



# Broader Nida Plateau Project, Greece (Annex I)

A candidature for the Landscape Award of the Council of  
Europe 2022-2023

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## 1. General Framework

This document aims to provide additional information regarding the Application of the Broader Nida Plateau Project for the Landscape Award of the Council of Europe for the 2022-2023 edition. It is complementary material of the Application Document, the Poster, the Video of Nida and the photographic album.

The Application is submitted by the Psiloritis UNESCO Global Geopark through the “Idaion Network” a non-profit enterprise, established by eight municipalities of the Psiloritis Mts and the Region of Crete and its main partners and stakeholders.

It summarizes the main features of the proposed area, the territorial and spatial context that govern project’s design and implementation, as well the objectives and main achievements during the seven years of its development. It further aims to document how this project contributes in the achievement of the main directions of Landscape Convention through the implementation of the Objectives of Regional Spatial Planning and the objectives and the SDGs in this mountain part of the island of Crete, in Greece.

## 2. The Territory

### 2.1 Geographical and Administrative Profile

The Broader Nida plateau project is being developed at the Municipality of Anogia, Region of Crete in Greece and the Psiloritis Geopark UNESCO (Fig. 1).

It is a mountainous area with mean altitude of about 1500m at the eastern flanks of Psiloritis range, that hosts the highest peak of the island of Crete (2456m.). A karstic landscape develops there due the limestone and marble that built up the area, including small and large plateaus (poljes and dolines), potholes, sinkholes, and caves together with large terrains of bare rock (Fig. 2).

The polje of Nida is dominating the territory located just at the eastern slopes of Psiloritis chain (Photo. 1). It is a plain area at about 1300m. height with an elongated shape along the north - south direction, covered by reddish to yellowish sediments. Small valleys develop towards to the east leading to the areas of Rouvas forest and the Petradolakia plateau, as well as to the south, leading to the Messara basin. The Petradolakia plateau is the physical continuation of the Nida plateau towards the east, and it forms an aggregate of small plateaus, potholes, sinkholes and small hills of barren and rough rock. Together with

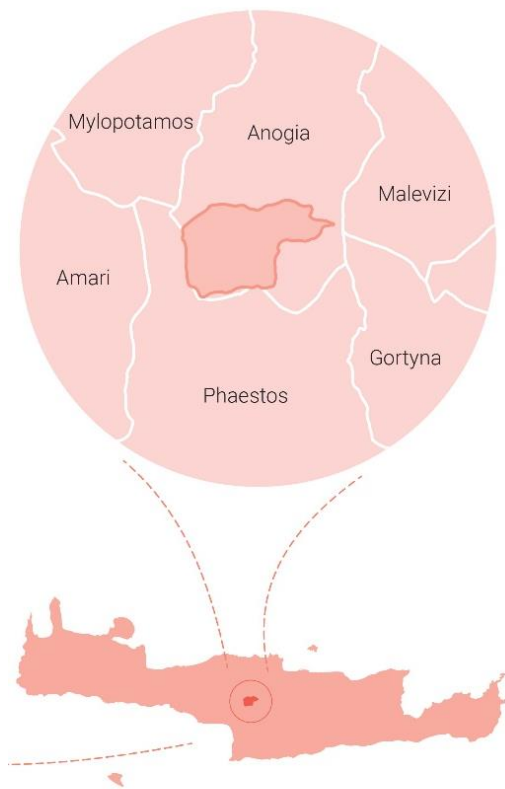
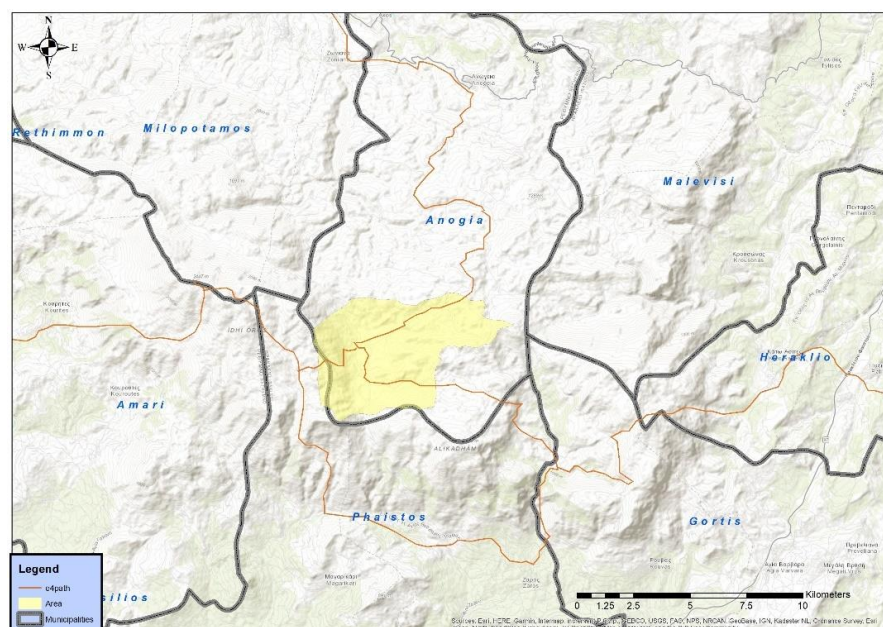
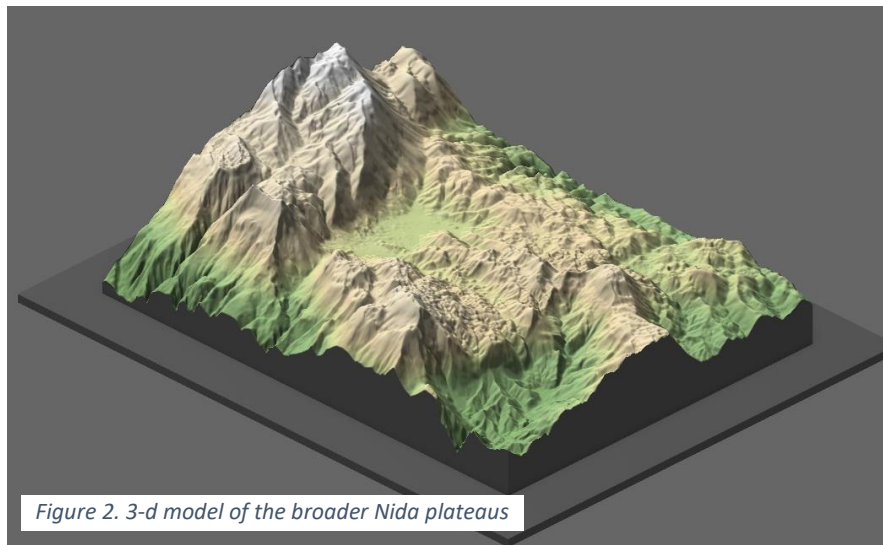


Figure 1. The area of Nida Plateau in the region of Crete, Greece.



Nida constitutes the “Broader area of Nida” in which a special project for is being implemented since 2015 by the Psiloritis UNESCO Global Geopark (UGGp).

Although the area belongs administratively to the Anogia municipality, close to other municipalities too. The southern border of the area is the border with the municipality of Phaistos. The border with Gortis municipality is few kms to the southeast, while the eastern border is quite close to the border between Anogia and Malevisi. Northwest of the Nida plateau starts the border between Anogia - Milopotamos municipalities (Fig. 3).

**These municipalities are constituent parts of the Psiloritis UGGp.**

Access to the Nida area is possible via the paved regional road that starts from Anogia village and stops at the parking lot at the Nida plateau. Few kms after entering the area, the paved road is split to the east leading to the Skinakas Observatory at the Skinakas peak, while a dirt road continuous further south leading to the village of Gergeri and the Messara basin. Another dirt road starts from the village of Kroussonas at the east and joins the main road of Anogia-Nida at the archaeological site of Zominthos northeast of the area. These are the only potential road-ways that one can approach Nida with a vehicle. The European trail E4 is running from the east to the west the Nida area, having a branch towards north that leads to Anogia village (Fig. 3). Other trails from nearby villages can lead also hikers to Nida plateau.

The main entrance gate is thus the village of Anogia, the capital of the municipality from where all kind of vehicles (cars, bikes, bicycles) can drive to Nida. A secondary one is from the south and the village of Gergeri from where a dirt road leads to Skinakas. Many visitors chose to hike along the Gafaris gorge trail that starts from the village of Zaros and then join the E4 trail to continue to Nida. Similarly, either with car along dirt road or through an ancient trail (The Plato way) visitors from the village of Kroussonas can reach Nida. Those villages, Anogia, Kroussonas, Zaros, Gergeri, Livadia are the largest towns in the broader territory and main destinations from the nearby big cities of

Heraklion (Capital of Crete) and Rethimnon. The outline of the area of Nida was actually drawn following the oreography of the area (Fig. 6). As it is formed by a number of surface depressions, nearby peaks and watersheds delineate its limits. It is however very impressive that those limits are similarly and very precisely described in a popular song of past centuries having the title “The song of Nida” which is also recorded at various local folklore collections (Sbokos 1992). The total extent of the “Broader Nida Plateau” Project implementation is **20 Km<sup>2</sup>** (Fig.4; accompanying map 1).



Figure 4. The broader area of Nida plateau and other sites of interest. Dashed lines show the E4 trail and the Nida plateau circular route.

### 2.1.1 The Municipality of Anogia

The Municipality of Anogia belongs to the Regional Unit of Rethimno (former Prefecture of Rethimno) of the Region of Crete. It is located almost in the center of the Island and its east borders are the Municipality of Malevizi and of Gortis, to the north with the Municipality of Mylopotamos, to the south with the Municipality of Phaistos and to the southwest with the Municipality of Amari (Fig. 3). The name Anogia, meaning “high place”, is connected with the location as it is built, at an altitude of 790 m (Photo 1). The two settlements of the Municipality (Anogia and Sisarcha) are built at the foothills of Psiloritis and according to the 2021 census, the population of the Municipality of Anogia is 2.240 inhabitants, the total area 102,632 Km<sup>2</sup> and the population density 24.43 per Km<sup>2</sup>. Anogia is a hegemonic community regarding the nearby villages and specially they are well-known for their resistance to the Ottoman and German occupation. The village has been rebuilt three times, since it has been burned down trice, the latest one during WWII.



Anogia has also a great tradition in music and it is the birthplace of many great musicians and performers like Vasilis Skoulas, Nikos Xilouris and Psarantonis. Cretan music can be enjoyed in the village at the traditional weddings and concerts which are held in the open theatre during summer, as well as at festivals during July and August. The main occupations of the villagers are sheepherding and agriculture.

Photo 1. The village of Anogia seen from the south

## 2.2 Geological heritage

Nida is the highest plateau in Crete with a mean altitude of 1360 meters. It was formed as a result of karstic erosion, by the enlargement of smaller surface depressions (dolines), and now forms a larger structure, a polje. Like the nearby Petradolakia dolines, it occurs just at the place where the “Tripolitza” limestone comes into contact with the underlying “Plattenkalk” rocks. These comprise mainly a dark grey marble in the form of thin beds, “plates” called by locals, that often are bended to form folds. Very typical within this marble are either white or reddish in color silica intercalations (Photo 2). According to botanical studies, these silica concretions were formed from sponge colonies on Tethys’ sea-bottom, appearing today as fossilized remnants (Photo 3). An area where these reddish silica layers is present is called “Red Plates” (or in Greek Kokkines Plakes). Karstic erosion has resulted in the development of surface depressions like the small dolines and sinkholes (Photos 4, 5), as well as of caves with most profound in the Idaion Andron cave (Photo 5).

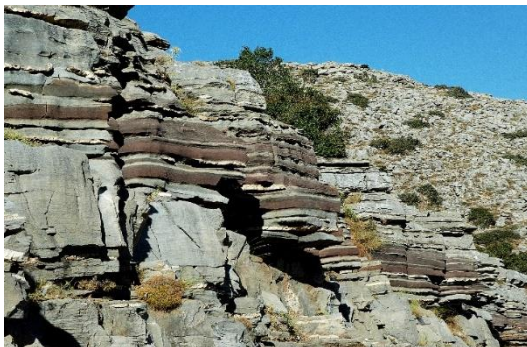


Photo 2. The Platy marble of Nida



Photo 3. Sponge colonies at Petradolakia



Photo 4. Sinkhole at Petradolakia area

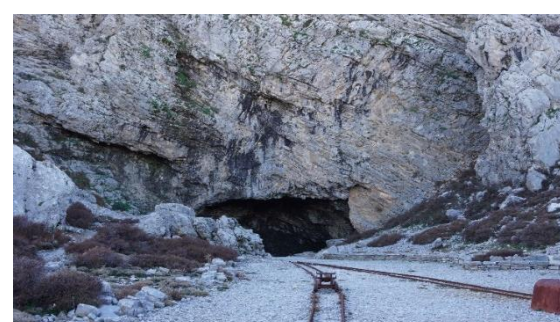


Photo 5. The entrance Idaion Andron cave

The large Idaion fault that delimits the eastern slopes of Psiloritis and the plateau itself played a significant role in the creation of Nida polje. The fault forced down the area of the plateau in respect to the Psiloritis summits, thus modulating conditions for water concentration and for the intense erosion of the rocks. Indeed, the entrance to the Idaion Andron occurs exactly on the fault plane, which is also the cause of its discovery. Additionally, many sinkholes appear at the northern part of the plateau, which seems to have sunk even more, forcing surface water into the underground rivers. Quite deep potholes and sinkholes also occur at the area of Petradolakia that form a very dramatic landscape resembling volcanic areas, with depressions like craters and bare dark dolomite and limestone.



Photo 6. The spring at Agios Fanourios

Today, the raising of livestock mainly occurs in the plateau, but several decades ago the red soil that covers the depression was a fertile land for growing cereals. The existence of water, even on a small scale, is sufficient to maintain the ecosystems and human activities. The most important springs are those of Varsamos at the southern edge, Afenti Christou just near the Idaion Andron, Romanas a bit further to the north and Agios Fanourios to the east (Photo 6).



Photo7. Internal view of a Mitato

The Platy marble is the main building material of the area which is very typical seen used by shepherds at their shelters. These are circular dry-stone buildings totally water- and windproof that are still in use in many places for living and elaborate milk. Usually, it comprises a main building associated with a small one, connected through an internal window that was used for cheese maturing. Always a stone fence nearby in the shape of horse-shoe used for sheep gathering and milking (Photo 7, 8). They belong to wider families of the nearby villages. Twenty-five are located in the Nida area (accompanying map 3).



Photo 8. Typical stone fence near a mitato

These are now part of the cultural heritage of Nida, inscribed at the UNESCO Intangible heritage as dry-stone constructions.

## 2.3 Natural Heritage

The total area of Broader Nida Plateau is included in Nature 2000 Network (Fig. 6), mainly at the SCI GR4330005 and a small part at the west at the SPA GR4330005, while its northern edge is a Wild Life Refuge (K 760-Trigiodio Municipality of Anogia (G.G. 1119 B' /28-8-02). The main vegetation type is Mediterranean shrublands with a predominance of characteristic “pillow” shaped dwarf shrubs, scarce due to intensive grazing and high altitudes.

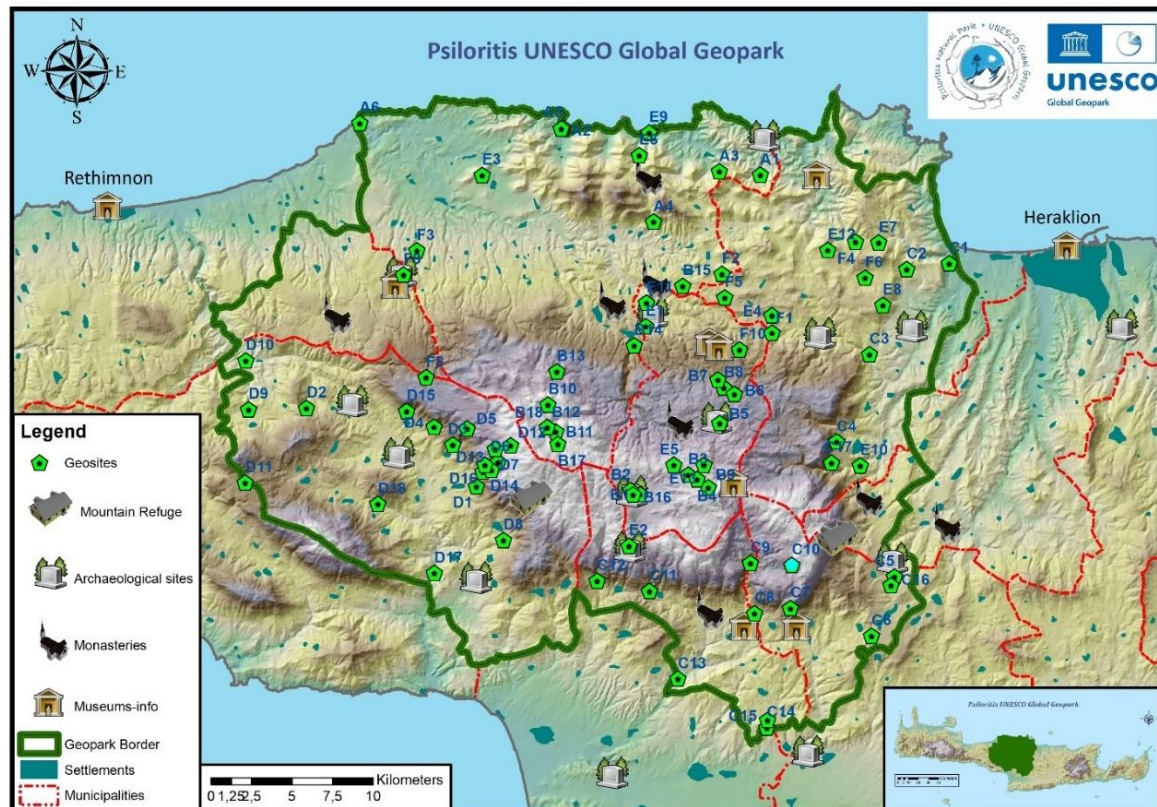


Figure 5. Map of Psiloritis UNESCO geopark presenting its main geological and cultural features. Big part of it is identified as Nature 2000 area under protection

The Kermes Oak (*Quercus coccifera*) and Cretan Maple (*Acer sempervirens*) are the dominant trees, while in the Nida Plateau small clumps of *Crataegus monogyna* grow. Oaks are very common as bushes, or “katsoprinia” (the overgrazed dwarf form), or even as bigger trees (when they have managed to escape grazing). Greek Spiny Spurge (*Euphorbia acanthothamnos*), Narrow-leaved milk-vetch (*Astragalus angustifolius*), Cretan milk-vetch (*Astracantha cretica*), are all cushion-like dwarf shrubs on the high-altitude slopes of Psiloritis, while Cretan Barberry (*Berberis cretica*) forms slightly taller bushes.



Many phryganic and annuals of Nida area are endemic to Crete, and indeed some are found only in this area (stenoendemic). *Horstrissea dolinicola* (one of the four endemic genera of Greece) grows only in small plateaus around Skinakas (Photo 9). *Crocus oreocreticus* (Photo 10), several *colchicums* and *Polygonum idaeum*, are all Cretan endemics common on the Nida.

Photo 9. The flowers of *Horstrissea* in Skinakas area. Long dimension of image ~4cms



Photo 10. *Crocus oreocreticus*



Photo11. The cretan agus (*Kretania psylorita*)



Photo 12. The Cretan shrew (*Crocidura zimmermanni*)



Photo13. The bearded vulture (*Gyps Fulvus*)

The Polygonum actually forms a “carpet” at the Nida polje and several old travelers reported that this was painting gold the teeth of the local sheep. Many aromatic and pharmaceutical plants are also present, such as Cretan Dittany or “erontas” (*Origanum dictamnus*).

The fauna of the park is also of great importance. On the southern parts of Nida, one of the last surviving populations of the Cretan Wild Cat (*Felis silvestris creticus*), a “phantom” animal for zoologists and researchers of the Cretan wild life, is to be found. Till the mid 90’s, the animal was known only through vague hunter’s and shepherd’s tales. Recently, however, after an intense investigation by the Natural History Museum of Crete, the presence of the Cretan Wild Cat was scientifically confirmed at the southern steep cliffs of the mountain.

Many invertebrates and some amphibians and reptiles of Crete are living in the area of Nida. All the Cretan mammals are also present here. Cretan Argus (*Kretania psylorita*), a small endemic butterfly is quite common on the plateau of Nida area (Photo 20), as well as the Cretan shrew (*Crocidura zimmermanni*), which is a “living fossil” and the only Greek endemic mammal (Photo 21)! Furthermore, many birds are to be found inhabiting the area, such as the common vulture (*Gyps Fulvus*) that make a big colony at Skinakas area and the Bearded Vulture (*Gypaetus barbatus*) an endangered species in Europe (Photo 22). The Cretan population of the species is one of the few surviving in southern Europe and thus of great importance.

## 2.4 Cultural Heritage

The culture and history of the Nida plateau is so rich and precious that is considered as one of the most valuable and representative areas of the island of Crete. The relation of humans with the place is dated back to the prehistory, as native place of Zeus. Close to Nida are located other important archaeological sites: the Minoan towns of Tylissos, Axos and Apodoulou are within few kms distance. Very close and always connected with the Idaion Andron is the minoan site of Zominthos,



Photo 14. The entrance of the Kamaraikon cave



Photo15. A cooper 'Kourites' shield found at Idaion Andron, an artefact where Assyrian, Minoan and Dorian art are present. ©Archaeological Museum of Heraklion

Photo16. The most internal fold in the Idaion Andron, where many copper shields were found

the Minoan palace of Phaistos and the Kamares cave, (south of Nida -Photo 14), the Byzantine monasteries of Diskouri, Vrontisi and Gorgolaini and just at the south of Nida, (accompanying map 2).

Psiloritis mountain is connected with the birth and activity of the Greek gods. At the glaciis of mountain Ida (Psiloritis), Rea hunted by Saturn, hid Zeus at Idaion Andron cave and the mythical goat Amalthea nurtured the king of Greek Gods. Here, Kourites with the growl of their shields covered the cry of the little god that was meant to become the father of Gods and people (Photo 15). Above the plain-land of Nida at Idaion Andron was the center of worship of the Cretan born Zeus. According to the ancient myth, Zeus disguised as a bull, crossed over the river Litheos and transferred Europe to the island of Crete ending up to ancient Gortis, few kms south of Nida, where was located the labyrinth.

The King Minos of the Minoans, according to Plato, had to visit Idaion Andron cave every nine years to receive the commandments of the Gods. Deservingly, this cave in the ancient times. from the Mesolithic till the Roman times was operating also as an oracle, explaining the reason of the so valuable and unique archaeological findings excavated here. (Photo 15, 16). \*

\* The archaeologists Yiannis Sakelarakis and Efi Sapouna-Sakelarakis (2011) have contributed the most in the documentation and promotion of the value of Idaion Andron cave and the Zominthos site through the excavations, publications and congresses.

The archaeological site of Zominthos is located just few kms north of Nida and it is the highest in respect to altitude, Minoan structure in Crete (Photo 17). It is a unique building of more than



1500m<sup>2</sup>, with at least two floors and a structure resembling the Minoan palaces. Its role should have been related with the administration and economy of the mountain products but also with the pilgrimage activities at Idaion Andron cave, located at a very crucial position where three main routes were joining to lead to Nida. It was the route from Knossos, described also by Plato, the route from Tylissos and the route from the ancient Axos (accompanying map 2).

Photo17. Aerial view of the archaeological site of Zominthos

Crete's geographic position in the southernmost part of the eastern Mediterranean and its natural environment played a definitive role in the birth, development, and character of the Minoans (ca. 3100–1050 B.C.), the first European civilization. Minoan settlements and cemeteries, artifacts, reveal the evolution of a society that was not only influenced by foreign factors, but also managed its resources so well that it developed into a great civilization.



Photo18. View of a group f Mitata

On the mountains, the typical dry-stone buildings of the shepherds, called “mitata” thanks to their ancestral structure demonstrates the continuity with prehistory. They populate Nida in great number, totally adapted to the landscape and the environment (Photo 18). These are part of the UNESCO Intangible Heritage lists and several of them characterized as National Monuments by the Ministry of Culture. They are strongly connected with the nomadic way of the shepherd's life in past times, but even today.



Photo 19. Fest in the plateau of Nida

Local summer fests are organized at the small family-owned chapels (three in this area) in which shepherds, their families and many other friends and locals are invited to celebrate the name day of a Saint (Photo 19).

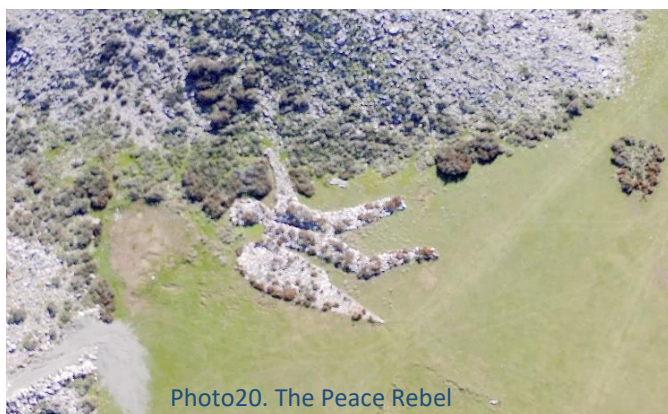


Photo20. The Peace Rebel

Even land-art activities are occurring in this area, the most profound of them being a rock sculpture made by a German artist Ms Karina Reck and shepherds, the “Peace Rebel” dedicated to the friendship between the WW2 enemies. (Photo 20).



Photo21. The Observatory at Skinakas

The Nida wider area is privileged to host the University of Crete Observatory on the Skinakas peak, founded in 1986. It is part of the Physics Department and the Foundation of Research and Technology - Hellas (FORTH), operated by the Institute of Astrophysics - FORTH (<https://skinakas.physics.uoc.gr/en/>) and hosts three telescopes. (Photo 20). The same applies for the Geopark Infocenter and the Digital Archaeological Museum at Anogia, the Geological Museum at Zaros, and the Skinakas Observatory and future Stars’ school.

Photo Gallery: <https://gallery.ia.forth.gr/index.php?category/1>

## 2.5 Human and economic activities

The dominant sectors of the local rural economy are agriculture, livestock and artisan. Specific livestock farming is the main activity in the area of Nida, dating back to ancient times. The vast majority of farms are family farms with mixed capital, low intensity, i.e. production of milk, cheese and meat. In the area of the broader Nida plateau exist about 50 family livestock farms with a total capacity of about 20000 animals.

As regards the secondary sector developed in the broader region, its basic characteristic is that it is directly linked with the primary production. The majority of enterprises activates in the processing of agricultural and livestock products and is small in size, investing little in technological modernization and the organization of automated production methods. It is mostly about small



Photo22. Shepherds milking their sheep

family craft enterprises that employ a small number of workers, often with seasonal contracts rather than permanent staff. Very typical and characteristic is the wool weaving, performed by the local women which produce superb quality and culture products. Very close to these activities is also the cultural production related with traditional music, songs and dances that can be enjoyed during the various summer festivals at Anogia.



Photo 23. Traditional weaving in Anogia

The tertiary sector ranks first in economic importance in the region over the past years, but maintains strong and close links to traditional specialization in processing and farming. In general, income and employment in the sector is offered by numerous shops, tourist accommodation and tourism businesses in restaurants and in leisure, as well as other services related to health, education and social care that are scattered in all the municipalities of the

region, with trade and other services to be mainly found in the administrative centers and tourism to develop in surrounding areas or traditional settlements.

In this context, the dominant sector in the service economy is first and foremost tourism and accommodation services. In the nearby mountainous area, the reserve of tourist infrastructure, which consists of small units (Hotel, holiday rentals, resorts etc.). There is increased tourist traffic mainly thanks to higher domestic tourism but also the firm interest of foreign visitors. On the other hand, the local product is gradually enriched and its quality improves, due to private investments aiming at enhancing local traditions and the unique characteristics of the region, in a structured way of highlighting local traditions and unique characteristics of the region. Especially in regards to the area of Anogia and nearby villages visit growth is directly related to the effectiveness of previous interventions and the combined effort of business and development strategy for the creation of a coherent and competitive tourist product. This is based on an individual identity-name, which is now enshrined by the recent recognition and nomination of Psiloritis as a UNESCO Global Geopark and the implementation of its Management and Action plan. The geopark has developed its own branding process allocating to its partner businesses a special label seen on products and facilities.

## 2.6 Psiloritis UNESCO Global Geopark

Psiloritis UNESCO Global Geopark ([www.psiloritisgeopark.gr](http://www.psiloritisgeopark.gr)) is located at the island of Crete in the center of the island occupied by the highest mountains, Psiloritis (up to 2456m). It is a mountainous and rural area in Crete which is one of the most touristic destinations in the Mediterranean. It covers an area of 1270 Km<sup>2</sup> that includes territories of 8 municipalities, 96 settlements and 42.000 inhabitants. It operates as geopark since 2001 when it became one of the first members of EGN and since 2015 it holds the title of a UGGp (Fassoulas 2004).

Psiloritis is composed of all these features that built a representative UNESCO Global geopark, with a great and imposing geodiversity, profound living environment, well-known culture, and history, as well as scattered, around and inside the mountain, human activities. Located in one of the most touristic islands of the Mediterranean, the island of Crete, it faces the challenge to develop responsible geotouristic activities in a poor economically developed mainland (Fig. 8).

The wealthy and intact by tourism and human pressures natural environment, the long-lasting history and culture that ranges from paleolithic to modern times, and the superb quality of agricultural and livestock products (Skoula & Fassoulas 2006) are considered the strong merits of the territory (UNESCO 2016; Zouros 2016) Between ancient times and our days, people continues to walk on Psiloritis in order to search transcendentality, to graze sheep, to find refuge in war time, to detect as botanists or as archaeologists, to be entertained. The natural site has been transformed into cultural landscape. Until now this landscape gains attention as all human interventions are related with its '*genius loci*' and they enhance it.

The geopark is managed by a nonprofit company **The Idaion Network** established by the local authorities in which all local organisations, associations and services participate. A geopark info-center exists at the headquarters of geopark in Anogia village, whereas a network of thematic museums, exhibitions and info points has been developed in collaboration with local stakeholders. Educational activities are performed either by geopark's staff or by the partners of the geopark, i.e., the **Anogia Environmental Education Center** and the **Natural History Museum of Crete**. Even since 2007, the geopark developed a local Quality Agreement which results in a special label awarding, after fulfilling several quality and sustainability criteria. This network of stakeholders and supporters includes show caves, museums and exhibitions, local producers, artists, tourism service providers and individuals located or intervening inside the geopark territory.

### 2.6.1 Management Plan and sustainability

An independent study performed for the broader geopark area, that covers the Nida plateau too, documented that Psiloritis is a mountain with unique features that meet the emblematic criteria for a site:

- C1. Spatial cohesion. Although it is not a single administrative unit all characteristics of the mountain financial, social, environmental and cultural form a very specific single entity that also has spatial variations.
- C2. Institutional recognition. Large part of the region is included in the Natura 2000 Network and there are also classified 9 wildlife shelters, 3 monuments of nature, 12 areas of outstanding natural beauty, 5 archaeological sites, 5 Monasteries as preserved monuments and 1 historical preserved Monument
- C3. Reputation. The reputation of the region at a national level is indisputable as many local tourists visit the region all year round and the integration into European and global networks is expected to improve the criterion.
- C4. Legends and myths. Related to many myths and legends but Psiloritis is mainly connected with the birth and the action of the immortal Gods. It is no coincidence that Idaion Andron was the center of worship of Cretanborn Zeus.
- C5. Power of inspiration. Has been and still is an inexhaustible source of inspiration for many artists.
- C6. Landscape of a high aesthetic value. The massif with its peaks sprang up millions of years before through the Mediterranean Sea with rocks and landscapes formed by the ongoing tectonic plates of Africa and Europe. It took 2 million years to reach the height of 2.500 meters, to acquire the charm that distinguishes today its landscape.
- C7. Unique ecosystems. Of the 1,130 endemic plants of Greece, 268 were found in Crete and of these 168 are found in Mt Psiloritis. The region has also a significant number of species of fauna and is rich in geosites.
- C8. Particular cultural identity. The peculiar popular culture of the region, developed over the years is one of the main and essential characteristics of the mountain.
- C9. Sustainability and anthropogenic environment. The absence of environmental disasters, the existence of small-scale infrastructure, the mild and qualitative intervention in the area and the pursuit mainly of the basic productive activity which is livestock farming in the traditional way, allows us to say that the area has not suffered considerable pressure.
- C10. Historic places. The timeless presence of local residents but also of the mountain in important historical events that determined the course of this place makes the massif an important historical site.

All the above were included in 2015 in the **Psiloritis Geopark Management Plan** that has the main objective to conserve, interpret, promote and enhance the values of the natural, cultural and

human environment. A certain number of actions and projects were developed since the 2015 using all available resources (mainly Regional and EU funds) and partners in the area. The Broader Nida Plateau Project was the most challenging and emblematic which presented its main outcomes in 2019 with the finalization of two Interreg projects.

### 3. The Broader Nida Project

#### 3.1 Project Objectives

The project on the emblematic Nida geosite was aiming at conserving, interpreting, promoting and enhancing the values of the natural, cultural and human environment in this area. To achieve this, we invested:

- ✓ in the collection of all **relative information** and **resources** in the form of a **geodatabase**,
- ✓ in the **analysis** of the values, threats and needs in this case, and
- ✓ in **setting** of specific **targets** and the identification of **potential resources** and **partners** to implement several projects in a certain time span of a decade.

The **values** we identified were related with:

- the breath-taking landscape of Nida polje,
- the rare and unique plants that exist in the area,
- the Idaion Andron cave with its millennia of history and treasures,
- the shepherd's life with their activities, houses and dairy products, and
- the living traditions and ethics related to this territory.

We had in addition, prioritize the **need**:

- ✓ to interpret and promote these values with all modern and traditional means,
- ✓ to manage properly the mountainous landscape and the pasture land, and
- ✓ to train and educate local inhabitants, entrepreneurs and visitors on the need of nature and culture conservation and the new geotouristic products
- ✓ to develop the necessary infrastructure for the visitors.



The necessary resources, human, and economic were foreseen at the geopark's stakeholders and partners, the local community, and the regional, national and especially, European founding opportunities.



Photos 24-25. The Geopark Visitors' center in Anogia

## 3.2 Main Outcomes

Following the implementation of geopark Management Plan, several actions have been developed between 2015 and 2019 by the geopark and its partners to interpret, promote and enhance the values of the Broader Nida Plateau. The tangible outcomes of this project are presented below.

### 3.2.1 Facilities - Visibility.

1. The geopark has installed through one its first projects interpretation panels in most important geological sites, like the Nida polje, the Petradolakia sinkhole, the sponge's fossils, the Idaion Andron cave, and the Saint Fanourios spring and fault. These occur as 70 X 80 cm color printouts on aluminum background, which show the location on the geoparks map, a big image of the site, two short explanations paragraphs, a QR code for further info at geopark's webpage and suggestions for environment friendly behavior.
2. In 2017 the geopark with the support of Regional funds, launched its new Visitors center which is located in the village of Anogia, that promotes through displays, monitors and hands on materials the value of the geopark and the Nida area too (Photo 35).



Photos 26-27. An interpretation panel for the fossilized sponges and another Panel for the Nida trail develop the Emblematic Mountains project

3. In 2016 the Municipality of Anogia, with the support of the Ministry of Environment, the Region of Crete and the Forest Service, received European funds to renovate and improve visitor facilities at the Idaion Andron Cave, interpret and promote the site and opened to the public.
4. Under an Interreg MED project addressed to the “Emblematic mountains” the main partner of geopark, the local Development Company named “AKOMM Psiloritis SA” developed in 2019 a circular trail in the Nida plateau accessing the main geological, natural and cultural sites, like the Idaion Andron cave, the main sinkhole, several mitata, the chapel of Afentis Christos and land art (Photo 20). The trail was supported with info panels, proper signage, a leaflet, and is connected with the main E4 trail.
5. Furthermore, in the nearby Anogia village a Digital Interpretation Center of Idaion Andron cave and the nearby archaeological site of Zominthos was developed in 2014 by the Municipality with funds from the Region of Crete. The Museum display replicas, digital presentations (holograms, 3d-models, 3d movies) and reconstructions of important features of the Idaion Andron and Zominthos sites acting as an entrance gate and promoter of the Idaion Andron site.

### 3.2.2 Interpretation - Education

1. Prior to the Management Plan Implementation a scientific congress was organised in 2012 by the Anogia Municipality and the Archaeological Service on the excavations at Idaion Andron, which resulted in a Coffee Table Book and three scientific volumes with the proceedings. A special documentary on its value was produced. All these help the continuous promotion and visibility raise of the site.
2. Geological interpretation is provided through the geopark's new webpage, a geopark field guide book and other publications that were developed. Most of these were implemented in 2015 and 2016 and were supported by regional and own geopark funds.
3. Another Interreg Greece-Cyprus project titled "GEOIN" aiming to promote geotourism in the insular geoparks, resulted in 2019 in the development of digital outcomes such as
  - an interactive geopark map which hosts spatial, text and visual information on all natural, cultural and human values and activities in the area of geopark, including the area of Nida.
  - 360° panoramas, either from earth or drone shots promoting the area of Nida and its main geosites with 5 panoramas that permit to rotate and zoom in and receive also geological.
  - a virtual tour at Psiloritis geopark that includes images, maps, and 360° panoramas from all areas, including Nida.
4. The Anogia Environmental Education Center in collaboration with the Natural History Museum of Crete and the geopark produced in 2017 two educational projects in the form of museum kits to be used by the visitors of the geopark and the schools. The first project was titled "*The invisible water routes*" trying to explain the formation of karstic features and especially caves as well as the life that they host in Psiloritis and Nida area. The second one was titled "*The biodiversity of the Psiloritis Plateaus*" and was focused on the endemic species of the area (Photo 42). These are constantly used till now by the geopark and the center.
5. The Anogia Environmental Education Center has also produced several educational projects that are either focused on the Nida area or are related to its features. One of them is titled "*a visit to the shepherd house*" and explains the construction of mitata and shepherds' life. Another one titled "*When water met the stone*" is related with the water cycle in the Psiloritis mts, Agios Fanourios and Afentis Christos springs and Petradolakia sinkholes. The project "Secret life of caves" tries to explore the history and life in the caves of Psiloritis, including study visits at Idaion Andron caves. Finally, another project is focused on the geodiversity of Psiloritis under the title "*Discover Psiloritis geopark*" during which the pupils visit among others the geosites of Nida area.

### 3.2.3 Conservation and social activities

1. Regarding the management of the landscape, for many years the Geopark and the Anogia Municipality have foreseen the risk of soil degradation and erosion, especially in the dolines, and have developed an environmentally friendly visitor's behavior, that it is promoted through geopark's publications and on the interpretation panels, whereas the Municipality announces every spring traffic regulation in the dolines following the snow melting.
2. In addition, in order to conserve and protect the so rare and endangered *Horstrissea dolinicola* (<https://top50.iucn-mpsg.org/species/41>), the Municipality of Anogia, the Forest Service of Rethimnon and the Mediterranean Agronomic Institute of Chania, developed in 2019 a project for the study, management and conservation of the fragile ecotopes, which resulted in the protection of the dolines by the Decentralised Administration of Crete as "Protected Natural Formations" (Greek Government Gazette, D'250/18.05.2020), the rearrangement of nearby shepherd's activities, and the monitoring and study of these ecotopes for several years. An interpretation panel

and several awareness raising activities were also developed (<https://www.ciheam.org/project/conservation-of-the-unique-population-of-horstrissea-dolinicola-in-central-crete-2/>).

3. Several cultural as well as sport events, organised by the Municipality, the geopark, the AKOMM and local stakeholders, find host at this area, like the celebration of the August full moon at Idaion Andron entrance (Photo 49), and the organization for several years of the annual mountain race called the “Psiloritis Race”, with its starting point at Nida plateau.

4. Hiking activities as well cycling is recently of high demand organized either by relative enterprises. Cycling is taking place along the main road from Heraklion or Rethimnon to Nida plateau (Photo 51), while hiking and trekking is performed along the E4 trail or the Nida plateau Trail (Accompanying map 1)

### 3.3 Recent and Future Activities

For the local communities, the emblematic “Broader Nida Plateau” is an **ongoing project**. Thus, new projects and activities are designed and being implemented through the years which try to further promote the territory and **use modern technologies** for interpretation and promotion of the area, especially to **younger generations**, people with **mobile disabilities** and distant users.

1. The Psiloritis geopark has developed with the support of a Horizon 2020 (**RURITAGE 2020**) project a new **story map for Nida** Plateau interpretation (<https://storymaps.nhmc.uoc.gr/en/nida-plateau-2/>) and a **Virtual tour** in the area (<https://tours.nhmc.uoc.gr/geoparks/nida/>), which has been adapted for **VR devices**, accessed either through the web or the Geopark’s info center at Anogia (Photo 53). The VR tour has been used in several activities like the Open Days of the Skinakas Observatory this year.

2. Anogia Municipality, *Androidus* project and several other local stakeholders contacted a study and applied successfully for the inscription in 2021 of pastoral life of shepherds at the **National Intangible Heritage List** ([https://ayla.culture.gr/i-voskiki-kai-o-kosmos-tou-voskou-ston-psiloreiti-2021/?fbclid=IwAR364wVg7XCHloO-7oHOLAiw\\_0Sms\\_aZNfWhxm4mU5xGvthab2kABuphfQ](https://ayla.culture.gr/i-voskiki-kai-o-kosmos-tou-voskou-ston-psiloreiti-2021/?fbclid=IwAR364wVg7XCHloO-7oHOLAiw_0Sms_aZNfWhxm4mU5xGvthab2kABuphfQ))

3. With the support of the Ministry of Environment and Energy and the Natural Environment and Climate Change Agency (NECCA) the geopark is planning to create a modern and well adapted to the landscape, new **view point** at the entrance of Nida Plateau (Photo 55, 56).

4. The Anogia Municipality with the support of the Geopark and the Region of Crete is also establishing a new Info Center for the interpretation of the Idaion Andron cave, using the abandoned resort existing at the parking place of Nida. In addition, under the project of the Territorial Project of the Region focused on the UNESCO Sites of Crete, the Municipality in collaboration with the geopark and the University of Crete is going to renovate an old ski resort just north of Nida in order to transform it to mountain shelter for environmental research and education.

4. Several projects focused or related with cultural activities in the broader Nida Plateau are being performed by local stakeholders like the Androidus Project Tank (<http://www.androidus.gr/>), a pool of creativity, innovation and cultural management.

- **Shepherds and the Pastoral Life of Psiloritis** is a cultural proposal launched by Androidus and the FORTH institution, aiming at exploring an important part of human history of the highest mountain of Crete as “written” in the monuments, toponyms, historical springs and the natural environment, that has been recently registered into the National Register of Intangible Cultural Heritage.
- The research project **IDAology** is dealing with the exploration, recording, and promotion of pastoral life in the Psiloritis Geopark as a main element of the Intangible Cultural Heritage (ICH) of the area, producing among others an AR book for children (<https://idaology.gr/>).

- Also, the **Metartum Project** uses the dry-stone Shepard's establishments as art workshops/laboratories for Modern Artists. During this project several art and cultural activities are being performed in the broader Nida area.

## 4. Compatibility with Regional, National, International Policies

The development of the “Broader Nida Plateau” is in full agreement with the targets of **Anogia Municipality Town Plans**, to develop the area as a place for ecotourist and livestock raising activities (Anogia Town Plan 1992 – GGG 278-24/3/1992 and its revision of 2018). The area of Nida plateau is characterized as archaeological park (ΠΕΠ ΑΠΙ) which foresees recreation, tourism and livestock raising activities only. The rest zone at the north and east of the polje is characterized as area of traditional shepherds' activities (ΠΠΕΔΙV), while the area of Agios Phanourios as an area of light eco-touristic activities.

The **Regional Spatial Framework of the Region of Crete** (Greek Government Gazette 260/08.11.2017) sets several zones in order to apply in national and regional level the requirements of the “Landscape Convention”. Under the characterisation of the “**carrying capacity of natural and cultural capital**” zones it includes the E4 trail (crossing the entire area of Nida) as of international importance, whereas the whole Psiloritis mt (including the broader Nida plateau) as of National Importance. This Framework foresees for the broader Nida Plateau (Article 11) that “... a priority for the protection, preservation and promotion of the unified natural and cultural heritage is the creation and implementation of a program of targeted spatial actions by the operating institutions, regional and municipal, which highlights the inseparable relationship of the natural and cultural personality of each space, as well as its timeless historical depth. All actions must have a synthetic character and be linked to productive reconstruction efforts of the mountainous massifs and the populous traditional settlements”.

**Consequently, the Management Plan of Psiloritis geopark in the Nida area is in full alignment with the Regional and National Spatial planning for the adaptation to the “Landscape Convention” and the achievement of the SDGs.**

## 5. Contribution to sustainable development

The enhancement, promotion and management of the “Broader Nida Plateau”, as it has been presented earlier, is an integral part of the **Management Plan** of Psiloritis UNESCO Global Geopark, that aims to the conservation of natural and cultural heritage, and its transformation in a regeneration tool and locomotive for sustainable local development, through the establishment of eco- and geo-touristic activities. The Plan encompasses most of the SDGs as well as the provisions of local, regional and national sustainable and spatial planning. The ultimate goal of the Plan is to transform geopark territory into a place habitable for its own residents, a place to be proud of and happy to live in.

Public understanding of our fragile planet and its risks through education and awareness raising, as well as through the creation of new digital tools that could serve these needs, even in cases of pandemics, should be the target of the UGGPs and their networks (Martini et al. 2021). These targets just second the “Top 10 Focus Areas”, set by IGGP program (UNESCO 2021), that a geopark should focus on. It is apparent that the new digital applications developed by geopark contribute significantly on achieving most of the goals of the “Top 10 Focus Areas” as they promote geological and broader natural landscapes of Psiloritis, encompass new scientific methodologies and technological achievements, inform and educate visitors and inhabitants on the values of the

territory, contribute on sustainable development enforcing geo- and sustainable tourism, and in addition, are inclusive and integrated, raising simultaneously awareness on the natural risks and the need of geoconservation.

As UNESCO has denoted the geoparks contribute in several SDGs and most profoundly at SDGs 1, 4, 5, 8, 11, 12, 13 17. Following the SDGs indicators (UN 2017) the new apps and activities developed by Psiloritis geopark, including the Nida Plateau project, contribute directly or indirectly in the achievement of these goals. In addition to the SDGs denoted by UNESCO for the UGGps, these apps are in line with the SDG 9 by the development of local infrastructures and networks that are resilient, reliable, and sustainable as they are based on the web, and support local well-being and equitable access for all. Furthermore, they carry forward the use of scientific research and upgrade the technological capabilities of small and medium scale local enterprises of Psiloritis, and facilitate free access to information and communication, described under SDG 5. Finally, these apps promote, interpret, and enhance the value of terrestrial ecosystems and landscapes and increase the local appreciation and pride that make conservation efforts more effective and ease, helping local managers to achieve sustainable management of ecosystems, reverse land degradation and halt biodiversity loss, foreseen under SDG 15.

## 6. Enhancement of values of the landscape

Crete is considered both as island and as continental land by botanists, historians, geographers and ethnologists, due not only to its size difference from the other Greek islands, but also to the small scale of its morphological elements and climatic micro-regions, leading to great landscape diversity juxtaposed with frequently contrasting geomorphology (Rackham – Moody, 1997. Its unique geography induced age-long cultural exchanges and syncretism among peoples of the Eastern Mediterranean, expressed in Cretan traditional arts, built forms and landed practices (Skoutelis, 2003). All the above projects and outcomes were scheduled to promote in a holistic manner the geo- and bio-diversity of the Nida area. Combining in the enhancement products (trails, booklets, panels, digital outcomes etc.) local tales and traditional songs, the shepherd's life (National Intangible Heritage), and the dry-stone constructions (UNESCO Intangible Heritage) we achieve the development of **coordinated actions** capable of reflecting the “genius loci” of this unique landscape. In addition, educational and training activities implemented by the geopark and the Anogia Environmental Education Center, through guided tours and special programs on the life of Shepherds and the Karstic landscapes of Psiloritis, communicate further in younger ages the values and the tradition of the area, keeping them alive. The geopark tries to transform these into a geotouristic destination, that promotes and supports in addition, the local diary and culture products, and thus local economy.

**Exemplary Value.** The project for the enhancement and management of the broader Nida Plateau under the Management Plan of Psiloritis UNESCO geopark gave the opportunity for a holistic promotion, interpretation and management of this picturesque landscape in the Psiloritis mts, and to transform it into a charming geo-and eco-touristic destination for all target groups.

It combines all aspects of natural and human environment, including the written and oral narrations, the ancient history and culture, as well as traditional activities, identifying and promoting the intrinsic interrelations and connections between them, using traditional and modern means and resources. It further tries to engage present and traditional activities related with the shepherd's life and products – the main economic activity, in the area – in sustainable and responsible tourism products that are developed, foreseen the local regeneration, the raise of local pride for their heritage and the improvement of the well-being of the nearby inhabitants.

Accomplishment of these goal is the way to achieve also conservation of natural and culture heritage for the future time and generations.

#### **Good practices**

- Combination of conventional approaches for nature and culture interpretation with modern technologies and means (Story telling maps, VR and AR products for pcs and mobile devices).
- Promotion and maintenance of traditional shepherd's life through its integration in all outcomes and further support for its nomination as a National Intangible heritage.

#### **Public Participation**

- Psiloritis Geopark is a bottom-up initiative that was established in 2001 by the local Municipalities, the stakeholders of AKOMM Psiloritis Local Development Company and the Natural History Museum of Crete. As a geopark, Local communities has essential rule in the geopark and according to the UNESCO Global Geoparks Operational Guidelines, they participate through their representatives at the Advisory Board, which develops its policy and the targets to achieve. This project was developed under the geopark's Management Plan and is implemented with the close collaboration of the shepherd's community of the area and the people of Anogia Municipality.
- Several workshops have been and are performed by the geopark and its stakeholders to support shepherds on modern marketing and promotional activities, the local people on the dry-stone constructions and the preservation of dry-stone wall and mitata technique, as well as the women for maintaining traditional weave products based on wool.

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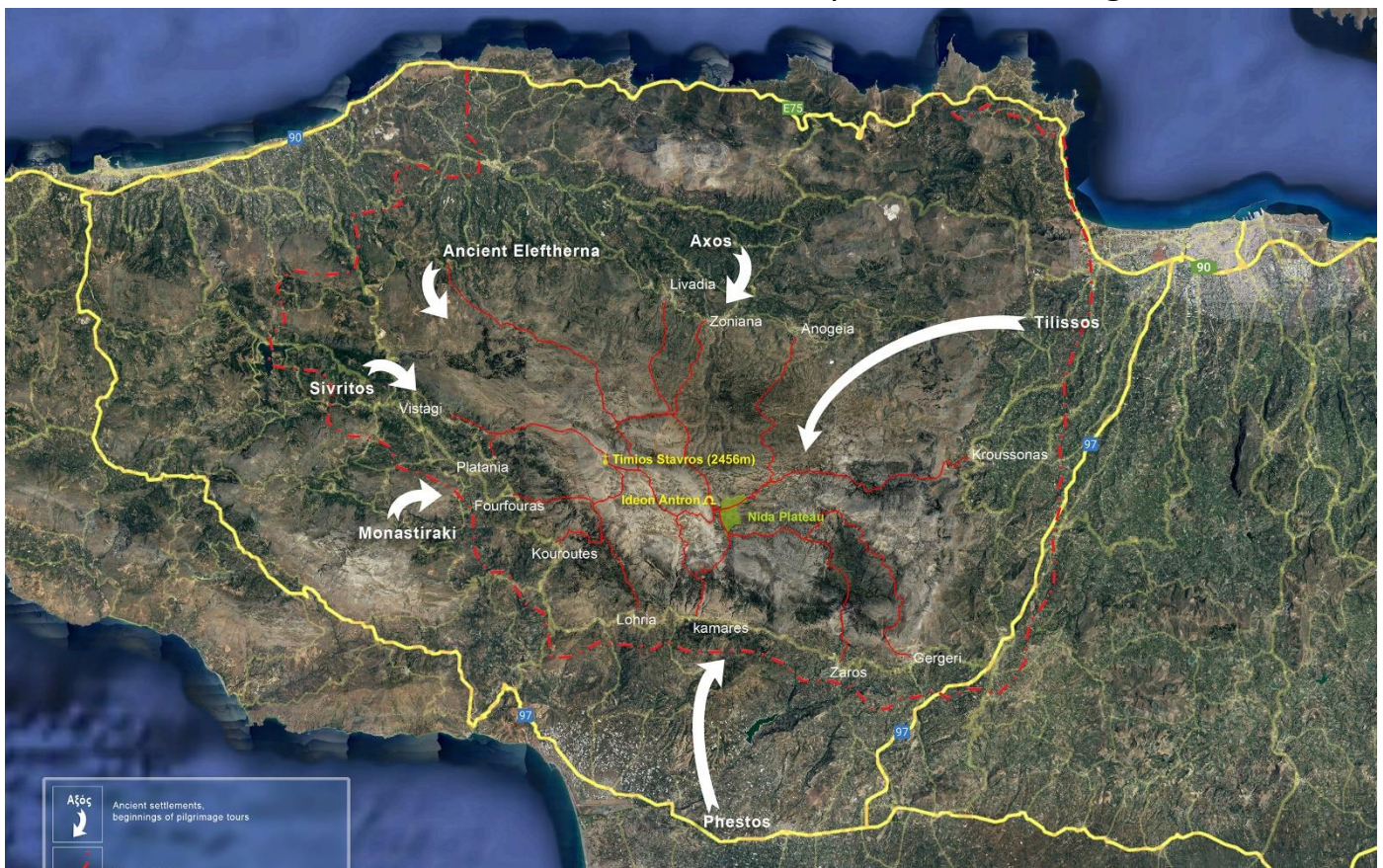
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ACCOMPANYING MAP 1 The main sites mentioned in the text



ACCOMPANYING MAP 2 The main archaeological sites close to Psiloritis and the traditional paths conducting to Nida



## ACCOMPANYING MAP 3 The mitata density in the plateau of Nida

