 2020 (compared to the second quarter of 2019), and wages and salaries in the sector decreased by 69,7%<sup>56</sup>.

According to the National Bank's Survey on Tourism<sup>57</sup>, the pandemic crisis has caused changes in the criteria for selecting tourist destinations - highlighting health security as a priority, while it can also be an opportunity to break free from the model of mass tourism provided infrastructure and high quality services.

#### 7.4.3. Profile of visitors of Cultural and Environmental Tourism (ecotourism), Geotourism and Tourism of Old Industrial Areas

In a more systematic comparative study of mass and alternative tourism, Gartner (2001), proceeds to a two-level analysis in contrast to the behaviours developed by each group of visitors in a corresponding form of tourism. The levels are analysed according to: tourist behaviour, characteristics, tourism development policies and key requirements.

**At the first level**, mass tourism involves numerous groups of travelers who do not seek to feel familiar with the local population and move from destination to destination, always on schedule, without delay and for a specific period of time.

<sup>55</sup> <https://www.tornosnews.gr/tornos/taseis/47412-ohe-meta-to-g-trimhno-toy-2021-h-anakampsh-ston-diethnh-toyrismo.html>

<sup>56</sup> [https://www.ey.com/el\\_gr/covid-19/covid-19-s-impact-on-the-greek-tourism-sector](https://www.ey.com/el_gr/covid-19/covid-19-s-impact-on-the-greek-tourism-sector)

<sup>57</sup> [https://www.nbg.gr/greek/the-group/press-office/e-spot/reports/Documents/SMEs\\_tourism\\_Dec2020.pdf](https://www.nbg.gr/greek/the-group/press-office/e-spot/reports/Documents/SMEs_tourism_Dec2020.pdf)



**In contrast**, in alternative tourism, a small number of travelers visit selected and specific areas for a longer period, trying to communicate with the residents and always following the observed traditions, manners and customs.

**At the second level**, mass tourism is based on rapid, disorganized and irrational growth, aiming for short-term economic benefits and ignoring the negative environmental and social effects it causes.

**In contrast**, alternative tourism requires an organised strategy so that the achieved growth will be relatively slow, but of great stability. As a result, on the one hand, it presents environmental and social sensitivity and, on the other hand, the relevant economic returns are characterised as medium-long-term (Mantratzis P., 2017).

The tourism development sector includes uncontrolled development for mass tourism, and involves the descent of the primary productive sector that is achieved by the non-local population. In alternative forms of tourism, on the other hand, local resources are used rationally and based on the rules of sustainability, by local workforce, according to organised planning, in order to maintain the existing local social situation (Moschos, 2013). The traveler who chooses alternative tourism, appears in relation to the tourist of mass tourism to (Spilanis, 2000):

- a. have a higher level of education
- b. look forward to holidays with active participation
- c. want to be more involved with the local community, local culture, environment and healthy lifestyle
- d. have a higher income and therefore have more purchasing power, so that its respective options are determined equally by the criterion of cost and interest
- e. seek the enjoyment of goods and services tailored to its own requirements.

## 8. Presentation of the Place Branding Strategy of the Study Area

### 8.1. Basic planning procedures

Following a participatory approach during the elaboration of the study, the Consultant collaborated with the members of the Committees of Culture and Extroversion Tourism and Conferences of the Municipality of Pilea-Hortiatis, who were invited to participate in a two-day online creative workshop, through ZOOM platform on Thursday 6 and Friday 7 May 2021 between 17.00-19.00.

The aim of the workshop was to formulate a joint proposal for the tourism development of the Municipality of Pilea-Hortiatis, answering three basic questions:

- (a) how I see my Municipality today in terms of its tourism development,
- (b) how I would like my Municipality to be in ten years in the field of tourism and
- (c) what I think needs to be done or changed to get to the desired tourism development (what are the available resources, what do I expect from the Municipality, how can I contribute, what tools can we use).

Based on the above, the laboratory was structured as follows:

#### 1st session - Thursday 6 May 2021 & time 17.00-19.00

- Acquaintance with the participants
- Record of the tourist resources of the Municipality
- Development of a common vision

#### 2nd session - Friday 7 May 2021 & time 17.00-19.00

- Brainstorming to achieve the vision
- Evaluation and prioritization of actions in groups
- Evaluation and prioritization of actions in plenary
- Conclusions

The workshop was coordinated by the Team of the Consultant of the Municipality of Pilea-Hortiatis in the framework of the Terra-Mine project, while participated the two competent Deputy Mayors and Chairmen of the two Committees respectively, as well as their members (10 people in total during the two days).

The main conclusions of the workshop were:

- The limited knowledge of the cultural, environmental and tourist resources of each settlement and the municipal unit by the inhabitants of the other settlements and municipal units.
- The need for cooperation of local stakeholders, as well as their networking with bodies outside the Municipality.
- The richness and diversity of local resources and infrastructure that favor the development of a large number of thematic forms of tourism.

In addition, ecotourism and trekking tourism, followed by the Conference and Sports tourism were selected as the most appropriate forms of thematic tourism for the region, followed by medical, educational, religious, cultural and gastronomic tourism with Hortiatis and Panorama being the main gastronomic destinations of the Municipality.

Finally, a necessary condition for the modern tourism development was the creation of important and large infrastructure, such as the Marina of Pilea, new sports centers such as the Handball Arena, etc., but also the implementation of a number of milder interventions such as the creation of mountain bike routes, the creation of paths and places of recreation in the forests of the Municipality and the Mountain of Hortiatis, the creation of beach volleyball courts, etc. The networking with tour operators and conference organizers was recognized as important for the promotion of conference tourism in particular.

The conclusions of the two-day workshop were discussed with the competent executives of the Independent Planning Department, while at the same time the Report of the Municipal Authority for the year 2020 was studied, as well as the Technical Program of the Municipality.

Finally, throughout the study and design of the identity strategy and marketing, the Consultant collaborated with the Department of Organization, Marketing and Tourism of the International University of Greece, which gave directions regarding the methodological approach to be followed.

## 8.2. SWOT Analysis

In order for the Municipality of Pilea-Hortiatis to be able to proceed with the development of the strategy regarding the brand of the Municipality but also to determine the steps that should be followed to achieve its individual goals, it must recognise the strengths and weaknesses of the Municipality, as well as the opportunities and threats of the environment. The SWOT Analysis method is an important tool for analysing the internal and external environment. The strengths and weaknesses concern the internal environment of the Municipality as they arise from the internal resources that it holds. On the contrary, opportunities and threats reflect its variables, the external environment of the city, which should be identified and adapted to the possible extend (Kotler, 1999).

Table 10: SWOT analysis summary table

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>▪ Geographical location and proximity to the city</li> <li>▪ Rich natural environment</li> <li>▪ Multidimensional historical and cultural identity</li> <li>▪ Intense cultural activity throughout the year</li> <li>▪ Special gastronomic tradition</li> <li>▪ Strong tertiary sector</li> </ul>	<ul style="list-style-type: none"> <li>▪ Absence of a central brand name and tourism development strategy</li> <li>▪ Limited tourist infrastructure</li> <li>▪ Lack of an institutionalized strategy and monitoring body</li> <li>▪ Limited tourism promotion and presence on social networks</li> <li>▪ Limited percentage of tourist expenditure</li> </ul>

<ul style="list-style-type: none"> <li>▪ Recently renovated and new venues for conferences, events, etc. as well as places of modern culture</li> <li>▪ Significant number of sports facilities</li> <li>▪ Modern health infrastructure</li> <li>▪ Existence of significant resources for outdoor tourism activities</li> </ul>	
Opportunities	Threats
<ul style="list-style-type: none"> <li>▪ Existence of multiple financial tools for infrastructure development and implementation of actions</li> <li>▪ Need to extend the stay of visitors</li> </ul>	<ul style="list-style-type: none"> <li>▪ National and Regional tourism policy that is not in line with the resources of the Municipality</li> <li>▪ Significant potentially competitive destinations in the wider region, but also in the Balkans</li> </ul>

### 8.2.1. Strengths

#### Geographical Location and proximity to the city

Undoubtedly one of the strong points of the Municipality of Pilea-Hortiatis is the intense suburban green and natural environment. The Municipality presents a rich geomorphology while it also has a significant stock of green for a suburban Municipality of a Greek city. The presence of the rich natural landscape in combination with the existence of a technologically developed Municipality with strong infrastructure and services at a very short distance from the second largest city in Greece, Thessaloniki creates the necessary conditions for the development of alternative forms of tourism. The geographical location of the Municipality which includes a variation of landscapes and a high altitude for a suburban Municipality. This location offers many points of view to the bay of Thermaikos and the area of the lakes in the Mygdonia basin, covering the needs of visitors and residents for leisure and emotional experiences. In addition the combination of urban construction on the slopes of Mount Hortiatis in close proximity to the Sheikh-Sou Forest offers great accessibility and security to the potential visitor, providing important services a short distance from the natural landscape.

#### Rich natural environment

Ο Δήμος σε όλη την έκτασή του ξεκινώντας από το αστικό περιβάλλον της Πυλαίας όπου βρίσκεται το Ελαιόραμα, ως το Σείχ Σου, το Χορτιάτη, το Δάσος Κουρί στο Ασβεστοχώρι και το Δάσος Αμαδρυάς στο Φίλυρο είναι ένας καταπράσινος δήμος με πλούσια πανίδα και χλωρίδα.

The Municipality in all its area starting from the urban environment of Pilea where Eleorema is located, to Sheikh Sou, Hortiatis, Kouri Forest in Asvestohori and Amadryas Forest in Filyro is a green municipality with rich fauna and flora.

### Multidimensional historical and cultural identity

Refugees from Pontus and Asia Minor, Vlachs originating from Paiko, local populations (mainly in Asvestohori) compose the core of human geography of the Municipality of Pilea-Hortiatis, contributing significantly to the formation of its cultural identity. While at the same time it has a rich historical heritage from the Neolithic years until today, with important monuments of Roman, Byzantine, Ottoman, etc. period, but also the memory of the Hortiatis Holocaust.

### Intense cultural activity throughout the year

Both the Municipal Authority and the local stakeholders plan and implement cultural actions and events throughout the year, attracting the interest not only of the locals, but also of the residents of the wider metropolitan Thessaloniki.

### Special gastronomic tradition

Having as reference point "the Triangles of Panorama" which have a special place in the gastronomic map of the Region of Central Macedonia and Thessaloniki, the taverns and restaurants of Hortiatis in particular, are a reference point mainly in terms of dishes with local meat prepared with local recipes, while Panorama has several restaurants with international cuisine.

### Strong Tertiary Sector

The Municipality of Pilea-Hortiatis has a particularly strong tertiary sector, which already has a recognisable brand name in the field of entertainment, both locally and regionally. The strategic choices of the tertiary sector combined with its geographical position contribute to the creation of favourable conditions for further investments, especially in the coastal front of the Municipality, where mainly national and international entertainment structures have been developed. However, taking into account the tourist rise of the city of Thessaloniki and Halkidiki in conventional-mass tourism, we conclude that it is necessary to develop alternative tourism that will be combined with the strong tertiary sector leaving a larger imprint of visitors.

### Recently renovated and new venues for conferences, events, etc. as well as places of modern culture

The Municipality of Pilea-Hortiatis has a significant number of modern cultural infrastructures as well as a network of conference facilities capable of hosting from corporate events to large thematic conferences.

### Modern health infrastructure

Apart from the General Hospital of Thessaloniki "Georgios Papanikolaou", the Municipality of Pilea-Hortiatis has a significant number of private hospitals and clinics which serve not only the citizens of Thessaloniki, but the whole of Northern Greece and the North Aegean, as well as in many cases patients from foreign countries.

Furthermore, the construction of the Pediatric Hospital of Thessaloniki in Filyro will further strengthen the position of the Municipality in the health map of Northern Greece.

#### Significant number of sports facilities

The Municipality of Pilea-Hortiatis has a significant number of sports facilities and plans their further development in the future with the creation of new basketball and football courts and the upgrading of existing ones. This stock can act as a lever of growth by organising mass sports activities.

#### Existence of significant resources for outdoor tourism activities

The wider area of the Municipality has significant resources of outdoor activities that can be utilised throughout the year. Mount Hortiatis, the suburban Forest of Sheikh-Sou, the Forest of Kouri and the Grove of Filyro, hiking trails, forest trails, mountain biking and motorised mountain sports, are resources that although they are not yet have fully utilized, are a strong point of the Municipality.

### 8.2.2. Weaknesses

#### Central Brand name and tourism development strategy

The Municipality of Pilea-Hortiatis has not invested significantly in tourism and in the natural landscape and the geographical position it holds, as is evident from the lack of info-points, but also the incomplete material available to the potentially interested public as future visitors. In addition, what is clear is that there is no unifying strategy that will highlight the overall tourism product of the Municipality. Although Hortiatis and the coastal front are brand names, they are not part of a unifying whole that will allow the substantial promotion of the Municipality as a tourist destination.

#### Limited tourist infrastructure

Despite the fact that the Municipality gathers a very large number of daily visitors, the infrastructure it has within the Municipality is limited. The tourist pressure received by the Municipality from the City of Thessaloniki, which led to the small growth of the hotel stock, also contributed to this.

#### Lack of an institutionalised strategy and monitoring body

The lack of an institutionalised strategy and monitoring body for tourism is a problematic point for the development of the tourism product.

#### Limited infrastructure development in the natural environment of the Municipality

The development of infrastructure for the implementation of unique activities in contact with nature is particularly limited. The diverse presence of the Municipality on the internet and the negligible presence as a tourist destination shows that the general belief in the Municipality for a strong alternative tourism connected with its brand is limited.

#### Limited percentage of tourist expenditure in the Municipality of Pilea-Hortiatis

Although the Municipality of Pilea-Hortiatis receives an extremely large number of visitors daily, their contribution to the local economy is very small. Most of the visitors do not spend the night in the Municipality even if they are foreign visitors. The city



essentially only benefits from the limited consumption of visitors during their stay for a few hours. This practice leads to burden the Municipality (garbage, marking, road maintenance, etc.), with a moderate return to the local economy.

### 8.2.3. Opportunities

#### Existence of multiple financial tools for infrastructure development and actions implementation

A particularly important opportunity both for the Municipality of Pilea-Hortiatis, and the region in general is the existence of multiple financial tools for the development of infrastructure and also the implementation of actions. Specifically, in addition to the significant contribution of all NSRF programs to strengthen the infrastructure of the Municipality, at the same time, assistance in the implementation of extremely important planning actions, transfer of good practices and extroversion are European co-financed programs, such as Interreg, LIFE and URBACT. The utilisation of these projects is particularly important in the sustainable development of the Municipality.

#### Need to extend the stay of visitors

Alternative tourism can attract new visitors but also extend their stay with multiple benefits. The municipality has an important resource related to the very good natural environment, but also the important supply leisure and entertainment services. The municipality can develop the sectors of alternative tourism that it can support in order to become one of the first developed alternative destinations in Greece.

### 8.2.4. Threats

#### National and Regional tourism policy that is not in line with the resources of the Municipality

The other aspect of tourism policy at national and regional level is that the existing strategy rewards the development of the areas of Halkidiki, the city of Thessaloniki and Pieria, recognising only one support in the Municipality of Pilea-Hortiatis. The development of the Municipality in terms of tourism cannot be based on such a model because remaining a satellite of Thessaloniki will constantly lose its comparative advantage of the natural landscape and the actions that can be developed in it.

#### Important potentially competitive destinations in the wider region, but also in the Balkans

A significant threat to the Municipality of Pilea-Hortiatis is the important competing destinations in the wider region and in the Balkans. Thermalism and ski tourism are highly developed in Bulgaria (Velingrad and Bankso respectively) and the infrastructure in these places is much more developed. Respectively at the level of cultural resources there is significant pressure from Thessaloniki. It is particularly important for the Municipality to diversify its tourism product and brand, avoiding competition.

### 8.3. Vision and goals

The general brand identity strategy of the area will be formulated taking into account the analysis of the current situation, the results of the analysis of quantitative data, the views that emerged from the workshop and the prioritization of priorities in the territorial unit of the Municipality of Pilea-Hortiatis. Of great importance in the design and elaboration of the place identity and the goals that will be pursued, is its specialization in specific strategic axes and the defined-measurable operational actions which are necessary **to be perfectly adapted to the existing local development and social characteristics as well as the possibilities of the intervention area.**

It should be clear from the beginning that the **specialized** strategic and operational planning of the tourist identity aimed at the best possible allocation of development funds, their maximum absorption and enhancing the competitiveness of the destination, creating a multi-functional productive development model will be based on:

- the strong and potentially strong competitive advantages of the Municipality,
- strengthening social cohesion, social inclusion and
- in sustainable and unrestricted development.

In this context, the vision for the Municipality of Pilea-Hortiatis is formulated as follows:

Creating a modern multi-thematic destination - eco-cultural, conference, medical, sports and educational tourism.

Moving from the vision to the goals, the main goal is:

In the establishment of the Municipality of Pilea-Hortiatis and its settlements - in the consciousness of the residents and visitors of Thessaloniki - as destinations of special eco-cultural interest that provide opportunities and opportunities for recreation and entertainment to visitors in all four seasons.

In the formation of a competitive tourism product for conference, medical, sports and educational tourism, which will incorporate the eco-cultural experience and will thus be differentiated from the respective tourism products of other urban centers in Greece.

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- The formation of a competitive tourism product for conference, medical, sports and educational tourism, which will incorporate the eco-cultural experience and will thus be differentiated from the respective tourism products of other urban centers in Greece.

## 8.4. Target markets

The key target markets include:

- The citizens of the Metropolitan Unit of Thessaloniki, with emphasis on the inhabitants of the city of Thessaloniki.
- The visitors of the city of Thessaloniki - Greeks and foreigners, with emphasis on the inhabitants of the Balkan countries who already visit the shopping centers located within the boundaries of the Municipality.

In the future, the target markets for conference tourism should be defined, considering as a first step the targeting of scientific companies and other bodies of Northern Greece to host their institutional conferences, but also other events and workshops.

## 8.5. Strategic selection of designs - branding models

### Formation of the tourism development model

The key position from which the definition of the tourism development model- identity begins is that this is important and necessary to be formed based on the challenges that arise in the wider area of the municipality of Pilea-Hortiatis- covering to the extent that it arises from the existing situation and the neighbouring municipalities - and the opportunities and weaknesses it has to face, and not based on the formulation and implementation of a *"one size fit all"* tourism strategy. In other words, the region needs to be developed as a whole focusing on tourism and the existing or potential competitive advantages.

In the model of the proposed spatial development, the area is treated on the one hand with its geographical status and on the other hand with the possibility of supporting multi-thematic tourism actions, forming two distinct levels:

- the level of local and global social, economic and productive challenges and
- the level of development strategy adaptation to specific existing or potential characteristics, creating the foundations for joint local action.

### Strategic goals

The basic position of the researchers is that the tourism economy is dependent and co-formed by the whole local economy. Therefore, the development tourism model and the identity of the area of the Municipality of Pilea-Hortiatis, on one hand is necessary to be included in the general reference framework and on the other hand, to support and serve the competitive advantages of its geographical position in relation to the wider area. In this context, the formulation of the objectives of the development model, presupposes and contains a **framework of principles**, as key elements of its **programmatic tourism planning and business operation**. As a result of the above, four basic principles emerge, which determine the strategy and objectives of the program, as well as all its actions, and consist a determining factor for the successful outcome of its implementation:

- **Involvement** of all citizens, institutions, organisations and companies as they are the subjects of action of the program. At all levels of the intervention area, the solidarity of stakeholders, associations, economic and social actors and their

organisations in promoting a collective and coherent vision is essential, not only in terms of tourism strategic planning, but the total economy depending on it.

- **Sustainability (or "viability")** beyond programmatic expediency for the conservation of natural resources, as a content of conscientious, individual and overall responsibility and action.
- **Equal opportunities and actions against exclusion**, with the aim of encouraging the reintegration of women and men who have left the labour market, reducing disparities in treatment and promoting the abolition of occupational segregation, and the development of services and infrastructure to serve the disabled.
- **Efficiency and sustainability** as basic principles for defining the individual tourism policy measures, which are the expression of good business action with social responsibility, which will create employment opportunities in areas directly or indirectly related to tourism activity (catering sector, retail and wholesale, transport, services, construction, consulting, marketing, etc.).

The objectives set based on the results of the consultation are:

- The creation of a brand that will be harmoniously integrated in the strategic planning of sustainable urban development
- The creation of a tourist brand that will enhance innovation and will be harmoniously connected with the whole and the characteristics of the local economy
- The utilisation of existing and potentially significant competitive advantages, in the long run
- The formation of a structured, diversified and **innovative tourism product** which will be based on the utilization of local peculiarities - environmental, cultural, social, geological, industrial - on the quality of services and goods provided and on authenticity
- The support of the tourism productive system through the creation of the necessary **complementary local economic, social and environmental infrastructure**.
- Strengthening and maintaining local employment, creating conditions for equal employment opportunities and **increasing local income**
- The development, focusing on tourism economic activity, of productive **intra-sectoral and inter-sectoral interconnections** at local level with the aim of strengthening the local partnership
- Improving the quality of life of residents and visitors.

### The development model

Based on the above, the central strategic goal of the development model is as follows:

Creating a development tourism model of interconnection of the secondary sector, with the offer of specialized services and **mild suburban tourism**, aimed at sustainable, competitive and inclusive development, **adapted to the existing - or potential - competitive advantages of the intervention area**, taking into account the environment protection, maintaining social cohesion, fostering innovation, synergies, lifelong learning, and making the best use of human resources.

Basic interconnection axis of the secondary sector with the offer of specialized services and tourism activity is the multidimensional natural environment combined with the provision of high quality infrastructure services and the proximity and accessibility to the

entire geographical distribution of the Municipality, which formed competitive advantages and contributed significantly to population growth and the formation of a long-standing geographical and cultural identity.

The proposed model of integrated **spatial** development promotes a development process that seeks to strengthen all economic activities in which the intervention area has local comparative or competitive advantages, as well as the utilisation of all its infrastructure and environmental sites.

At the same time, the **balanced development** of all spatial units is sought without the over-concentration of the population and activities in specific parts of the area.

From the assessment of the current situation made in the framework of the Regional Framework for Spatial Planning and Sustainable Development (PPXSAA) for the housing network of the Region of Central Macedonia and the Prefecture of Thessaloniki, it seems that the metropolitan area of Thessaloniki and the corresponding Urban Complex dominate. The exact same assessments are expressed by the Regulatory Plan of Thessaloniki, which has been prepared in the past and is already in the process of revision, with the aim of unified planning of the area of urban complex of Thessaloniki. Regarding the functional structure of the Municipality, the neighbourhood and the influences from the Municipality of Thessaloniki have direct effects, as there is dependence on the city of Thessaloniki. These effects focus on services of the higher and highest degree of the tertiary sector such as: services, entertainment, transportation.

The position of the Municipality in terms of transport networks is relatively good, as important supra-local roads pass through it. At the same time, it is located very close to the upgraded international airport "MACEDONIA", to its southeast. On the contrary, it is located at a distance from both the port and the railway station of Thessaloniki, but access is achieved in a relatively short time, through the ring road of Thessaloniki. There is also a direct and regular connection of the Municipality of Pylea-Hortiatis with the railway station, through the public urban transport.

It is worth noting that major national projects that are in a mature stage and will be implemented in the near future have a positive impact on the Municipality, giving it additional comparative advantages and tools for planning its strategy and creating a unique and attractive place brand. The new Pediatric Hospital donated by the Stavros Niarchos Foundation, the new upgraded Internal Ring Road of Thessaloniki with Flyover, new tunnels, junctions and no tolls, the utilisation of the Coastal Front of Pilea with a modern marina and other sea support infrastructure projects and other sea support professional activities, as well as other actions that have direct or indirect relevance to the Municipality of Pilea-Hortiatis.

## 8.6. Presentation and analysis of the tourist identity of the area

The tourist identity of the Municipality of Pilea Hortiatis is determined to a significant degree by the available resources of the area. For its strengthening and empowerment, however, it is proposed the development of specific forms of thematic tourism with the

planning and implementation of targeted actions and interventions that will contribute to their promotion and establishment.

#### Nature Tourism (Ecotourism - Rural Tourism)

- Ecotourism - rural tourism is developed in rural areas that are of interest for tourism, including areas of the National System of Protected Areas, except for areas of absolute nature protection. In the Municipality of Pilea-Hortiatis, a comparative advantage is the harmony of the urban environment with the preservation of rural elements, which favours the development of this type of tourism. With the necessary demarcation of eco-development areas and with the expansion of the relevant possibility outside residential units, as the Municipality includes large natural and wooded areas.
- Actions to highlight the two protected areas that have the relevant resources (nature, landscape, area of activities), as a pole for the development of nature tourism focusing on the population of purely urban municipalities and passers-by, mainly visitors of the Municipality and the wider area. Such areas are in principle the protected areas that have a Management Body.
- Establishment of local networks, routes - paths, multi-thematic character with emphasis on the nature-loving dimension.
- Marking of routes according to the specifications in force in the EU. and issuance of mountain tour maps and enrichment of the routes with alternative activities (mountain bike tracks, horse riding, mountaineering). Include in them, where possible, catering and leisure infrastructure.
- Establishment of infrastructures for observation and interpretation of nature (eg observatories, visitor information centres, museums and mountain shelters).

#### Geotourism

- Promotion, projection and traffic activities of the inactive quarries of Asvestohori and activities for their inclusion in tourist networks (action that is already implemented through the TERRA MINE program and is a model for the continuation of similar activities) depending on the specific (general or special) characteristics of the areas of the quarries in combination with the natural environment of the wider area of the Municipality.
- Ensuring their accessibility and managing visitor flows with respect to the resilience of each ecosystem.
- Include them in tourist networks (thematic or not) depending on their special (general or specific) characteristics. In addition, actions are proposed in order to gain international recognition from respective organisations to acquire even greater recognition and attractiveness.

#### Conference-Exhibition tourism

- Development of conference - exhibition tourism in the wider area of the Municipality of Pilea-Hortiatis as it is characterised as an area with adequate accessibility (mainly by air and road) and activities for the participants and their attendants.
- Creation of conference-exhibition tourism facilities of smaller scale: In the wider area or in the neighbourhood with the Municipality there are HEIs. and research



centres, remarkable elements of the natural and man-made environment, historical sites, sports and cultural events, etc.

- Improvement of the attractiveness of the Municipality, through modernisation and upgrading of the existing facilities and creation of new ones, either purely conference-exhibition or combined with accommodation of high standards in addition to the existing ones and at the same level with them
- Utilisation of an existing building stock, in conference events and exhibition spaces and the restoration and reuse of remarkable old shells as conference - exhibition spaces with parallel incentives.
- Integration of new technologies in the infrastructure of conference - exhibition tourism.
- Connection of conference tourism with other forms of thematic tourism.

#### Spa and therapeutic (medical) tourism

Exploitation of the already many public and private health providers (waiting for new even more attractive ones, eg Pediatric Hospital in Filyro) and generally the creation of therapeutic tourism centres (spa, wellness tourism etc.) with emphasis on the combination of prevention / treatment -rehabilitation, leisure and vacation in areas that have, in accordance with the object of "treatment", appropriate resources, especially in developed or developing tourist areas of the country with good accessibility.

#### Sports Tourism

- Utilisation of the sports facilities of the Municipality, especially by the organisation of regular international and national sports events.
- Enhancing the possibilities of specialisations of sports events (speedboat races, rowing races, etc.) on the coastal front of the Municipality when it has suitable facilities.
- Development of training centres in the mountainous and semi-mountainous area of the Municipality, which have satisfactory access and hotel support. The training facilities and other relevant infrastructure must be harmonised with the scale and the particular characteristics of the installation and operation area.

#### Recreational sports activities in the mountain area

- Development of sports activities (sports) in the mountain area (eg mountaineering, climbing, mountain biking). Some of these activities can be developed to a lesser extent in the semi-mountainous and lowland area of the Municipality or in combination.
- Environmental protection of areas with potential for development of climbing fields, with provision for limited accessibility.
- Creation of motor mountain sports infrastructure.

#### Urban Tourism

- Support the role of the Municipality as an autonomous destination for short-term tourism (city break).
- Highlighting and upgrading historical monuments, archeological sites and other remarkable elements of the natural and cultural environment of the Municipality.
- Integration of the Municipality in networks based on thematic units (eg Terra Mine Program, etc.).

- Upgrading and expansion of services and activities in sports venues, recreation areas, modern information facilities, festivals, cinemas and other thematic or cultural events.
- Modernisation and improvement of the Municipality hotels quality by constructing new accommodations of high standards, in harmony with the existing ones
- Upgrading the role of public transport, improving traffic and pedestrian safety as well as the accessibility of people with disabilities.
- Appropriate marking and informing the visitors about the location and the content of the tourist resources and ensuring easy access to them, emphasising on the safety of the visitors mainly in the environmental areas of the Municipality.

#### Cultural Tourism

- Upgrading and interconnection of the museum, monumental, archaeological and folklore capital of the Municipality and its promotion.
- Preservation and promotion of the architectural heritage and in particular of the historic individual buildings.
- Ensuring the accessibility, visitability and organisation of archaeological sites and monuments and their support with appropriate infrastructure projects / Their inclusion in tourist networks.
- Creation of museums and theme parks including the technological ones for the promotion of the cultural resources and special features of each area of the Municipality
- Enhancing actions for multi-spaces creation with digital representation of historical, mythological and other cultural scenarios (connection of innovation-culture).
- Support, promotion and establishment of festivals, cultural institutions and other relevant events
- Development of gastronomic tourism and its integration in the tourist product.

#### Religious Tourism

- Highlighting poles of Pilgrimage and religious monuments, formation, organisation, and promotion in networks.
- Improving their accessibility as well as the connections between them.
- Promotion of landscaping / upgrading and projecting measures of the worship places, accommodation and facilities as well as their surrounding area.
- Preservation of the monasteries' architectural features of new non-adapted to their character building extensions.
- Support for actions related to the organisation of relevant events.
- Promotion / support of exchange programs of visits between religious communities

#### Maritime Tourism

Maritime tourism is a top tourist activity, with long-term activity in Greece. In recent years it has shown a steady growth trend and in this context the Municipality of Pilea-Hortiatis has been working for years to mature and finance an important project for the development of the sea front of Pilea that concerns the creation of a state-of-the-art tourist port (marina).

## 8.7. Suggestion for the area’s visual brand

All the cities of the world have a history and a tradition, most of the cities of the world are based on projecting their historical past. In the case of the Municipality of Pilea-Hortiatis, it is considered useful and critical in the context of its differentiation and creation of a recognisable and attractive place brand, at the same time to promote both the importance of the significant present and the upcoming planned future. In this way the Municipality will utilise its comparative advantages and strong "papers", by creating a unique and attractive place brand.

The place brand of the Municipality of Pilea-Hortiatis must be widely accepted and come from the existing development priorities of the Municipality, which consist of the general directions of the Municipal Authority and constitute the strategic objectives that guide and lead the specific decisions when choosing their actions.

Given that the Municipality of Pilea-Hortiatis already has a visual identity (logo) that highlights its settlements, but also its special features, it is recommended to use it for its tourist promotion by creating a complete toolkit of applications in the framework of marketing destination.



PILEA | PANORAMA | HORTIATIS  
EXOHI | ASVESTOHORI | FILYRO

The proposed applications aim at highlighting the thematic forms of tourism that consist development priority for the Municipality: Green - Geotourism, Urban, Conference, Medical, Sports, Cultural (gastronomic, religious) and in the future Maritime Tourism.

## 9. Presentation of Marketing Strategy and Suggested Marketing Actions of the Study Area

### 9.1. Marketing Strategy Design and Presentation

In order to draw the specific strategies and the marketing mix for the Municipality of Pilea-Hortiatis, it is necessary to read correctly and to accurately determine the 4Ps of the marketing mix (product, price, promotion, place). In order to make the most intangible part of the tourist product tangible, the 4Ps should be extended to four more and become 8Ps (people, physical evidence, planning, programming) (Bekk, Spörrle and Kruse, 2016). This section describes the 4Ps regarding the Municipality of Pilea-Hortiatis and in the second section we will expand to the next 4Ps that mainly concern services. Thus, a complete picture will be presented regarding the special strategies that the Municipality is suggested to have in order to create and maintain a recognisable and attractive place brand.

#### The 4 P's of the Municipality of Pilea-Hortiatis

Tourism marketing is different because the "customer" buys a range of services, but has very little specific value at the end of the trip. As a result, marketing initiatives need to emphasise the value of memories, make the collection of services easily accessible, and add value through additional planning and other factors. A key challenge is to convince potential visitors that the item they are buying provides good value for money and that the services will be as described and expected.

#### Product

According to the previous analysis and the goals set by the development of the Municipality's strategy, the tourism product consists of the natural environment, alternative thematic tourism, culture and business city; all this through the promotion of the suburban nature as a key element of the Municipality.

**Natural environment:** The Municipality of Pilea-Hortiatis and the wider area of Mount Hortiatis present a significant comparative advantage in terms of the natural environment given the rich mountain volume that ends in the coastal zone, creating strong geomorphological, climatic and visual contrasts in relatively limited geography.

This image differentiates the Municipality of Pilea-Hortiatis from other (typical) suburban destinations, making it more competitive and thus creating conditions for attracting different categories of visitors throughout the year.

Hortiatis as a Special Protection Zone (SPA) which is part of the wider protected area shows an increasing trend of traffic with a wide field of further development to welcome even more visitors, for hiking, mountain biking, educational activities and general recreation. In addition, the Cedar Hill or Sheikh Soo has similar characteristics as a "Protected Natural Landscape" or "Landscape of Special Natural Beauty", which already serves the needs of mainly daily or short-term recreation and other activities close to nature. In addition, there is the Kouri Forest in Asvestohori and the Filyro Grove, which mainly support similar local needs.

**Conference tourism:** The Municipality of Pilea-Hortiatis has created a network of municipal conference spaces which includes the "Stavros Kougioumtzis" Amphitheater, the "Litsa Fokidi" Hall and the Lobby - Reception Hall - Cafe / Catering "Terkenlis" at Panorama, the "Ioannis Manoledakis" Hall in Chortiatis and the Cultural Center of Asvestohori. In addition, in order to attract conferences, the Municipality offers to the participants the privileged use of all its facilities, such as the municipal swimming pool and in general the sports facilities, free entrance to the municipal cinemas, etc., as well as the organization of proposed excursions, for hiking in the beautiful forest paths of the municipality as well as in cultural and archeological sites of Thessaloniki and the surrounding areas in collaboration with local professionals.

**Sports tourism:** In addition to the sports activities that take place in the many sports facilities located in all the Municipal Units, the area has the infrastructure to support a variety of alternative sports activities, such as mountain biking and climbing. The development prospects of these tourism by-products are considered to be particularly important. In addition, the existence of modern sports facilities in combination with the natural and healthy environment is ideal for attracting sports teams to prepare in the summer as the climate and conditions of the area make the area very competitive and close to the city of Thessaloniki. The above is expected to significantly enhance the tourism product of the region and contribute to increasing traffic throughout the year.

**Health Tourism** It is now a fact that medical tourism attracts visitors from all over Greece and neighbouring countries all year round and can be an important element of a region's tourism product. The Municipality of Pilea-Hortiatis with the public and private medical infrastructures that are in its territory in combination with the planned completion of the new Pediatric Hospital in the Municipal Community of Filyro, acquires unique comparative advantages in this type of thematic tourism. In this context, it is necessary to strengthen and reshape the image and brand of this type of tourism in the region, but also to attract investment in this sector with the aim of strong competitive advantage with long-term benefits.

**Cultural tourism:** As mentioned extensively above, the historical interest of the area of the Municipality of Pilea-Hortiatis in combination with the important local cultural elements and cultural activities organised by local cultural associations under the supervision of the Municipality, are a key element of tourism development. In the area there are other monuments of the ancient but mainly modern history of the Municipality, making it, through the appropriate promotion, an extremely interesting tourist destination in combination with the other services provided by the Municipality. In this context, it is necessary to formulate a framework through which the cultural and archaeological wealth of the region will be projected, while it is necessary to formulate the corresponding information material (eg, cultural and archaeological map of the region), but also the establishment of a corresponding body which will be responsible for highlighting and promoting these elements. Also, operating in the standards of other countries and regions, it is considered necessary to interconnect these elements so that the visitor can visit them as a whole and not individually, while the adoption of modern technological means for better utilisation and promotion is considered necessary.

**Gastronomic tourism:** In recent years, gastronomic tourism has greatly increased, as it is a way of recreation and entertainment in the field of tourism, so, it plays a key role in tourism movement and development, and of course, in upgrading and enriching the quality of the tourism product. The specific resource has been very distinguished lately in the Municipality of Pilea-Hortiatis and especially in the area of the Municipal Unit of Hortiatis. This product can greatly contribute to the economic and tourism development of the Municipality as it can be combined with other types of thematic tourism and enhanced by the proximity of the Municipality to the city of Thessaloniki and more than one million inhabitants of the area.

### Price

Regarding the price of the product, it follows the general price trend in the country, but also of the international competition (Law of One Price). Definitely, in the tourism product, the price of the provided services should correspond to their quality, but in any case, the marketing can contribute to the relative increase of the prices. Pricing policy can either involve adding new features to the product without changing the price or keeping the product features the same while reducing the price, using economies of scale where applicable.

The pricing policy, however, usually concerns companies and organisations that provide tourism products. This project concerns a marketing plan for the Municipality of Pilea-Hortiatis and for this reason we cannot formulate a pricing policy for the total tourism product of the region. The proposed pricing policy is expected to be followed by both the tourism companies and the competent bodies (eg, municipal enterprise, transport, etc.). It should be formed based on the philosophy of the Municipality, which is based on the provision of quality services aimed at the long-term tourism development and the formation of competitive advantages.

Within this framework and given the unfavourable social and economic situation of the economic crisis in combination with the succession of the health crisis, a prudent pricing policy is required that will be based on actions, such as the following:

**Value for money.** The goal in this case is to build trust between suppliers and customers, ensure repeat visits, increase occupancy (arrivals / overnight stays) and by word-of-mouth advertising to potential visitors.

**Defining the pricing policy by strategic goal:** Formulation of specific packages for a selected target market. For example, different packages for different income groups. This will make the Municipality an attractive destination for all income groups and will increase traffic at all times of the year.

**Creating a Variable and / or Penetration Pricing Policy:** A policy of offers or discounts at specific times when demand is relatively low could address the issue of seasonality. Respectively, in case it is decided to look for new markets, which is part of the strategy of the Municipality, a specific policy of low prices can be implemented, enough to attract new visitors to the area.



**Constant price variation:** without profiteering, in periods of high demand, such as holidays and celebrations of the Greek and local calendar.

**Implementation of competitive pricing policy:** weighting and estimation, during pricing, of the prices of direct and indirect competitive tourist destinations. In other words, the product should have a similar price to that of the competition, especially when the services provided are of little differentiation.

### Promotion

Viewing a destination usually gives product and price details. The main features of a tourism destination marketing strategy are the method of communicating the information, the content of the promotion and its cost. Within this framework of analysis, it is considered ineffective to participate in traditional and costly channels of communication, either promotion or sales, because the current targeted tourist audience wants to use at all times and in any place modern technological methods for their escapes, identifying at the same time the role played by the promotion and distribution processes.

In addition, as Carey, Gountas and Gilbert (1997) mention, in order for a destination to be successful, it is necessary to work more closely with travel agencies, tour operators and event organisers in order to influence and shape a positive image of the destination contributing positively in its development. Of course, it is worth noting that different agents often have different perceptions of the destination, which makes its projection different depending on the travel agent. Through this process, it seems that it is possible to identify the strengths and weaknesses of the destination, while the constant and good communication with the travel agents and organisers of activities can contribute positively to the restructuring, to a certain extent, of the package of provided tourist services but also in the overall picture of the destination (Baloglu and Mangaloglu, 2001; Evans, Stonehouse and Campbell, 2012; Brooker and Joppe, 2014).

Traditional ways of promoting, such as advertising, help to some extent increase the popularity of the destination to the tourist public, however, you should not overlook the fact that the use of low-cost digital tools, is extremely useful in promotion and sales in such low-budget destinations. For example, the implementation of Omni channel marketing<sup>58</sup> is now considered necessary.

According to Google Inc. (2017):

1. 7 in 10 people choose and make a trip online.
2. 83% of travelers are influenced by comments and videos on social media about their travel choice.

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<sup>58</sup> The Omni-channel approach represents every platform and device that a customer will use to interact with the company in the specific destination, while the channels know their interactions. Companies that use the technique align their messages, goals, and design across each channel and device (Brynjolfsson, Hu and Rahman, 2013; Lazaris and Vrechopoulos, 2014). Omni-channel Experience is a multi-channel approach to marketing, sales and customer service in a way that creates a complete and coherent experience regardless of where the customer is (Frazer and Stiehler, 2014; Verhoef, Kannan and Inman, 2015). Researchers often associate the omni channel with a number of other terms such as Augmented Reality and Point-of-Sales systems (Bodhani, 2013a, 2013b).

3. 87% of travelers organize their trip online.
4. 75% of travelers plan and book their trip using mobile, computer or tablets

In any case, the promotion of the Municipality of Pilea-Hortiatis, should be redefined throughout the year according to the needs of the target groups and mainly focused on the daily visitors from the neighbouring Municipalities. It should also be complementary to the seconded promotion efforts implemented by trade associations, cultural and sports clubs, etc. In the latter, the co-ordination of all the above bodies in a co-ordinating body which will take overall responsibility for the implementation of current and future marketing plans, always in collaboration with the private sector and the local market of the Municipality of Pilea-Hortiatis seems necessary.

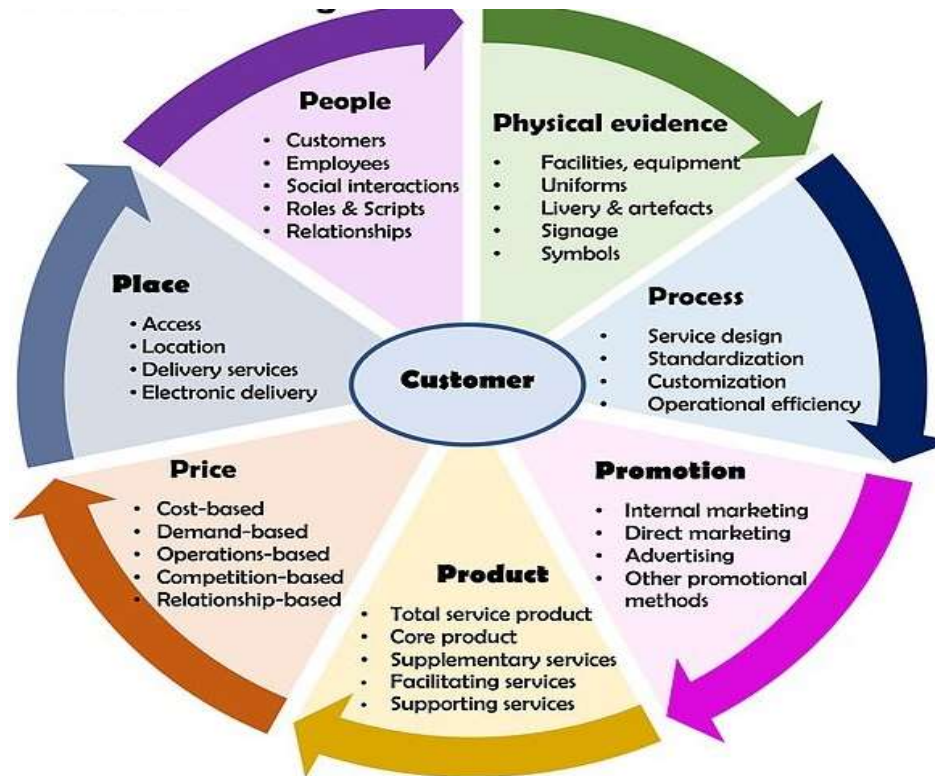
#### Distribution (Place)

In the case of tourism, determining distribution is a difficult aspect. “Distribution” mainly concerns the distribution of the product to the “customer” visitor and includes the various activities undertaken to make the product accessible and available to the target customers. Distribution at this level refers to the fact that the visitor buys a set of services. Tourism is a product of services and here customers have to be transported to different destinations (point of sale), its channels are travel agents, agents, wholesalers, websites, blogs etc.

Private tourism professionals, travel agents and other travel services usually offer an affordable package of travel services to the visitors of a place. They are the main distribution channel of the tourist product at national and international level, ie they are the established distribution channel. In addition, they are able to combine packages or individual elements of the tourism product and connect them to form new tourism distribution packages. Their role in this point is an important part of the development of tourist demand. At the same time, the use of new technology (internet, blogs, social media, etc.) play a central role in the development of the tourism industry and the destination tourism product. It is worth noting at this level, that the online presentation of the destination is very limited, while there are no specific tourist packages for international visitors (Medical, Conference, Maritime Tourism), except for day trips by individuals.

Regarding the distribution of the tourist product, as this marketing plan is being prepared for the Municipality of Pilea-Hortiatis, it is understood that the co-operation of all stakeholders at all levels with the local population is required. Thus, through the co-operation of the private and the public sector, a perfect and efficient distribution of the tourism product can be achieved, while the co-operation between institutions at national and European level is crucial. At the same time, the support of the local market is particularly important and for this reason, as mentioned, the cultivation of tourist awareness in all residents and institutions of the region is important, while the formation of a tourist brand will further strengthen this goal. In all of the above, the creation of a body and its smooth operation seems to be necessary

The first 4 P's (Product, Place, Promotion, Price) have already been commented on in the above section, then we will examine the next 4 which mainly concern services in general and in this case, tourism. 8 Ps is best described as the specific ingredients needed to reach selected markets (Morrison, 2010). The figure below shows the 8 Ps:



### Human Resources (People)

In recent years and with the development of services becoming more intense, the recognition of the human factor in achieving marketing goals is constantly increasing. This applies to all service organisations, in the sense that the quality of service provided cannot be standardised as there is always the human element and depends on the situation of the individual at this particular time of service (Magatef, 2015). This makes it more difficult to control the provision of services. Therefore, the establishment of human resources requires special attention in order to capitalise on customer satisfaction (Seryasat et al., 2014). Often in businesses operating in the tourism industry, jobs are precisely defined and with specific outlines (routine), however, if this routine becomes a unique experience for the client, the business has succeeded. By projecting people as a separate element of the marketing mix, attention needs to be paid to maximising their effectiveness. Measures can be taken to train people to meet the specific needs of their job, with the motivation to orient the client and reward them to make the desired contribution.

Although here the strategy described refers to the Municipality of Pilea-Hortiatis and not to a specific company, this does not necessarily mean that the model is not applicable.

Thus, the human resources of the Municipality can be divided into three categories, the residents, the employees in the tourism sector and the people who are employed in the wider tourism sector or are municipal employees in respective services.

Regarding the inhabitants of the Municipality, the human capital plays a decisive role, regarding the perception that they have about their place. International research shows that the citizens of a destination act as ambassadors of their city, contributing positively to the tourism development of the destination (Che-Ha et al., 2016; Chegini, Molan and Kashanifar, 2016). In particular, citizens should deeply understand that the development of tourism and the change of their image will contribute positively to improving their quality of life. As Vila-Lopez, Küster-Boluda and Marin-Aguilar (2019) state, quality of life can be achieved by improving certain subjective factors, such as attitudes and self-reported image, rather than emphasising objective factors. The authors also express the view that quality of life can be used to determine the effectiveness of the marketing mix, to the extent that each part of the mix will have a positive impact on quality of life. Thus, the quality of life from the marketing point of view starts with the transfer of products to the market that can bring long-term benefits and minimise the negative effects promoting positive perceptions of city branding among city dwellers. That is, quality of life can be achieved by implementing tourism marketing strategies that can influence the attitude of citizens. On the one hand, the attitude towards sustainability (if tourism strategies are based on economic, social and / or environmental sustainability) and, on the other hand, the attitude towards the destination brand of the city (to the extent that public organisations use these strategies for to strengthen it). The ultimate goal is to improve the quality of life, as better attitudes lead to higher levels of quality of life in residents.

To this point in the study of Batle, Garau-Vadell and Orfila-Sintes, (2019) is mentioned that meetings and the creation of a framework of shared experiences or their exchange between visitors and residents (P2P exchange experiences) can lead to a deeper contact of the stakeholders and create an authentic environment for shaping common experiences and co-operation. This experiential process, which was implemented in Mallorca (Spain) showed that the lack of interest was reduced and the emotional and communication skills were increased, while the positive feelings of the citizens regarding their image were improved. However, it is worth noting that a limitation to the whole project may be the lack of self-confidence especially in terms of skills and behaviour. Throughout this process, an important role will be played by the service provider that will be able to create such programs, as well as informative seminars regarding the usefulness of the destination brand and the strategic goals that accompany it<sup>59</sup>. With this process of open participation of the citizens, the participation of the tourism sector also increases.

The second category is the people directly employed in the tourism sector, whose role is extremely important. These people come in contact with a wide variety of potential

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<sup>59</sup> Such procedures indicatively are: City of Thousand Welcomes-Dublin City; Be a Host – Tourism Vancouver; Meet the locals – Hong Kong Tourism Board; Meeting Locals – Istanbul City.

customers who want information and advice on many tourism related issues. It is important for them to be experienced and know all the information related to the destination. The packages offered by the municipal authorities and other organisations, the sights and the activities of the various sites, time periods, the possible cost and time estimates required for any trip / excursion and any other information that a tourist may be interested in. These people should be well-trained and strongly motivated to serve visitors on a daily basis in a pleasant manner. They should be enthusiastic and friendly, understanding the needs of different people and should be able to advise them accordingly without undermining or overestimating the importance of a particular position due to their personal bias. Special attention should be paid to the employees of this category, because the first impressions of the place and the people of an area tend to form in the minds of visitors at this point, which are difficult to change later.

Finally, people who have little or no contact with tourists. These are people who are not directly involved in encouraging and motivating potential tourists, but who play an important role in designing, removing and implementing different marketing programs according to customer needs. These people need to research, gather information, prepare brochures and other promotional material and their main responsibility is to bring their tourism marketing in touch with the latest trends. Employees in this category should develop a sense of customer responsiveness, understand the needs of the various sections of tourists and try to guide them by providing all the necessary information.

Finally, people involved in design and development activities may not be in direct contact with customers. Their responsibility is to design attractive packages and strategies for the development of tourism at various levels. The co-ordination of the various activities of the organisation, the internal marketing, the philosophy with external partners, etc. are the key responsibilities at this level. Ongoing information about the various programs and activities should be obtained from people who are in direct contact with the "customers" in order to incorporate the changes that visitors want.

Therefore, the human resources employed in the tourism industry, as well as in the support services or organisations, should constantly attend training seminars, in order to be informed about the new developments in the industry. In this dimension, in addition to conferences, seminars, etc., an ERASMUS Plus program for the exchange of employees from the tourism sector could positively contribute to the exchange of good practices and develop the service provided by tourism companies in the Municipality of Pilea-Hortiatis.

### Planning and Programming

The design and planning of processes related to the tourism product are also extremely important factors in ensuring visitor satisfaction and successful marketing promotion. For this reason, all procedures, programs and operating mechanisms as well as activities should be strictly defined, in order to meet to the maximum extent, the requirements of customers – visitors. In any case, because here the request concerns a public self-government and not just a business the design and planning should relate to the overall

projection of the destination as well as the activities that take place. The co-operation of the private sector with the Municipality of Pilea-Hortiatis is considered necessary as the co-ordination by a service of the Municipality or a body that will deal exclusively with the issues of tourism is considered necessary, in terms of uniformity and control of the provided services.

International research shows that a negative image of a destination remains more in the visitor's memory than a positive one (Iordanova and Stylidis, 2019). For this reason, delays in the procedures or in the service of the visitors should always be designed with the aim of their best service.

#### Physical Evidence / Environment

Every visitor would like to see, evaluate and compare a product in physical form before deciding whether to make it - or buy it or not. As the services are intangible, it is almost impossible to evaluate the product before the final purchase. Thus, even if one “buys” tourism, it is very likely that one still has doubts about the quality of service expected. This is especially true for the tourism product, because a potential tourist would have to estimate the amount of satisfaction he could receive before he even reached his destination. This option is difficult for a destination if the promotion and reputation of the destination is not attractive, as the visitor has the option to choose between many different destinations.

In this regard, the promotion through photos, videos, etc. of the facilities and services of the tourist product is considered necessary. In particular, all the elements, from the space to the people who are there are very important for the formation of the visitor experience. Thus, the visitor transports not only the images to his place, but an overall experience.

Additionally, Physical Evidence can be divided into two types:

- Basic: Includes all the basic requirements that are necessary for the provision of services. In the case of a business, it could be the rooms, the furniture, the facilities, etc. Respectively for the tourist destination of Edessa, the basic requirements can be related to the transport and access to the destination, the services provided to the museums, etc. In total, they are all facilities related to the provision of efficient service.
- Regional requirements: are all the regional elements that contribute to the access of the destination and give a tangible area to the intangible nature of the service. This could be a public transport ticket or a museum ticket. Other requirements may be related to destination symbols and services provided.

Regarding the Municipality of Pilea-Hortiatis, the tourist product has specific tangible elements concerning the historical monuments. However, great importance should be given to the promotion of the natural environment, the facilities and the services provided. It is considered that the facilities and the overall structure have improved a fact that should become well-known in order to make the destination better promoted



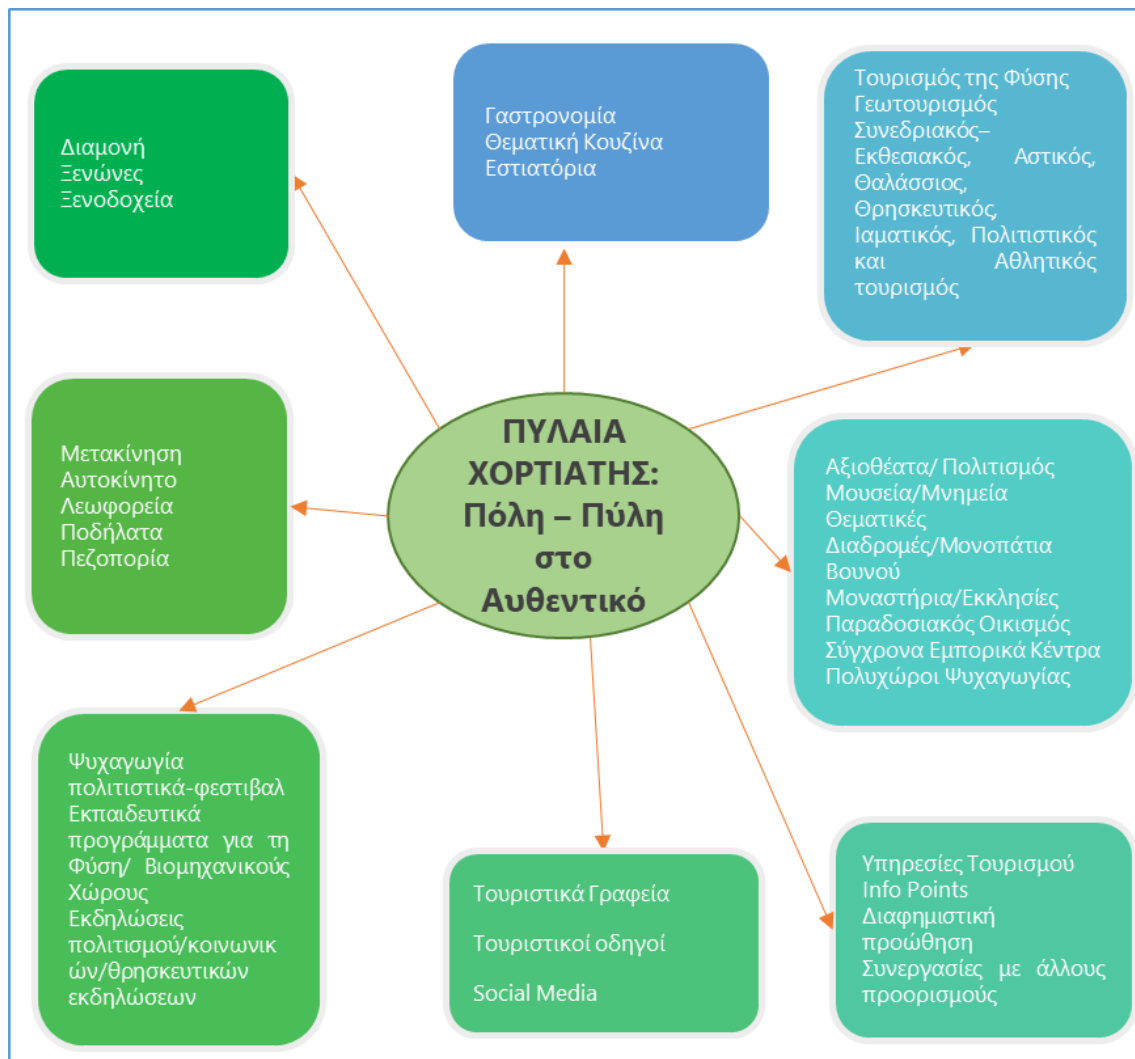


Figure 35: Development Axes of Strategic Marketing

## 9.2. Proposal and analysis of specialized marketing tools

This section presents the suggested marketing tools:

- The mass media with emphasis on the creation of publications in the press, thematic magazines, as well as in-flight magazines.
- The creation of brochures for the targeted promotion of thematic forms of tourism individually or in combination.
- Advertising on the Internet and social media (Facebook, Instagram), as well as the creation of a special section on the website of the Municipality for the promotion of the destination Pilea-Hortiatis in Greek and English, as well as the creation of a Facebook page for the same purpose.
- Participation in exhibitions (eg PHILOXENIA).
- Invitation and hospitality of Greek and foreign travel journalists and bloggers in the context of familiarization trips.
- Creating a cultural calendar.

- Production of thematic videos of 45-60 seconds for the promotion of the tourist product of the Municipality via internet.

### 9.3. Proposal for a monitoring - evaluation and redesign system of the marketing strategy and actions

For the monitoring and evaluation of the program of marketing actions can be used a series of indicators that will be collected periodically, so that it can be possible and functional to measure the results of the implementation of the program. The indicators can be divided into different categories and of course the organization can form new ones or enrich the already proposed ones according to its needs.

The table below presents a comprehensive proposed monitoring system. The system should be re-evaluated every five years. It is proposed to create an annual report from the Organization to the Municipality for its information regarding the implementation of the Plan.

Table 11: Proposal of a system of indicators for monitoring marketing actions

Indicator	Reference number	Target of the 3rd Year	Target of the 5th Year	Source
Unique Website Visitors especially in the section "Destination Pilea-Hortiatis"	0			Google analytics
Social Media (Number of followers)	0			Facebook, Instagram etc.
Number of views of the videos				Youtube
Fam Trips	0			Implementing Agency
Participation in exhibitions				Implementing Agency
Number of entries in the media				Implementing Agency
Overnight stays in the Municipality of Pylaia-Chortiatis	Number of Nights 2020			Implementing Agency / ELSTAT
<b>RE-EVALUATION: Every 5 years</b>				
<b>Implementation Reports to the Municipality: Annual</b>				

### 9.4. Proposal of single routes in the cross-border area from the Municipality of Pilea-Hortiatis to the Municipality of Madan

The suggestion of thematic packages includes the proposal entitled One Road Two Mines, which presents a single road route starting from the municipal district of Asvestohori of the Municipality of Pilea-Hortiatis (where the majority of the quarries of the Municipality are located) and final destination in Municipality of Madan in Bulgaria. The cross-border route of a total of 338 kilometers includes three intermediate stations throughout the area and lasts three (3) days. It aims to enhance the attractiveness and traffic of the two sites, while highlighting the quarries as places suitable for geotourism, highlighting the added value that the two municipalities can offer through their co-operation in marketing and the places/municipalities branding



The total distance of the route is 338 km and the estimated time with the use of a private vehicle is 4 hours and 13 minutes.



Figure 36: The total distance of the route of the suggestion One Road Two Mines is 338 km and the estimated time with the use of a private vehicle is 4 hours and 13 minutes. (source: own editing)

The suggestion for future visitors who wish to discover the uniqueness of the places and experiences offered by geotourism and in particular the visit to areas of former quarries that have been turned into visitable places. The route proposed for visitors / tourists includes three stops, which are of tourist interest focusing on natural monuments and generally geotourism destinations.

**1<sup>st</sup> stop:** The quarries of the Municipal District of Asvestochori of the Municipality of Pilea-Hortiatis, where visitors will have the opportunity to tour the former quarry that has been

documented, based on internationally accepted criteria, as an irreplaceable historical, social, scientific and technological ensemble that clearly and completely describes the evolution of the world history of lime production. In addition, this visit can be combined with a tour of Mount Hortiatis which is a Special Protection Zone (SPA) and is part of the wider protected area, with special natural beauty. The area has an increasing trend of visits with a wide field for hiking, mountain biking, educational activities, amateur climbing and recreation in general. In addition, similar features have the Cedar Hill or Sheikh Sou as a "Protected Natural Landscape" or "Landscape of Special Natural Beauty". Alternatively, the Kouri Forest in Asvestohori and the Filyro Grove are proposed as recreational areas that support small-scale recreational activities.

**2nd stop:** The Municipality of Paggaio after a journey of 126 km with estimated time using a private vehicle 1 hour and 20 minutes.<sup>60</sup>



Figure 37: The first route of the suggestion One Road Two Mines (source: own editing)

The Municipality of Paggaio is built at the foot of Mount Paggaio, which covers a total of 324,000 acres. Pangaio is considered one of the most beautiful mountains in Greece and highlights in the best way the greatness of Nature. The highest peak is "Mati" with an altitude of 1956 meters. Access to the top is from different points, depending on the interest of the visitor. The area is characterised by the great biodiversity of flora and fauna, as well as the presence of several endemic and rare plants, which highlight its ecological importance. The area has been designated as a permanent wildlife refuge and is included in the protected areas of the Nature Network - NATURA 2000. The mountain is suitable for hiking, as there are many paths with beautiful and dense vegetation. From the mountain, passes the international path E4, which is the southern branch and extension of the European long path E6.

<sup>60</sup> <https://www.dimospaggaiou.gr/tourismos/>



Visitors - tourists can be accommodated in one of the three mountain shelters: "Hatzigeorgiou" Shelter, "Butterfly" Shelter and Shelter of the Hellenic Mountaineering Association of Kavala. They can also choose between one of the many preserved and marked mountaineering trails: Avli, Eikosifoinissa, Mavra Nera, Mesoropi, Kalogeros Myrtophytos, Donti and Kokkino. In addition to off-road routes, the visitor can find paved and dirt roads, which end at the top of the mountain, offering incredible images of the natural wealth of the mountain. Finally, the climbing fields "Remvi", "Kokkina vrachia" and "Spilia tis Koukouvagias" are located in Nea Iraklitsa and have routes for all levels of difficulty.

**3<sup>rd</sup> stop:** At the National Park of Nestos river Delta and the lakes Vistonida-ismarida after 107 km-estimated time with a private vehicle 1 hour and 09 minutes.

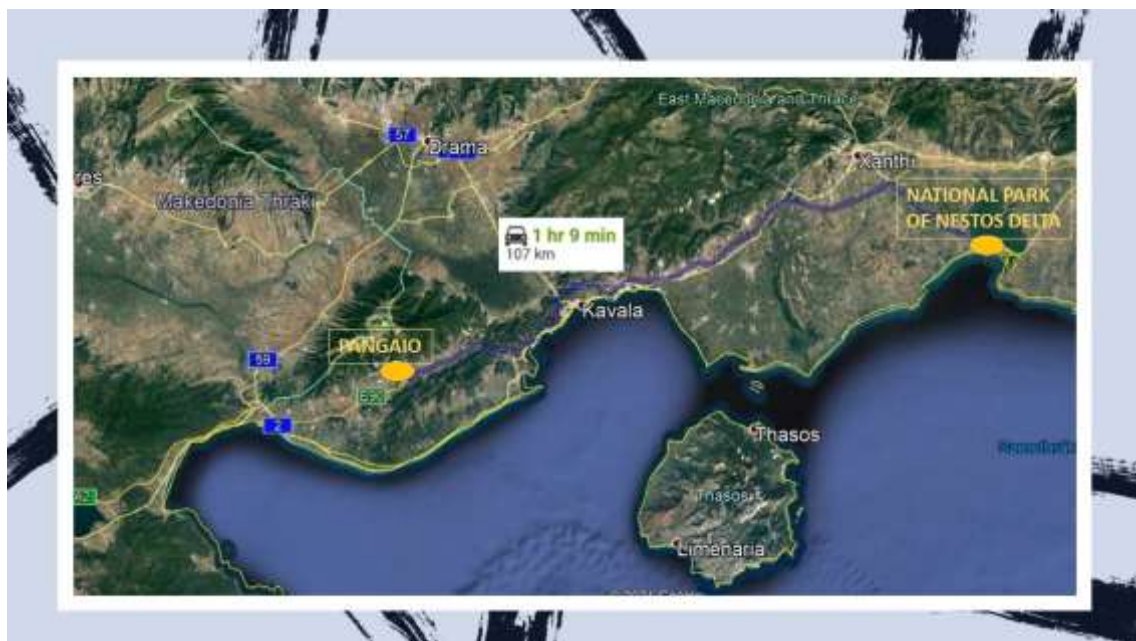


Figure 38: The second tour of the suggestion One Road Two Mines (source: own editing)

**4<sup>th</sup> stop:** The Municipality of Madan after 110km and estimated time 2 hours and 20 minutes with a private car at where the visitor can spend the night and visit the sights presented in the above sections



Figure 39: The third route of the suggestion One Road Two Mines (source: own editing)

The second route proposed aims to highlight and network important aspects of the pre-industrial and industrial heritage of the cross-border area and includes:

1st station: Asvestohori Quarries - physical and digital tour

2nd station: Drama - tour of the old tobacco warehouses (listed buildings)

3rd station: Ancient Abdera - quarries

4th station: Madan Municipality - sightseeing tour associated with mineral wealth and mining

5th station: Kavala for a tour of the historic tobacco warehouses and a visit to the tobacco museum.



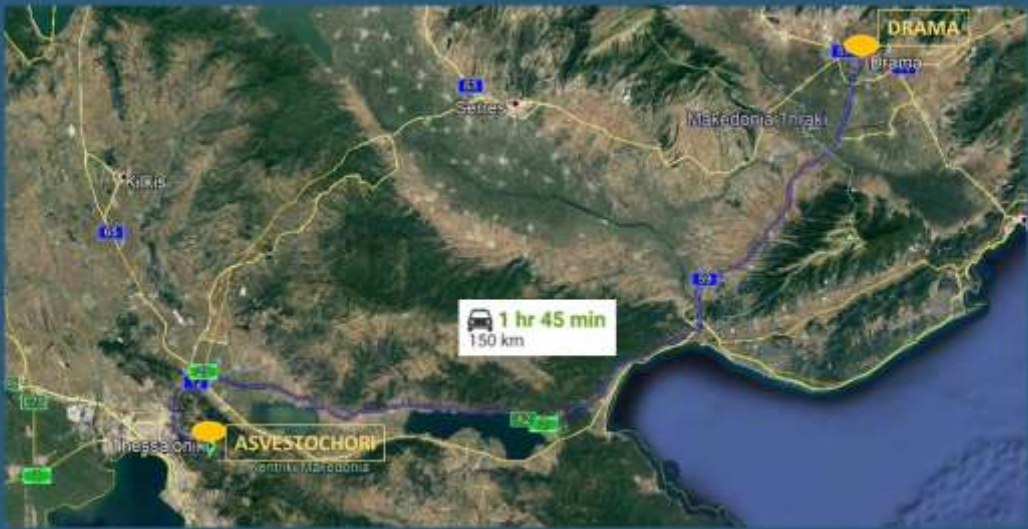


Figure 40: First part of the 2nd route of the proposal One Road Two Mines (source: own editing)



Figure 41: Second part of the 2nd route of the proposal One Road Two Mines (source: own editing)



Figure 42: Third part of the 2nd route of the proposal One Road Two Mines (source: own editing)

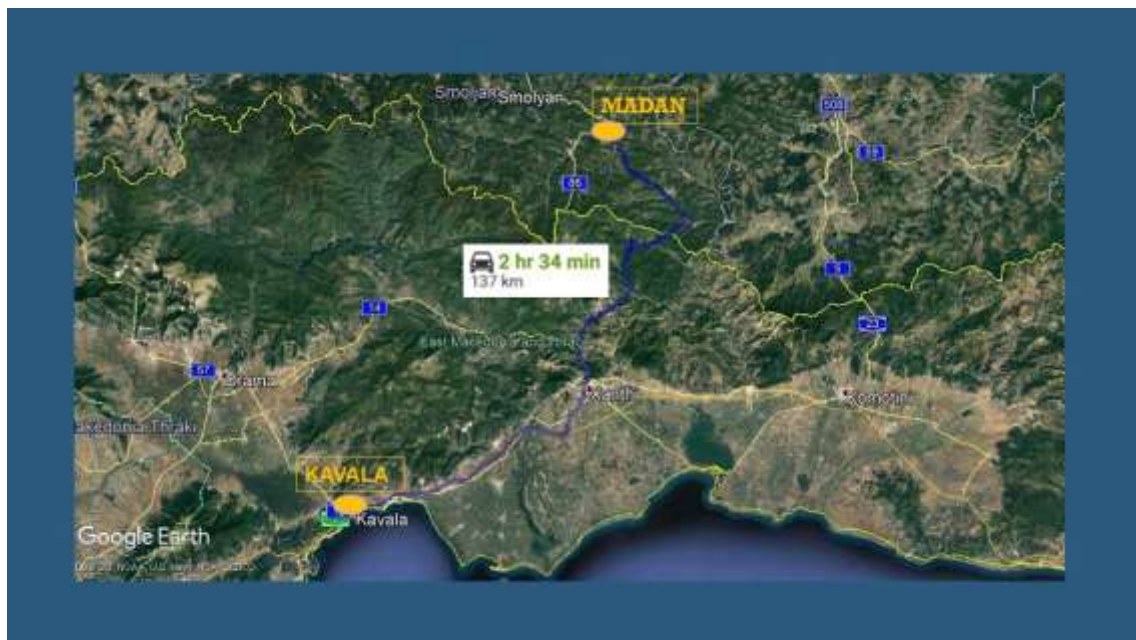


Figure 43: Fourth part of the 2nd route of the proposal One Road Two Mines (source: own editing)

Common feature of both routes are the departure / arrival points where the visitor is proposed to stay (Municipality of Pilea-Hortiatis and Municipality of Madan), while it is estimated that they can be covered in a period of three (3) days (with two nights).

## 10. Financial Tools Recording and Analysis for Actions Implementation for the Protection and Promotion of the Intervention Areas and Widespread Promotion of the Municipality and its Special Heritage

This section attempts to record those financial tools that could potentially be used for the protection, utilization and promotion of the environmental, cultural and tourist resources of the Municipality of Pilea-Hortiatis, as well as for its thematic networking at European level. Especially regarding the European programs presented below, they could be used by the Municipality of Madan, either in the context of new collaborations between the two Municipalities, or autonomously. In addition, a record of actions and projects that could be implemented and their matching with the available financial tools is done.

In any case, as we are at the end of the 2014-2020 Programming Period with most resources committed and / or absorbed at regional and national level, as well as many European Programs closed, this chapter may be updated during the period December 2021-January 2022, when there will be a clearer picture of the Programs for the period 2021-2027, the design of which at this stage is at an early stage.

### 10.1. Financial tools

At the **national level**, the main programs that can be used for the protection, restoration, utilization and promotion of environmental, cultural and tourism resources and the creation of modern infrastructure by local authorities are:

- The Local Government Financing Program **"Antonis Tritsis" Local Government Development and Solidarity Program** and in particular the Invitations AT06, AT07, AT08 and AT10.
- The **PHILODIMOS II Program** (2018-2022), which among other things concerns the financing of social and cultural infrastructures of the municipalities with interventions such as (a) construction, improvement and maintenance of administrative, social, sports and cultural infrastructures and (b) financing of studies of above.
- The **Operational Program Transport Infrastructure, Environment and Sustainable Development**, where the indicative actions of the program include the preservation and protection of the environment and the promotion of resource efficiency, through actions to meet the requirements of the acquis in the fields of waste and water, emblematic interventions to improve and revitalize the urban environment and targeted actions to reduce air pollution, reduce noise and protect biodiversity.
- The Rural Development Operational Program and especially the Local Leader Program CLLD



- The Regional Operational Program of Central Macedonia and especially the Investment Priority 6c. Preservation, protection, promotion and development of natural and cultural heritage

At European level, local authorities in cooperation with each other and / or with other bodies (research institutes, NGOs, etc.) can use a number of European Programs to study, exploit and promote their cultural and environmental heritage, but also networking and exchanging good practices.

- The **HORIZON EUROPE Program** where its 2nd pillar entitled "Global Challenges and European Industrial Competitiveness" includes as sub-sectors the culture, the creativity and the inclusive society, as well as the natural resources and the environment.
- The **Creative Europe Program** and especially the "Culture" axis, which includes, among others, the implementation of cultural collaborative projects and networks.
- The **Citizens, Equality, Rights and Values program**, which for the period 2021-2027 has incorporated the until recently valid Europe for Citizens Program. It is noted that the 3rd Axis of the Program concerns the commitment and participation of the citizens and encourages (a) the research, education and organization of events for the strengthening of the recent European memory and (b) the twinning and networking of cities in order to strengthen the perception citizens on the richness and diversity of the common European heritage
- The **LIFE 2021-2027 Program** which, as in the current programming period, will continue to be the main financial instrument of the European Union for the environment. It is noted that in the current programming period it included two sub-programs, (1) Environmental Action and (2) Climate Action. In the context of these, it financed demonstration, innovative and pilot projects, projects of transfer of good practices, as well as dissemination and information, preparatory and integrated projects for large areas, as well as capacity building projects.

## 10.2. Proposals for projects and interventions in the under study sectors in the Municipality of Pilea-Hortiatis

α/α	Actions / projects	Budget (indicative)	Potential sources of funding	Schedule	Competent bodies - required actions
1	Preparation of Technical Studies for the Project "Upgrading and modernisation interventions for the utilisation of the Asvestohori quarry area.	372.760,00			

2	Geological study for local road quarry Argyro (Asvestohori)	5.000,00			
3	Formation of walking paths in Hortiatis	10.000,00			
4	Studies for the implementation of forestry protection and promotion projects on the hill of Analipsi MU Panorama	24.570,00			

## 11. Epilogue

The present study was developed within the Terra-Mine project and is a first attempt to shape the tourist identity of the Municipality of Pilea-Hortiatis by placing it in the wider context of the cross-border area of Greece-Bulgaria.

Both Municipalities participating in the project - the Municipality of Madan and the Municipality of Pilea-Hortiatis - share a special geological and at the same time industrial heritage associated in the first case with the mines that traditionally operated in the area and in the second case with the local quarries. At the same time both of them are characterized by a rich natural environment.

The Municipality of Pilea-Hortiatis - a breath away from Thessaloniki - has a strong development character with a number of modern infrastructures for culture and sports, open green spaces in its urban environment and green forests in its mountainous and semi-mountainous settlements, while it occupies also a part of the sea front of Thessaloniki that remains unexploited up to now. At the same time, its rich and long history, as reflected in the monuments, the sites and traditions, completes its multidimensional identity.

Aiming to the tourist development of the Municipality, the first priority is the development of ecotourism and trekking tourism, along with the development of business (convention) tourism, followed by sports, medical, cultural (gastronomic and religious) and educational tourism.

The long-term goal (but already in the process of implementation) is the development of maritime tourism with the valorization of the sea front and the creation of the marina in Pylea.

Having recognized its resources and comparative advantages and at the same time, having invested in important infrastructure during the past years, the Municipality of Pilea-Hortiatis is now able to shape its tourism product and prepare an integrated plan for its promotion in order not only to attract the citizens of Thessaloniki, but also its visitors who want to explore and experience the "green" that surrounds the city.





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