



[www.parnassosnp.gr](http://www.parnassosnp.gr)

**PARNASSOS NATIONAL PARK**  
**MANAGEMENT BODY**  
*Trails and Routes*  
*Cultural Landscapes*

Thekla K Tsitsoni  
Professor

School of Forestry & Natural Environment  
Head of the Postgraduate Studies Programme  
President of Parnassos National Park Management Body

# Protected areas



## Definition

"A protected area is a clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long term conservation of nature with associated ecosystem services and cultural values"  
(IUCN)



# In our National system of Protected areas there are 5 categories

## Law 3937/2011

- ▶ Strict Nature reserve
- ▶ Nature reserve
- ▶ Natural Parks : National or Regional parks
- ▶ Habitat/ Species Management Area : Special Areas of Conservation (SAC), Special Protection Areas (SPA) or Wildlife Refuges or combination of them
- ▶ Protected Landscapes/seascapes or Protected natural formations/natural monuments

## Protected areas in international level

- **Wetlands** of international importance according to the Ramsar Convention (Greece has characterized ten (10) wetlands)
- **Specially Protected Areas** according to the Barcelona Convention - Protocol No 4 "On special protected areas of the Mediterranean", nine (9) areas have been declared as Specially Protected Areas
- **World Heritage Sites** (Antihasia Mountains - Meteora, Mount Athos)

- **Biosphere Reserves** (National Park of Olympus, National Park of Samaria)
- **Biogenetic Reserves** to preserve representative samples of flora and fauna of European natural areas (Sixteen (16) areas have been characterized as Biogenetic Reserves)

# NATURA 2000 European Ecological Network

The Natura 2000 network is the centerpiece of the European Union for the protection of the natural environment and the preservation of biodiversity. It is a network of protected areas - the largest in the world - which provides protection to the most endangered species and habitats in Europe. The network was established under the Birds Directive of 1979 and the Habitats Directive of 1992.

- The Birds Directive (2009/147/EC) is reported Special protection areas (SPA) and it was adopted with the aim of protecting, conserving and regulating the status of all bird species occurring in the wild state in the EU, as well as the sites that are important to them.
- The Habitats Directive (92/43/EEC) is reported Sites of community importance (SCI) and Special areas of conservation (SAC) and it ensures the conservation of a wide range of rare, threatened or endemic animal and plant species. Some 230 rare and characteristic habitat types are also targeted for conservation in their own right.



Greece currently has 446 sites listed under the Natura 2000 network



# National Park Management Bodies

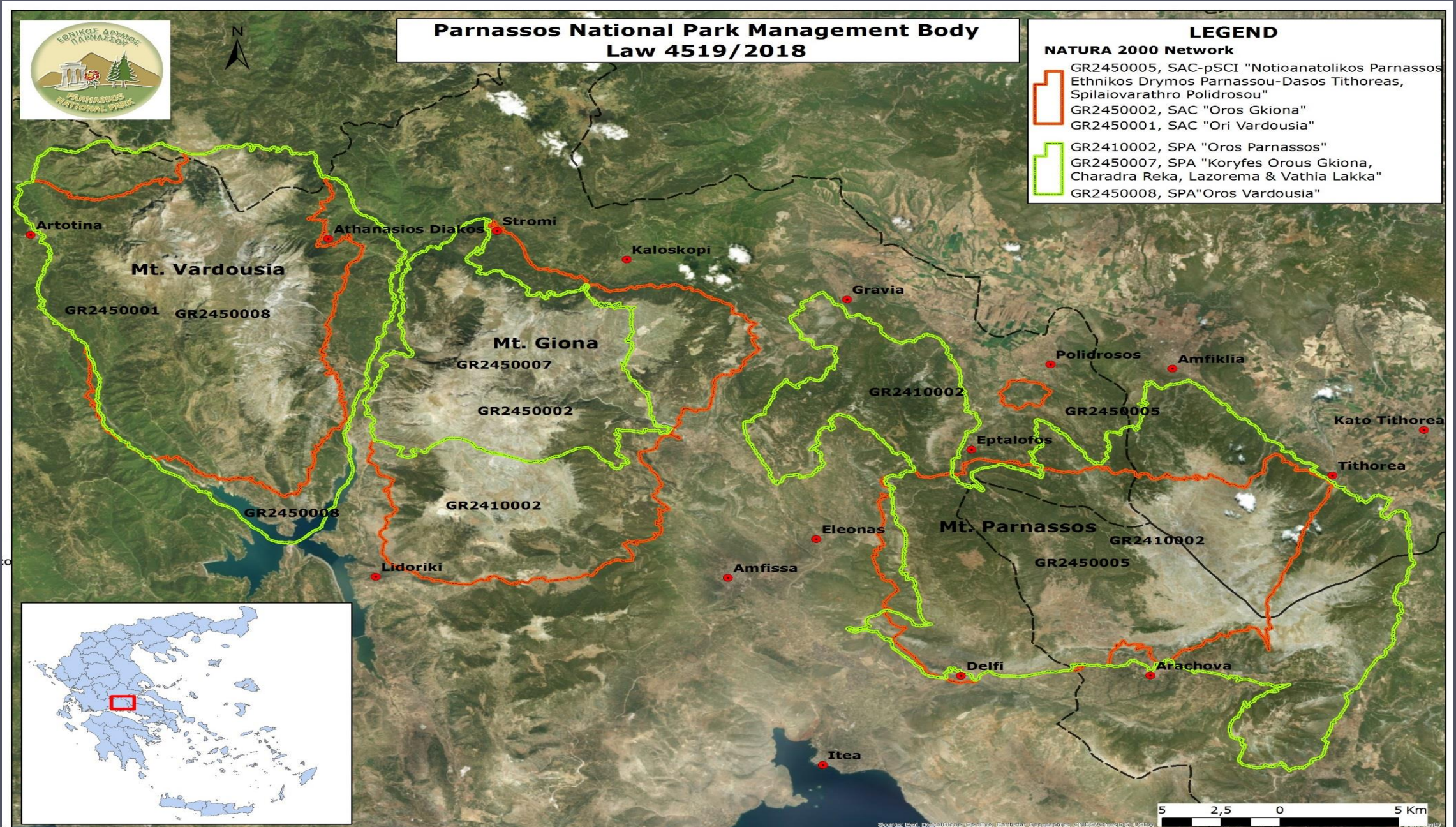
National Park Management Bodies were established for the protection, conservation, management and enhancement, of both nature and landscape of the mountain, as natural heritage and valuable natural resource, while developing human activities that are met with this goal.

**Main objectives of the Management Body are:**

- The conservation of natural resources, biodiversity and protection of the entire region
- Promoting and implementing of information and awareness campaigns for the local community
- Attracting visitors and promoting the values of the protected area
- Sustainability of the protected area's ecosystems
- Developing partnerships with research centers, universities and NGOs



# The expanded borders of Parnassos National Park



# Environmental routes - trails, which are Development management tools for the region

The development of environmental thematic routes network, except from getting acquainted with the characteristic of the natural environment as well as the historical background of the area, it is a significant management tool for sustainable development used for highlighting the particularities of the area, such as optical resources, historical and cultural heritage.



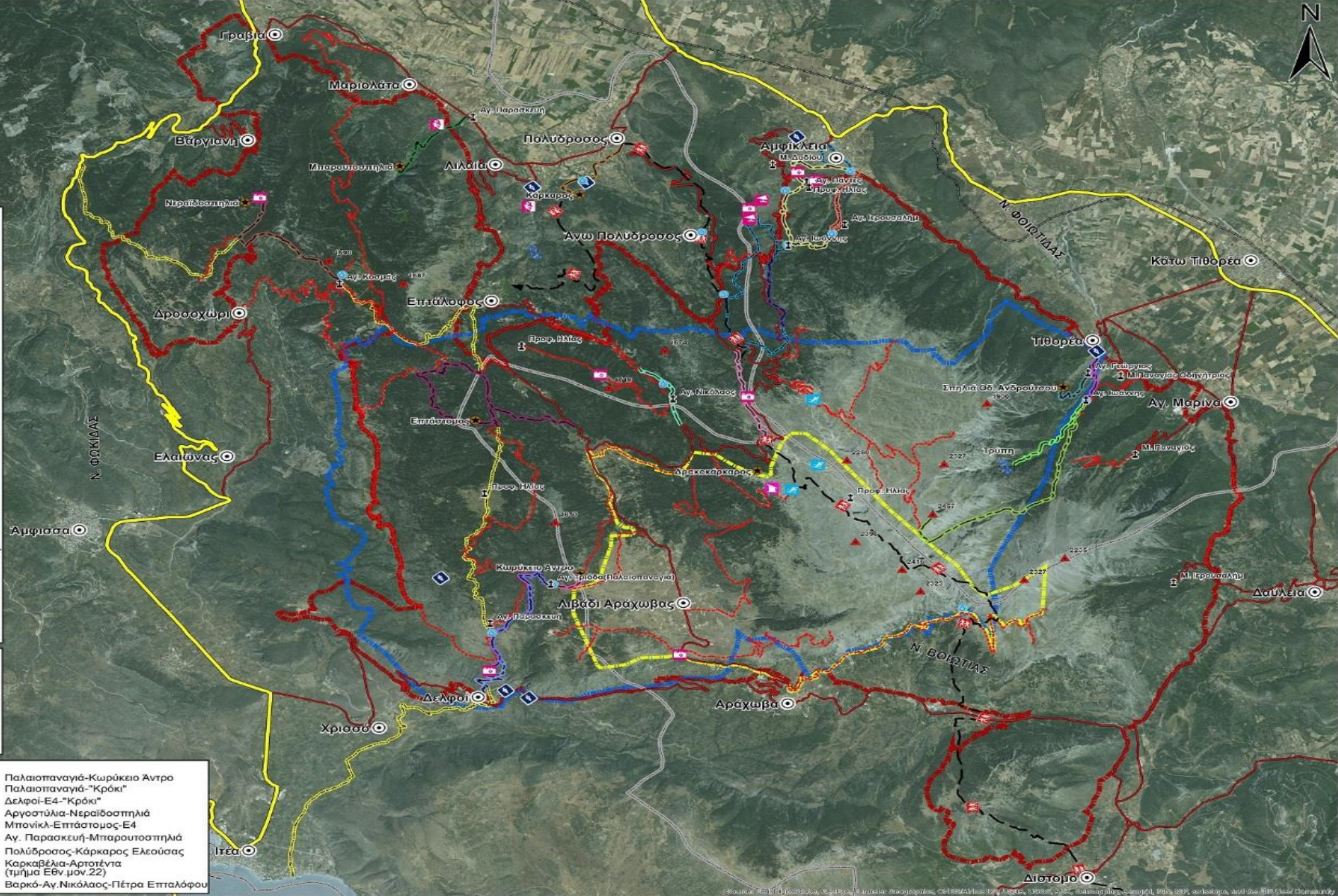


- ΥΠΟΜΝΗΜΑ**
- Οικισμοί
  - Σπήλαια-Βάραθρα
  - Εωκκλησι-Ιερά Μονή-Μοναστήρι
  - Αρχαιολογικός χώρος
  - Χιονοδρομικό Κέντρο
  - Πηγή-Βρύση
  - Καταράκτης
  - Καταφύγιο
  - Θέση θέας
  - Αναρριχητικό πεδίο
  - Πίστα αιωροπέρισης
  - Ευρωπαϊκό μονοπάτι E4
  - Εθνικό μονοπάτι 22
  - Ορεινός αγώνας δρόμου "Μονοπάτι Παρνασσού"
  - Εθνική οδός
  - Ασφαλτοστρωμένος δρόμος
  - Δασικός δρόμος
  - Σιδηροδρομική γραμμή
  - Καταφύγιο Αγρίας Ζωής "Ασπρόχωμα-Ψιλό-Πρόντολη-Κελάρι(Αράχωβας)"
  - ΖΕΠ "Όρος Παρνασσός" GR2410002
  - ΕΖΔ "ΝΑ Παρνασσός-ΕΔ Δρυμός Παρνασσού-Δάσος Τιθορέας" GR2450005

Συντάκτης χάρτη:  
 Θεοδώρα Λαναρά  
 Δασολόγος-Περιβαλλοντολόγος MSc

Γεωγραφική Προβολή Χάρτη  
 ΕΓΣΑ 87

- ΜΟΝΟΠΑΤΙΑ- ΟΡΕΙΝΕΣ ΔΙΑΔΡΟΜΕΣ**
- Αμφικλεία-Αγ. Ιερουσαλήμ
  - Παλαιοπαναγιά-Κωρύκειο Άντρο
  - Αμφικλεία-Χαράδρα Βαράμωσ
  - Παλαιοπαναγιά-"Κρόκι"
  - Αγ. Ιωάννης-Αμφικλεία
  - Δελφοί-E4-"Κρόκι"
  - Λάκα Τσάμη-Λάκα Βίκα-Μπογδάν
  - Αργοστόλια-Νεραϊδοστηλιά
  - Τιθορέα-Σπηλιά Οδ. Ανδρούτσου
  - Μπονικλί-Επτάστομος-E4
  - Τιθορέα-Εκκλησιάς ο Μύλος
  - Αγ. Παρασκευή-Μπαρουτσιπηλιά
  - Αγ. Ιωάννης
  - Πολύδροσος-Κάρκαρος-Ελεούσας
  - Τιθορέα-Αγ. Ιωάννης
  - Καρκαβέλια-Αρτοποιία (τμήμα Εθν. μον. 22)
  - Διπόταμα-Τρύπη
  - Βαρκό-Αγ. Νικόλαος-Πέτρα Επταλόφου
  - Τιθορέα-Λιάκουρα(2.457μ.)



4280000  
4275000  
4270000  
4265000  
4260000  
4255000

352000  
360000  
368000  
376000  
384000

2 1 0 2 Km

ΕΘΝΙΚΟΣ ΔΡΥΜΟΣ ΠΑΡΝΑΣΣΟΥ  
PARNASSOS NATIONAL PARK

N  
N. ΦΟΙΒΙΑΣ  
N. ΒΟΛΩΤΙΑΣ

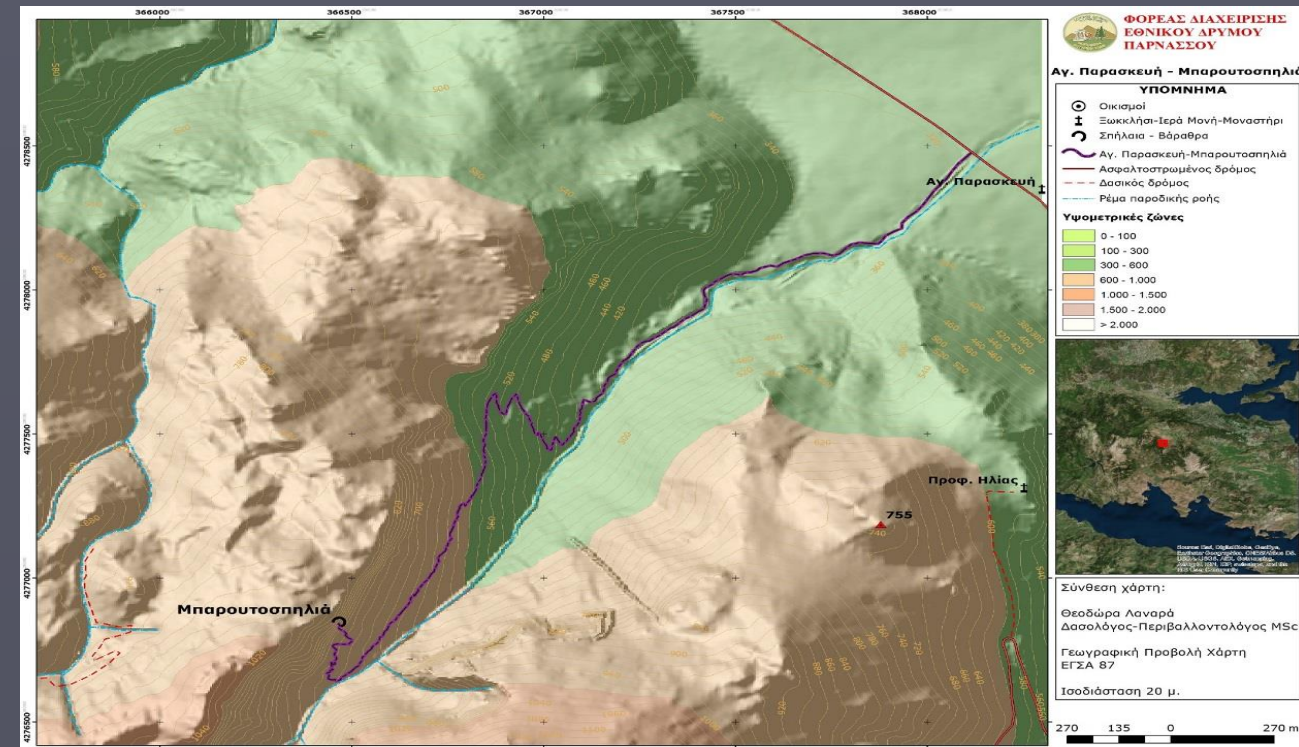
Αμφισσα  
Χρισσό  
Ιτέα  
Διπόταμο

Γραβιά  
Μαρσιολάτα  
Βέργιανη  
Νεραϊδοστηλιά  
Μπαρουτσιπηλιά  
Λιλιάτα  
Κάρκαρος  
Ανω Πολύδροσος  
Επτάστομος  
Επτάστομος  
Κωρύκειο Άντρο  
Αγ. Παρασκευή  
Δελφοί  
Χρισσό  
Αράχωβα  
Αμφικλεία  
Αμφικλεία Π. Δαδίου  
Αγ. Πάνος  
Αγ. Ιερουσαλήμ  
Αγ. Ιωάννης  
Αγ. Γεώργιος  
Μιλασάκις Οδηγητής  
Αγ. Ιωάννης  
Μ. Γιαννάτος  
Δαύλεια  
Μ. Προσολήμη

Χάρτης: Π. Μουρατίδης, © 2010. Ημερήσια διαδρομές: © ΕΠΕΑΕΚ/ΜΕΤΑ 1997, 1998, 2002, 2004. Διαδρομές: Σαμαρά, 1994, 1997, 2002, 2004. Αρχειοφωτ. από το ΒΠ Γεωγ. Οργανισμ.

# The creation of the environmental routes - trails network

- Recording routes - trails by using GPS devices and photographic substantiation
- Digitization of the routes - making thematic maps by using Geographical Information Systems (GIS)
- Description of the routes on the website [www.parnassosnp.gr](http://www.parnassosnp.gr)



# ► Cooperation with Club Alpino Italiano (CAI) under the MEDIMONT PARKS program (Mediterranean Mountain Parks)



## CAI MEDIMONT PARKS

### LE SFIDE DI TUTELA DELLA BIODIVERSITÀ: SPECIE ALIENE E CAMBIAMENTI CLIMATICI



**QUANDO**  
23-25 Novembre 2018

**DOVE**  
**CASTELLO S. GIORGIO**  
via XXVII Marzo (accesso con ascensore da via del Prione)  
**LA SPEZIA**

[WWW.CAI-TAM.IT/MEDIMONT](http://WWW.CAI-TAM.IT/MEDIMONT)

**TUTELA AMBIENTE MONTANO**

**PARTNER**  
P.N. DELL'ASpromonte - P.N. DEL GILENTO E VALLO DI DIANO - P.N. DELL'OITI - P.N. DI PARNASSOS - P.N. DEL POLLINO - P.N. DELLA SILA - P.R. DELLE ALPI LIGURI - P.R. DEL MATESE - P.R. DI ROCCAMONFINA - P.R. DEI NEBRODI - UNIVERSITÀ DI CORSICA - COMUNE DI CINQUEFRONDI (RC) - COMUNE DI ZUNGRI (VV)

**INFORMAZIONI**  
Presidente TAM Liguria  
Laila Ciardelli  
3487478928  
laila.ciardelli@gmail.com

Referente CGTAM  
Valeria Ferioli  
3475327283  
v.ferioli@gmail.com

**ISCRIZIONI**  
Sul sito del progetto o sul modulo <https://goo.gl/forms/JKBisiDjUewMQv02>  
Entro 31 ottobre 2018



The trails and routes in the protected area combine natural environment with :

- History
- Culture
- Geology
- Sports
- Interpretation of the natural environment
- Observation - photography of flora, fauna and landscapes
- Environmental education - awareness

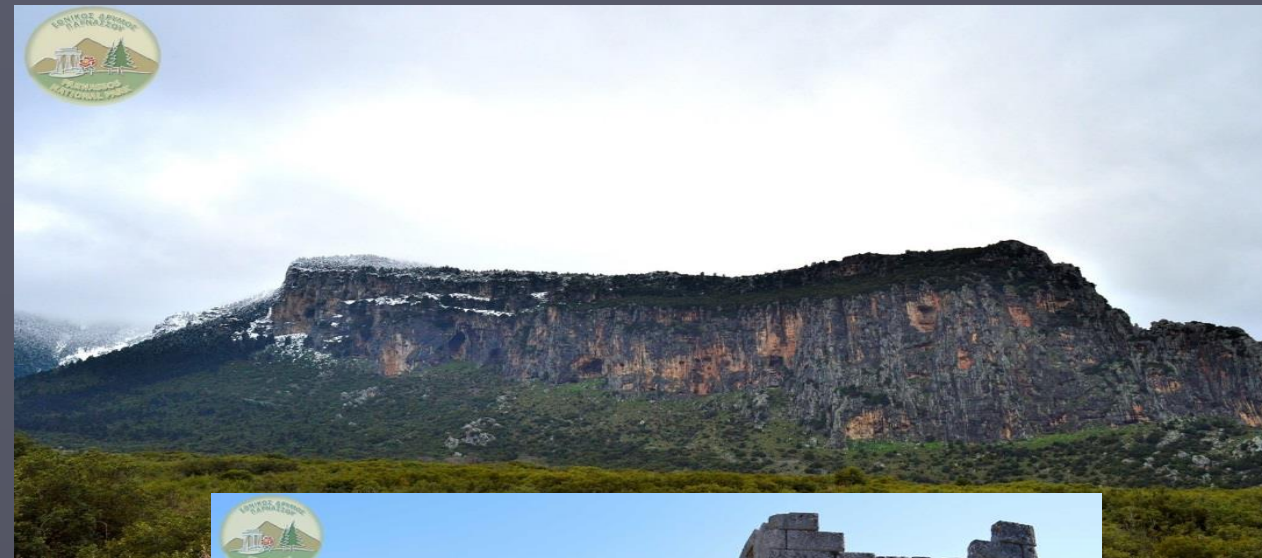


## □ History

### Tithorea - Od. Androutsou cave

Distance : 3,5 Km

Characteristics: Geomorphology of the area, the impressive Kahala gorge, historical background, Tithorea's Aesthetic forest, ruins of the 4<sup>th</sup> century fortress of ancient town



## □ Culture

This trail drives from Delphi to "Korikion Andron" (Corycian cave)

Distance : 10 Km

Characteristics: the beauty of the landscape, Parnassos National Park, "the landscape of Delphi", European long distance trail E4, ancient trail to Corycian cave, Habitat- Endemic forests with *Juniperus* spp 9560\*



## Amfiklia - Agia Ierousalim

Distance : 2,5 Km

Characteristics: Geomorphology of the area and the presence of limestones, the church Ag. Ierouralim 11<sup>ou</sup> century AC built into cave, the impressive Varsamo gorge



## The spring of Agia Eleousa at Polydroso

Passing through National trail 22

Characteristics: Springs of Viotikos Kifisos river, a shrine dedicated to the river god near the spring of Agia Eleousa at Polydroso, and presented him with lavish offerings. Several architectural elements, such as architraves, triglyphs, and column drums, and the imposing retaining wall, which supported the temple, survive. The churches of Agios Christoforos and Agia Eleousa, which replaced the ancient cult buildings during the Early Byzantine period



## □ Geology

### Neraidospilia

Distance: 5,7 Km

Characteristics: Impressive landscape and geomorphology, the European long distance trail E4, Greek fir forest (*Abies cephalonica*)



### Cave - gulch Eptastomos

Characteristics: Most important vertical cave, depth 110m. It is located at the central part of Parnassos National Park



## Tripi waterfall

Distance : 4,8 Km

Characteristics: The impressive Tripi waterfall height 80 m, the route through steep slopes, gorges and the intense land relief under the peaks Kalogiros (2.327m) and Liakoura (2.457m)



## Mparoutospilia

Distance : 2,8 Km

Characteristics: Particular geomorphology of the area, cave with impressive dimensions and stony basins inside



## □ Sports

### Mountainous race "Parnassos Trail"

Races: 24,2 Km, 10,9 Km, 6 Km.

Organization A.C. Dionysos Amfiklia

### Mountain bike routes

Characteristics: Routes at forest roads and trails, such as: downhill, free ride, cross country



### Climbing

Climbing fields : Mariolata 20 routes with a range of difficulty 5a+ - 6c+,7c+

Lilea 30 routes with a range of difficulty 5a-7c/7b+



## Long distance routes

European long distance trail E4 : The starting line is Gibraltar and through France - Switzerland - Austria - Hungary - Romania - Bulgaria enters Greece and crosses it vertically until Gythio and continues to Crete

National trail 22 : Connects Mt. Parnassos with Mt. Parnitha tov



❑ Other actions in the protected areas.

❑ Interpretation of the environment

❑ Photography





## ❑ Environmental Education- Awareness

Environmental and public awareness to highlight the importance of species of flora - fauna and types of habitats as well as landscape and cultural heritage. Among the main actions to achieve its objectives are: visiting's at school units for environmental information and awareness, organizing seminars, workshops or participating in events of the local community, collaboration with Forest Service and Fire Service .





[www.parnassosnp.gr](http://www.parnassosnp.gr)

## The Parnassos Management Body took part in 3 conferences with POSTERS

**5th International Conference** on Environmental Management, Engineering, Planning & Economics, Myconos Island, Greece, May 14-18,2015,

“The management and promotion of Tithorea’s trail at the Parnassos National Park for the sustainable touristic development of the region

**13th International Conference** on Protection & Restoration on

the Environment, Myconos Island, Greece, June 3-8,2016, “Strategic sustainable development and ecotourism in natural ecosystems with archaeological heritage resources: The case of “Korikion Andron” Trail at the Parnassos National Park”

**7th International Conference** on Environmental Management,

Engineering, Planning & Economics, Myconos Island, Greece, May 19-24,2019 “Geo-and biodiversity in the Parnassos National Park: Ecotourism promotion and nature trails management and enhancement”

The first Poster

**The management and promotion of Tithorea's trail  
at the Parnassos National Park for the sustainable touristic  
development of the region**



The trails and especially the so-called “thematic trails” such as the “Nature Trails”, “Geological Trails”, etc, besides the outdoor recreation and physical activity that offer to a modern man, they are also significantly “tools”, used by the specialists for highlighting the characteristics of the natural environment, the geological-geomorphological characteristics, as well as the historical background and tradition of certain areas.

Typical example of this is the northeastern side of Parnassos National Park, which is traversed by the Tithorea’s trail, at the “Aesthetic forest of Tithorea, near the village of Tithorea. The purpose of the present research is to highlight the specific characteristics of Tithorea’s trail concerning biodiversity, landscape, geomorphology, history and culture, as well as to offer proposals about its management in the protected area of Parnassos National Park.

The management and promotion of Tithorea’s trail could become a model for alternative forms of tourism in mountainous areas and it will help to integrate the protected area in the wider ecological, economic and social environment for the sustainable development of the region.



The efficient management of a trail, the protection and enhancement of the landscape and the natural and built environment that surround it, need compliance to the relevant rules in to be maintained. These rules include proper signage, regular maintenance and, in some cases, monitoring and guarding as well as promotion. The appropriate signage and maintenance are prerequisites for the safe use of the trails.

Signs are probably the quickest and easiest way to leave the trail user with a positive impression. If the signs are high quality, well maintained, and properly located, other trail problems which are harder to solve are often over-looked (e.g., wet areas). Consistent signs are the quickest way to increase the trail's identity and the public's support for the trail.



The results of this monitoring & management program alongside the findings concerning the effects caused by the presence of visitors in the protected areas, can give its managers the possibility to systematically improve and apply a constantly rejuvenated "Rules & Regulations". As a consequence, this process contributes positively to the reduction of the environmental impact of the presence of visitors and use of the trail.

Meanwhile, the "revolving monitoring program" of visitors and its systematic updating will help to the accurate identification of the target group of visitors. This will enable the competent bodies in creating the appropriate conditions and infrastructure to meet the needs and requirements of visitors (eg. cyclists, etc.).

Additional actions can contribute positively to the enhancement of the landscape and generally to the rational management of a trail. These actions include the active promotion and attraction of publicity among others

A dense network of trails can be found at Mt Parnassos. Following their route, the traveler can enjoy many of the special features.

The management of Tithorea's trail, and the protection and promotion of the environment, namely of the vegetation, flora, fauna, landscape, geology, geomorphology, history and archeology, of this area, constitute the main subject of this paper.

Interventions are suggested for the efficient management of the trail and include:

- a. Appropriate infrastructure (construction of trail structures, boardwalks & wooden steps, litter bins, etc.),
- b. Signage (Trailhead information signs, kiosks or Information/Interpretive signs, Destination signs, Reassurance markers/blazes, You-Are-Here signs, etc.),
- c. Improvement of the trail (trail widening & clearing, tree & shrub trimming, etc.),
- d. Trail maintenance (user safety, access, protect adjacent resources, preserve trail investment, cleaning, etc.),
- e. Visitor monitoring & management and f. Promotion & marketing (publicity).

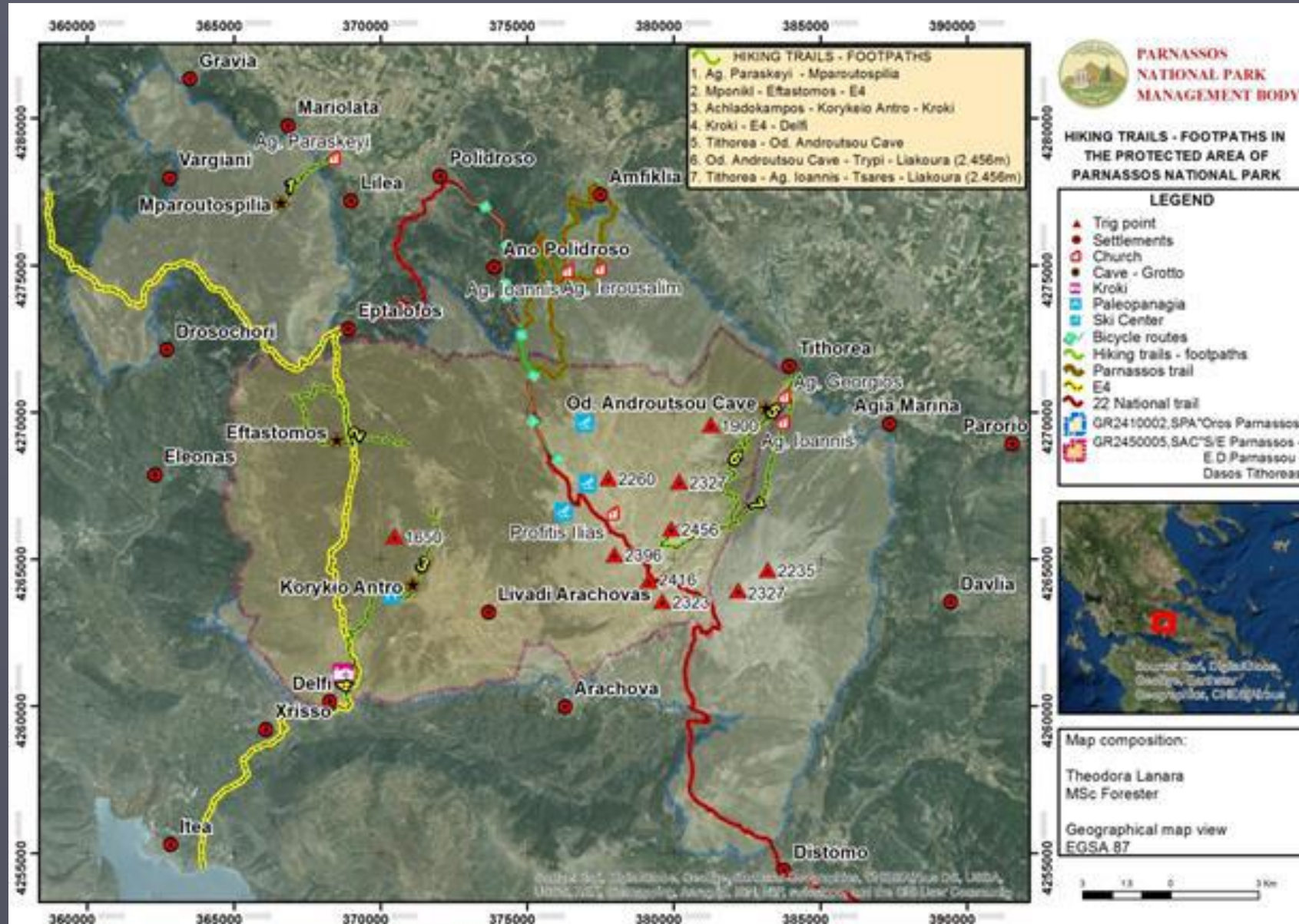




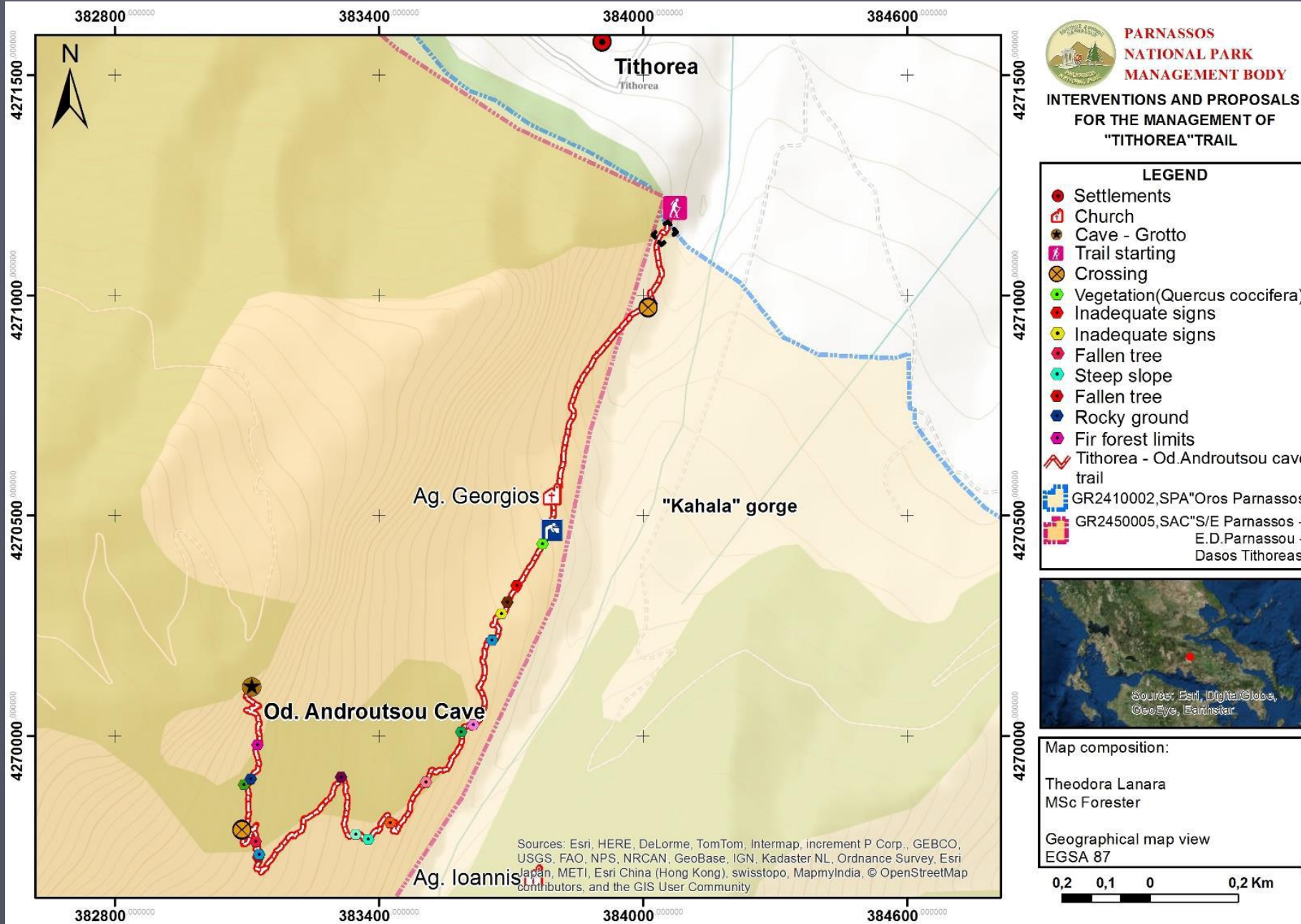
## Main characteristics of Tithorea's trail

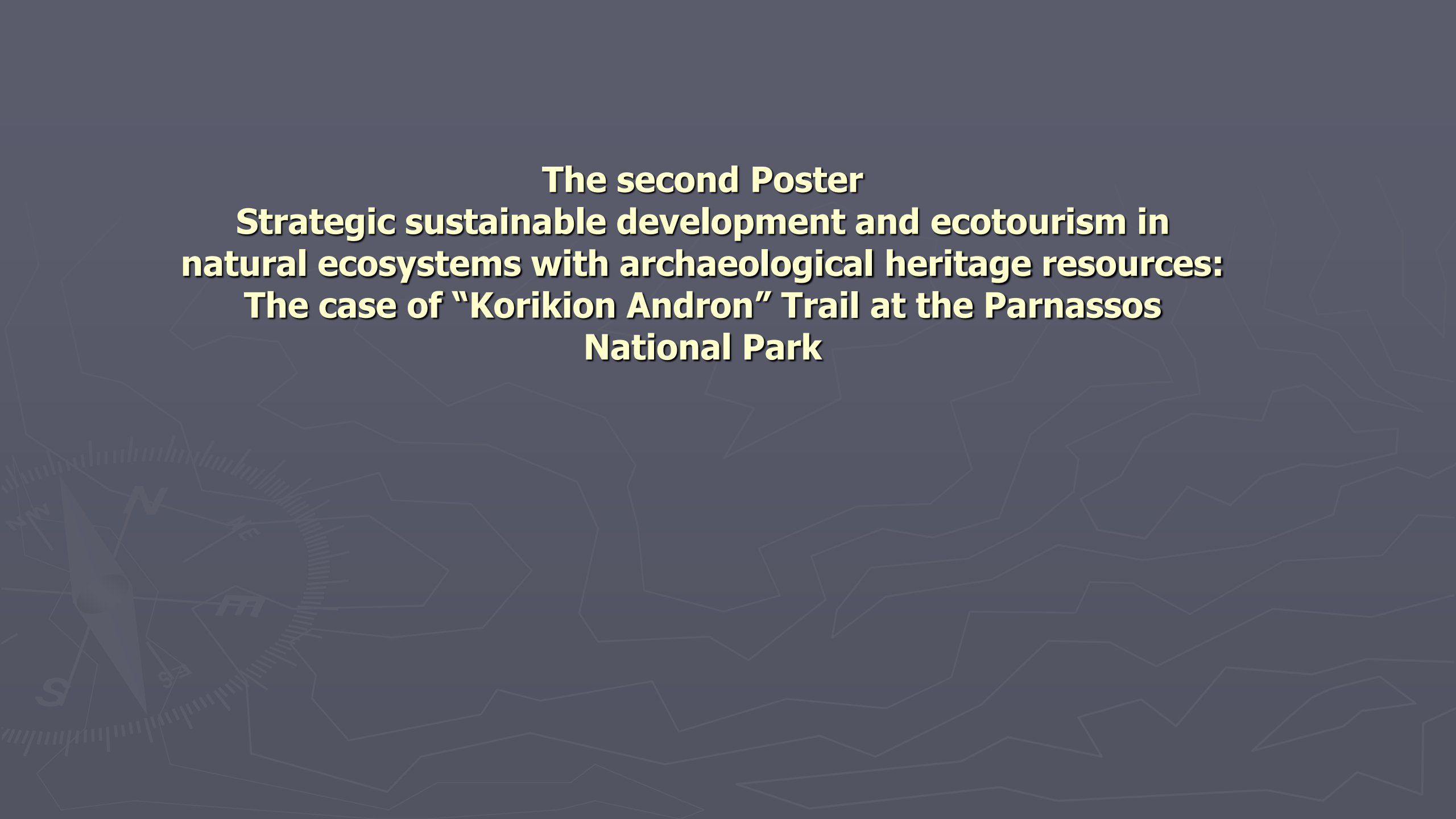
	<b>Route I (Short trail): From square of Tithorea to Od. Androutsos cave</b>	<b>Route II (Long trail): From square of Tithorea to Liakoura peak</b>
<b>Starting Point/ Trailhead location:</b>	Square of <u>Tithorea (Plakoto')</u>	Square of <u>Tithorea (Plakoto')</u>
<b>Trailhead elevation:</b>	450 m	450 m
<b>Finish - Od. Androutsos cave (elevation):</b>	1,040 m	-----
<b>Finish - Liakoura peak (elevation):</b>	-----	2,456 m ( <u>Liakoura</u> )
<b>Minimum elevation:</b>	450 m	450 m
<b>Maximum elevation:</b>	1,040 m	2,456 m
<b>Altitude difference:</b>	590 m	2,006 m
<b>Route distance/Length:</b>	3,200 m	10,900 m
<b>Estimated Duration:</b>	2:30 - 3 hours (including the return to the starting point)	5-6 hours (not including the return to the starting point)
<b>Type:</b>	Dirt trail (1,000 m), rocky trail (1,000m), semi-rocky trail (1,200 m)	Semi-rocky trail (4,600 m), rocky trail (6,300 m)
<b>Degree of difficulty:</b>	Easy to Moderate	Moderate to Difficult
<b>Trail markings:</b>	Good directional signs (red - white square mark)	Good directional signs (red - white square mark)
<b>Vegetation:</b>	Low bushes ( <u>Quercus coccifera</u> , <u>Quercus ilex</u> , <u>Phlomis fruticosa</u> ) to the greatest sections, dense fir forests ( <u>Abies cephalonica</u> ) in some parts.	Low bushes to the greatest sections, dense fir forests ( <u>Abies cephalonica</u> ) in some parts, shrub, <u>phryganic</u> and herbaceous species from the upper limits of the fir forests and reaches up to the peak of Mt. Parnassos ( <u>Liakoura</u> )
<b>Points of interest/ Trail features:</b>	The traditional settlement of <u>Tithorea</u> , <u>Kahala</u> gorge, waterfall, <u>outstanding</u> views, ruins of ancient fortification, the wild beauty of the steep karstic slopes, the beautiful chapel St. George surrounded by perennial oaks, Od. <u>Androutsos</u> karstic cave, flora & fauna of Mt Parnassos, the fir forest ( <u>Abies cephalonica</u> )	The traditional settlement of <u>Tithorea</u> , <u>Kahala</u> gorge, waterfall, <u>outstanding</u> views, the wild beauty of the steep karstic slopes, rocky cliffs, karstic caves, the beautiful chapel St. <u>Ioannis</u> , <u>wildflowers</u> , fir forest, <u>Liakoura</u> peak: the panoramic view towards the gulf of Corinth and Euboea island
<b>Recommended visitor season:</b>	April to November	May to September

# Map of the hiking trails in the protected area of Parnassos National Park



# Map of Tithorea's trail. Interventions and proposals for the trail management



The background of the slide is a dark blue-grey color. It features a faint, light-colored topographic map with contour lines. In the lower-left corner, there is a compass rose with a needle pointing towards the top-left, and the letters 'N', 'E', 'S', and 'W' indicating the cardinal directions. The text is centered in the upper half of the slide.

**The second Poster**  
**Strategic sustainable development and ecotourism in**  
**natural ecosystems with archaeological heritage resources:**  
**The case of “Korikion Andron” Trail at the Parnassos**  
**National Park**

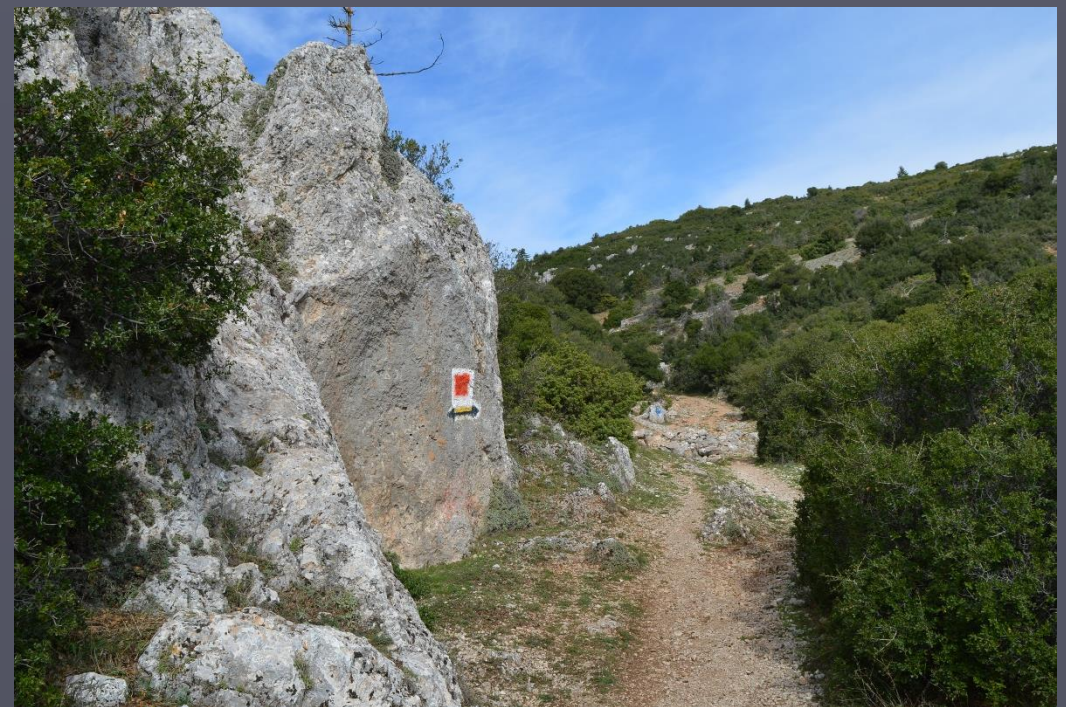
The mountain of Parnassos, crisscrossed by a dense network of hiking trails and mountaineering routes, is one of the ten Mountainous National Parks of Greece. Due to the modern lifestyle, trail walking and hiking offer unique opportunities for contact with nature, biodiversity, ecology and cultural heritage, ecotourism of each region.



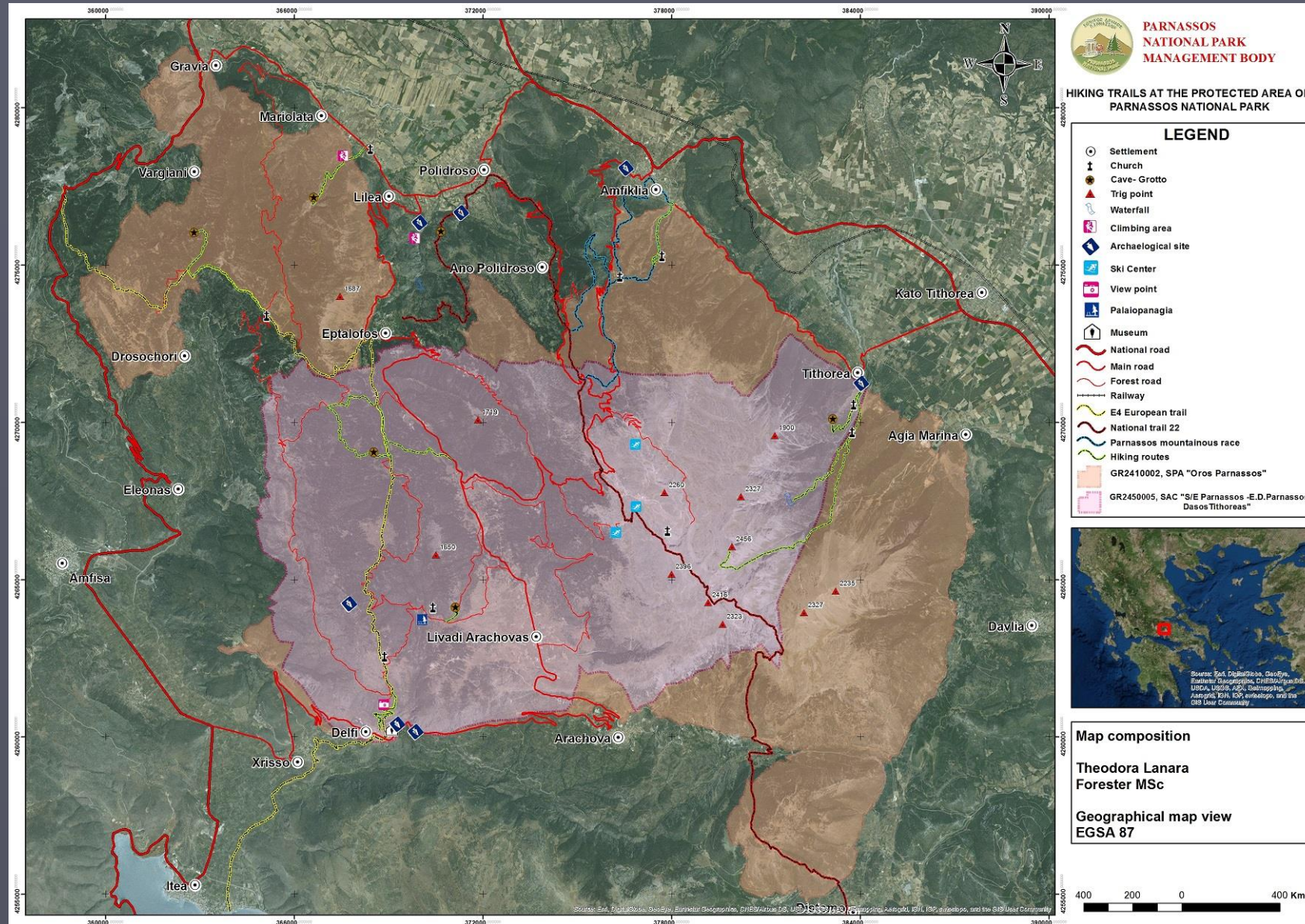
In the past, most trails were opened to facilitate communication of mountain areas with the lowlands and larger towns, and between the villages. Many trails, especially those in rural areas, were also opened to serve the movement of people and animals, the local logistical needs and generally the agricultural and pastoral life of the residents. In modern times most of these trails are being used in different ways or have been abandoned altogether.

Nowadays, many of these trails, in the area of Mt Parnassos, have been mapped, upgraded and maintained under the responsibility of the relevant Forest Services, Parnassos National Park Management Body, Hellenic Federation of Mountaineering & Climbing, Hellenic Alpine Club of Arahova, and various groups of volunteers, leading to different degrees of alternation in their routes. In this way, they can be used both for outdoor recreation and for the promotion of environmental, archaeological heritage resources, traditional and mythological features.

Certain trails have been marked with appropriate direction and description signs (trailhead information signs, information/interpretive signs, destination signs, reassurance markers/blazes, You-Are-Here signs, identification signs, etc.). An important factor to increase a trail's functionality and traffic is the proper (pre) design with specific technical specifications, to highlight its particular characteristics in tandem with the safe movement of visitors. This is also a factor to reduce maintenance costs and promote the rational management of a trail. Main tools to achieve this is the proper trail signage which makes visitors feel safe and comfortable, and the explanatory signs that promote public awareness.



# Map of hiking routes at the protected area of Parnassos National Park.



The main purposes of the present research are: a. the promotion of natural environment, biodiversity, landscape, geology, geomorphology, archaeology and mythology, b. the management and protection of the ecosystems and archaeological heritage resources and c. the strategic of sustainable development and ecotourism, in the wider area of the cave “Korikion Andron” at the Parnassos National Park. The appropriate signage and maintenance of the “Korikion Andron” trail, are prerequisites for the promotion and the safe use of the trail.

View to Parnassos mountain – route I



View to the gulf of Corinth – route I





## Geographical location of the study area

A dense network of trails can be found at Mt Parnassos. "Korikion Andron" trail, the subject of this present research, is located in the south-eastern side of Mt Parnassos in Central Greece, in the prefecture of Fokida. Mt Parnassos, with Liakoura (2,456 m), Kalogiros (2,397 m), and Gerontovrachos (2,396 m) being the highest peaks, is one of the most impressive and steep mountains of Roumeli (Central Greece). The main nearby villages are Eptalofos, Arachova, Delfi and Chrissa.

Palaiovouna Mt. (1,650 m) where "Korikion Andron" cave is located and the polje at Livadi Arachovas



The entrance of "Korikion Andron" cave.



The inside of "Korikion Andron" cave.



## Flora at the study area

The vegetation zones encountered at the study area are: a. *Quercetalia pubescentis* (or deciduous broadleaf zone), consisting mostly of *Quercus* genus forests. b. *Quercetalia ilicis*, consisting mostly of phrygana and maquis vegetation. The main plant species that occur in the study area are: kermes oak (*Quercus coccifera*), fir (*Abies cephalonica*), stinking juniper (*Juniperus foetidissima*), prickly cedar (*Juniperus oxycedrus*), jerusalim sage (*Phlomis fruticosa*), pink rock-rose (*Cistus creticus*), common hawthorn (*Crataegus monogyna*). At Palaiovouna area and the steep slopes of southern Parnassos Mt. above Delphi, a large number of rare and endangered plant species are found and are included in Annex II of Directive 92/43/EEC. Two endemic species of Parnassus are located in the area (*Centaurea musarum*, *Silene guicciardii*).

*Juniperus foetidissima*



*Centaurea musarum*



## History and Archaeology

The trail leads to the famous Korikion Andron Cave, which, according to Pausanias reports (Fokika) is "the most worth visiting of all the caves I saw". The Korikion Andro, sacred to the Corycian Nymphs and the Muses, and a place of worship for Pan, may be the first religious center and the first oracle of the wider area of Delphi. Excavations inside the cave report findings dating from the Neolithic (4th millennium BC) to the Roman period (2nd century BC).



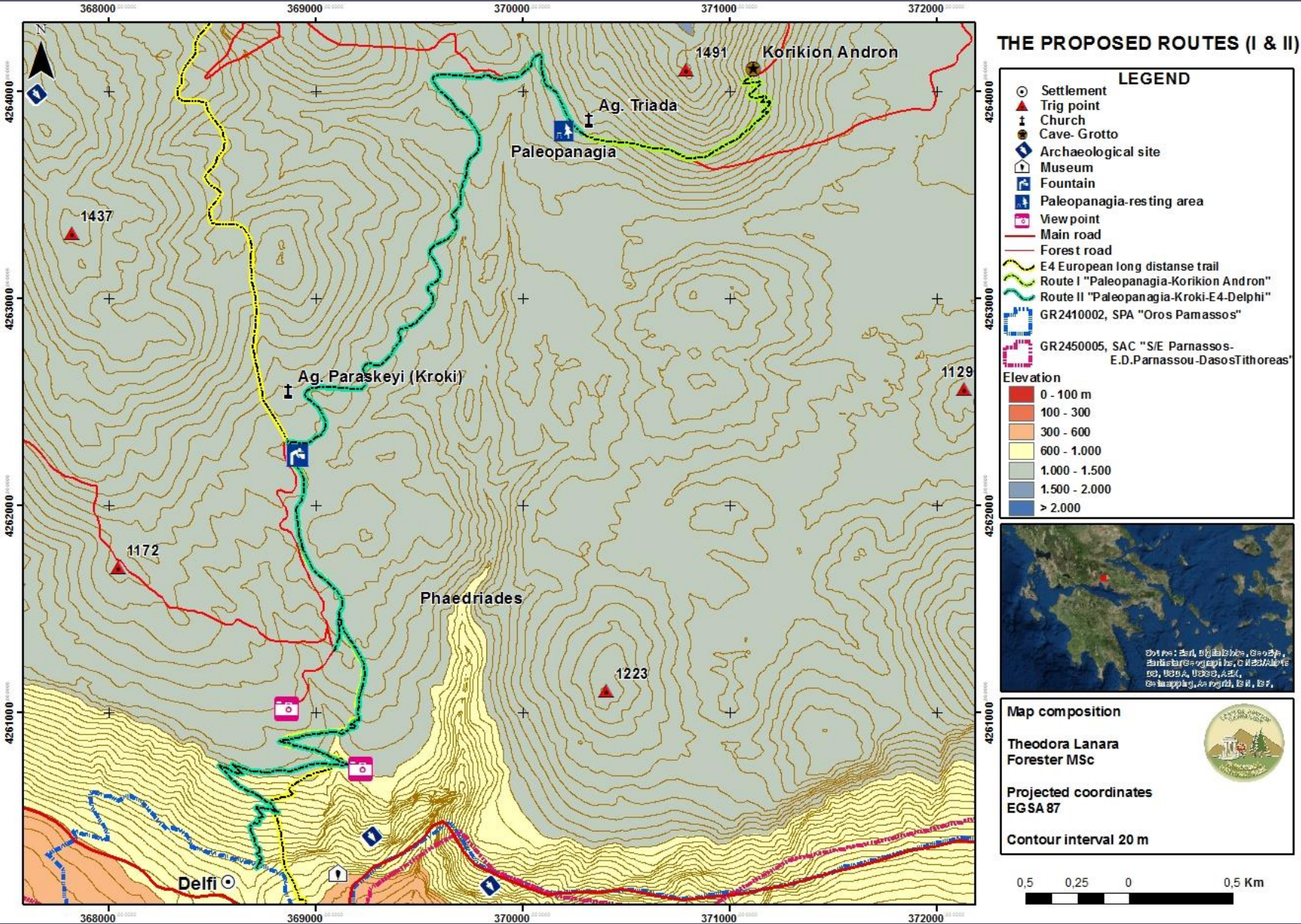
### “Korikion Andron” trail management – promotion and sustainable development

The preservation plan and some moderate customizations that have been suggested, aim to the conservation and protection of the paths' ecosystem, along with the cultural and archaeological heritage of the area. The plan is based on the fact that a well-structured path network will have minimal implications on the natural landscape, as well as on the path construction. Also, the technical specifications stated in the study aim to resource saving and in minimizing the future maintenance and management of the path.

# Main characteristics of “Korikion Andron” trail (Route I & II)

	Route I (short trail): From PalaioPanagia, Livadi Arachovas, to “Korikion Andron”	Route II (long trail): From “Korikion Andron” to Delphi
Starting Point/Trailhead location:	Paleopanagia (Livadi Arachovas)	“Korikion Andron” cave
Trailhead elevation:	1,120 m	1,360 m
Finish- Korikion Adron cave (elevation):	1,360 m	-----
Finish- Delphi settlement (elevation):	-----	570 m
Minimum elevation:	1,120 m	570 m
Maximum elevation:	1,360 m	1,360 m
Altitude difference:	240 m	590 m
Route distance/Length:	1,000 m	10,000 m
Estimated Duration:	1:30 hour (including the return to the starting point)	3-3:30 hours (not including the return to the starting point)
Type:	Rocky trail (800 m), semi-rocky trail (200 m)	Semi - rocky trail (5,700 m), rocky trail (4,300 m)
Degree of difficulty:	Easy to Moderate	Medium to Moderate
Trail markings:	Good directional signs (red-white triangular frame)	Good directional signs (red - white square mark) and from Kroki to Delphi signs E4 trail (yellow - black - white square frame)
Vegetation:	Low bushes ( <i>Quercus coccifera</i> , <i>Juniperus oxycedrus</i> , <i>Crataegus mongyna</i> ) to the greatest sections, <i>Abies cephalonica</i> , <i>Juniperus foetidissima</i> in some parts	Low bushes to the greatest sections, dense fir forests ( <i>Abies cephalonica</i> ) in some parts, the clump of stinking juniper ( <i>Juniperus foetidissima</i> ) near “Kroki”
Points of interest/ Trail features:	Livadi Arachovas’ polje, outstanding view, the beautiful chapel St. Triada surrounded by perennial kerme oaks, “Korikion Andron” cave, the entrance of cave: the panoramic view towards the gulf of Corinth, Kirfi Mt. and Gerodovrachos (2396 m), flora and fauna of Mt Parnassos.	The traditional settlement of Delphi and the archeological site, outstanding views, the wild beauty of the steep slopes, rocky cliffs “Phaedriades”, wildflowers, “the landscape of Delphi”: the panoramic view towards the gulf of Corinth, the settlements Itea – Crissa , Amfissa’ Olive grove.
Recommended visitor season:	February to November	February to November

# Map of the proposed routes (Route I & II) points of interest and points of view



# Inventory and Assessment of "Korikion Andron" trail (Route I).

			Assessment of Trail Problems & Proposals about the Korikion Andron trail Management (Works Needed - Operations - Maintenance - Management)							
Geographical coordinates of the point / position	Place name	Point distance from the starting point of the trail (in meters)	-Trailhead information signs, kiosks or Information/Interpretive signs	-Destination signs, Reassurance markers/blazes	-You-Are-Here signs, Identification signs	-Route Improvement (Construction of Trail structures, boardwalks & wooden steps)	-Route Improvement (Trail widening & clearing, new improved route, tree & shrub trimming)	-Trail maintenance (User safety, access, protect adjacent resources, preserve trail investment, garbage, litter bins)	-Promotion & marketing (publicity), visitor monitoring & management	Remarks
370808,536 X 4263675,267 Y	<b>Near Paleopanagia, starting point</b>	<b>0</b>	●	●	●		●	●	●	<b>1,2,3,4,5,6</b>
371156,317 X 4263881,782 Y	-----	<b>420</b>		●				●		<b>3,4,6</b>
371175,550 X 4263925,842 Y	-----	<b>520</b>		●		●	●	●		<b>3,4</b>
371129,433 X 4263967,514 Y	-----	<b>690</b>		●		●	●	●		<b>3,4</b>
371093,185 X 4263974,209 Y	-----	<b>725</b>		●		●	●	●		<b>3,4</b>
383998,745 X 4270964,227 Y	-----	<b>755</b>		●		●	●	●		<b>3,4</b>
371144,229 X 4264040,496 Y	<b>Panoramic view</b>	<b>820</b>	●	●	●	●		●		<b>3,4,5</b>
371062,698 X 4264037,338 Y	-----	<b>920</b>		●		●	●	●		<b>3,4,7</b>
371071,588 X 4264048,239 Y	-----	<b>940</b>		●		●	●	●		<b>3,4,6,7</b>
371087,781 X 4264070,252 Y	-----	<b>970</b>		●	●	●		●		<b>7</b>
371114,081 X 4264106,871 Y	<b>"Korikion Andron" Cave</b>	<b>1020</b>	●	●	●	●	●	●	●	<b>2,3,4,5,6</b>
	<b>Total length</b>	<b>1020</b>								<b>End of the trail (not including the return)</b>

The thematic trails have turned into one of the basic forms of forest recreation serving ecological, educational, nature protection causes, while at the same time, someone can gain important information on the rich history of the area.



The archaeological site of Delphi - route II



Stinking juniper (*Juniperus foetidissima*) at "Kroki" area – route II



The Landscape of Delphi – route II

A complete management system aims to the utilization of an areas' specific characteristics: the views, natural and important historical sites, along with the development of forms of alternative recreation (ecotourism, geotourism, cultural-educational tourism). All the above will aid to the sustainable development of the area. Parnassos Mt is a living laboratory of nature and ecology with its important and sensitive ecosystems. The mountains' broader area could be a model of alternative forms of mountainous areas. The natural and cultural heritage of the region, is able to act as a development keystone and the local community can become the guarantor of its protection.



## Conclusion

Parnassos network of trails includes numerous hiking and mountaineering routes, including thematic trails (nature trails, geological trails, trails, cultural heritage trails). The “Korikion Andron” trail is a combination of thematic trails, since it promotes the unique natural variability of the area, along with its geology, history and culture. The management and protection of the ecosystem and the archaeological heritage, the sustainable development and ecotourism in the area Parnassos Mt., is the main theme of the project. Any interference to the ancient trail that have been made in the past, is minimal and have been conducted by the Forest services. The future work that is proposed on project, based on sustainable development and promotion of the cultural/historical heritage is: a) Work aiming in the conservation and promotion of the paths’ unique characteristics, b) Trail-blazing, c) Improvement of the trail and d) Promotion of the unique identity of the place and its history (ecological awareness, cultural heritage, ecotourism, suggested future trails).



The twin rocks of the Phaedriades

## The third Poster

# Geo-and biodiversity in the Parnassos National Park: Ecotourism promotion and nature trails management and enhancement

### INTRODUCTION:

Worldwide, protected areas are considered to be institutions of great socio-educational impact that could be linked to the process of education for sustainable tourism development. Protected areas contain some of the planet's most important ecosystems and many also 'serve as important cultural places where people contemplate and understand the natural world through visitation and tourism'. The term 'protected area' is used to describe a variety of unique and very diverse habitats and natural areas. (

The IUCN defines a protected area as a "clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long term conservation of nature with associated ecosystem services and cultural values".

National parks fall with wilderness areas, nature reserves, sanctuaries, national monuments, World Heritage sites, and protected landscapes and seascapes and variants on these forms, along the IUCN continuum according to the level of human activity permitted.

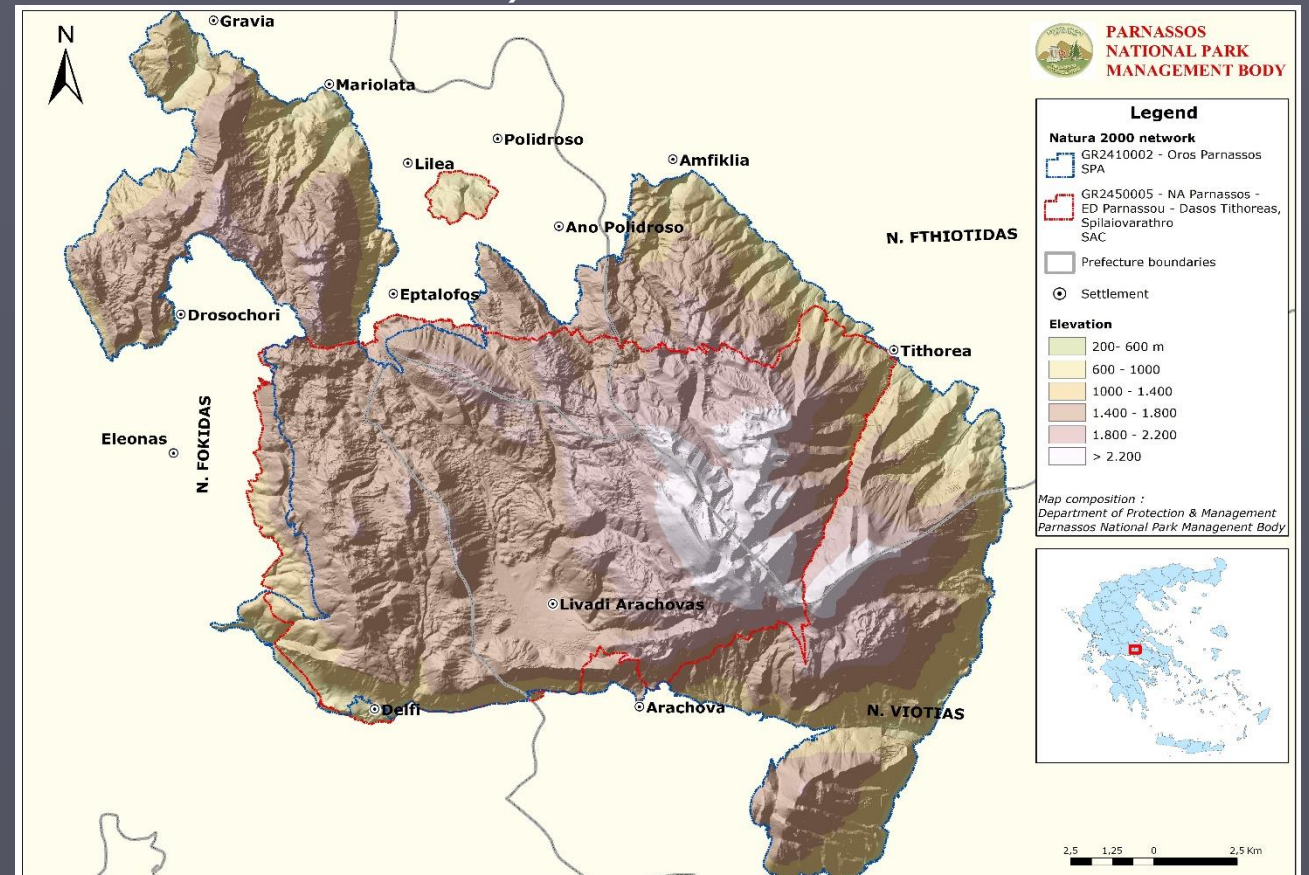
- ▶ National parks are “large natural or near natural areas set aside to protect largescale ecological processes, along with the complement of species and ecosystems characteristic of the area, which also provide a foundation for environmentally and culturally compatible spiritual, scientific, educational, recreational and visitor opportunities”.
- ▶ The development of ecotourism in a protected area is a "multifactorial" system. Proper assessment requires a multidisciplinary approach and detailed study, in order to carry out its objectives efficiently. Ecotourism should have minimal impact on both the environment and the local culture.
- ▶ The main purposes of the present research are to describe the strategy for developing the sustainable tourism, ecotourism, the various types of trails (hiking trails, biking trails, etc.) and to highlight the biodiversity, landscape, geodiversity sites and ancient history and mythology, of the Parnassos National Park, in order to propose improvements over the management and its sustainable ecotourism promotion.

The “Natura 2000” is a network of core breeding and resting sites for rare and threatened species, and some rare natural habitat types which are protected in their own right. It stretches across all 28 EU countries, both on land and at sea. Stretching over 18 % of the EU’s land area and almost 6 % of its marine territory, it is the largest coordinated network of protected areas in the world.

The aim of the network is to ensure the long-term survival of Europe's most valuable and threatened species and habitats, listed under both the Bird Directive (Directive 2009/147/EC, Special Protection Areas SPAs) and the Habitats Directive (Council Directive 92/43/EEC, Special Areas of Conservation SACs).

At Parnassos National Park has been instituted the according protected areas:

- a. The Special Protection Area (SPA)  
“Oros Parnassos”- GR2410002 as an important area for the reproduction and residence of birds under protection status
- b. The Special Area of Conservation (SAC)  
“Notioanatolikos Parnassos - Ethnikos Drymos Parnassou – Dasos Tithoreas, Spilaiovarathro” - GR2450005 to ensure the preservation and restoration of habitats and species of flora and fauna.

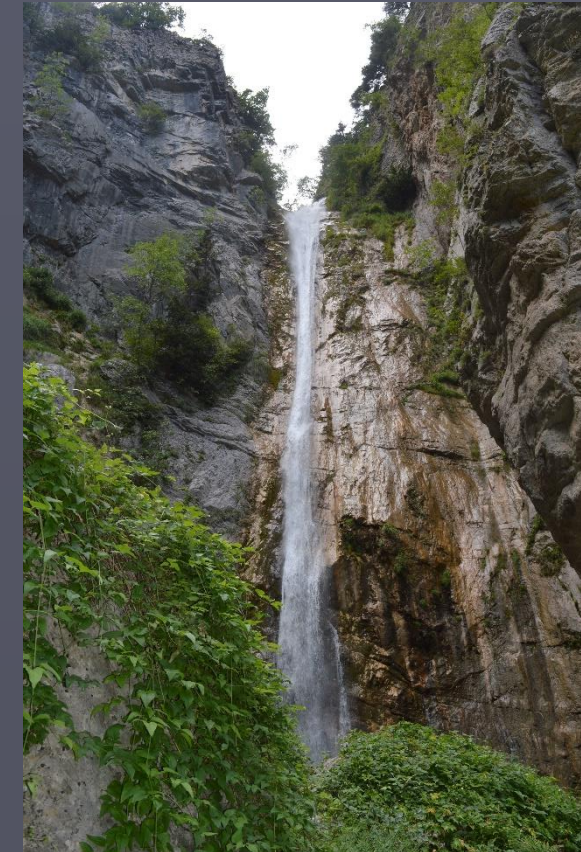


## Geological setting – Geomorphology

Parnassos Mt. is the eighth highest mountain in the mountainous country of Greece (80% of its landmass consists of mountains) and it is located in Central Greece. Its highest peak (Liakoura) reaches 2457 m.



The mountain is dominated by limestone with some flysch rock parts and it is characterized by steep slopes, gorges and intense morphological contrasts, with lack of surface flow, sinkholes, caves, dolines and poljes and an underground drainage system forming many springs at the foot of the mountain, due to karst phenomena.



## Mythology – History

The study area has a rich historical and cultural heritage, with significant monuments and archaeological sites that can contribute to the cultural tourism development of the region.

According to archeological excavations, the area has been inhabited since the prehistoric times and because of its geographical position, it held an important role throughout all the historical periods since then. Home of important ancient Greece kingdoms, crucial during important wars from antiquity to the modern era, it now has many archaeological sites, castles, fortresses, churches, monasteries, museums, natural beauties and many activities to do in the nature.



The worldwide famous archaeological site of Delphi, which is an **UNESCO World Heritage Site**, is the second most visited destination in Greece.

The archaeological and folklore museums, religious monuments, historical bridges together with local cultural events and folklore festivals based on local traditions and products form an attractive tourism destination



## Habitats - Flora - Fauna

The quality and importance of the Parnassos National Park is based on the ecological and aesthetic value of its natural elements, especially on its biodiversity, and in the cultural value of its archaeological and historical elements.

From ecological point of view, a variety of vegetation types which are excellent structure, are maintained and among them there exist special priority habitat types such as: 6220 \*Pseudo-steppe with grasses and annuals of the *Thero-Brachypodietea*, 6230 \*Species-rich *Nardus* grasslands, on siliceous substrates in mountain areas, 9530 \*(Sub-)Mediterranean pine forests with endemic black pines, 9560 \* Endemic forests with *Juniperus* spp., and other important habitat types



Except from habitat types, at the study area are included many endemic and stenoenemic species of plants *Centaurea musarum*, *Silene guicciardii*, *Euphorbia orrahnidis*, *Paeonia parnassica*. Some of endangered plant species are included in Annex II of Directive 92/43/EEC (*Paeonia parnassica*, *Bupleurum capillare*).



The Parnassos Mt. is also important for the significant number and variety of protected avifauna species, particularly birds of prey. In Annex I of the Directive 2009/147/EC fifty five (55) birds of the region are listed.

As for other fauna species, thirteen (13) mammals six (6) amphibians, fourteen (14) reptiles and ten (10) invertebrates, are listed in Annex II of the Directive 92/43/EEC. More common species are also present at the area.



## Hiking network

The mountain of Parnassos, crisscrossed by a dense network of hiking trails and mountaineering routes is one of the ten Mountainous National Parks of Greece.

Due to the modern lifestyle, trail walking and hiking offers unique opportunities for contact with nature, biodiversity, ecology and cultural heritage, ecotourism of each region. The so-called "thematic trails" such as "nature trails", "geological trails", "cultural heritage trails" are significantly "tools" used by specialists for highlighting the characteristics of the protected area, the geo-ecological characteristics as well as the historical and artistic value

The minimum conditions required for the proper development and implementation of ecotourism activities in protected areas, is the proper design of the paths, the systematic maintenance and monitoring, the calculation of the ecosystem's carrying capacity, the raising of awareness among the visitors to environmental protection, the application of conservation measures and procedures and the highlighting of particular characteristics of the natural environment, landscape and cultural heritage. Without the necessary planning, problems will inevitably emerge and the local environment will be depredated, as a direct effect of conventional or mass tourism





**PARNASSOS  
NATIONAL PARK  
MANAGEMENT BODY**

**Thematic trails of  
Parnassos National Park**

**Legend**

**Natura 2000 network**

GR2410002 - "Oros Parnassos" SPA

GR2450005 - "NA Parnassos - ED Parnassou - Dasos Tithoreas, Spilaiovarathro" SAC - pSCI

Main road

Minor road

European long distance trail E4

National trail 22

Thematic trails

Settlement

Parnassos Ski Center

Cave

Church

Archaeological site

**Elevation**

200- 600 m

600 - 1000

1000 - 1.400

1.400 - 1.800

1.800 - 2.200

> 2.200

Map composition :

Department of Protection & Management

Parnassos National Park Management Body

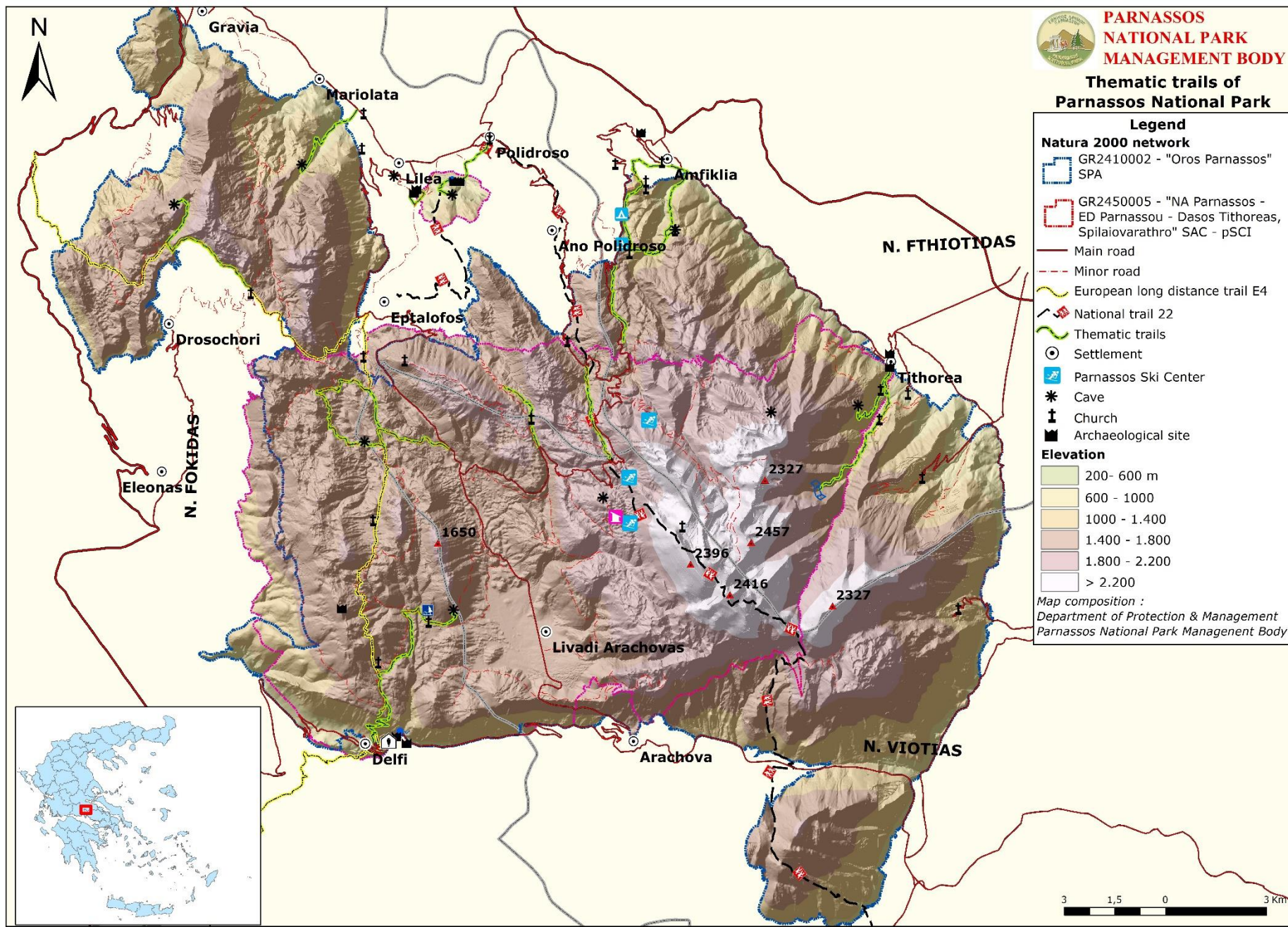
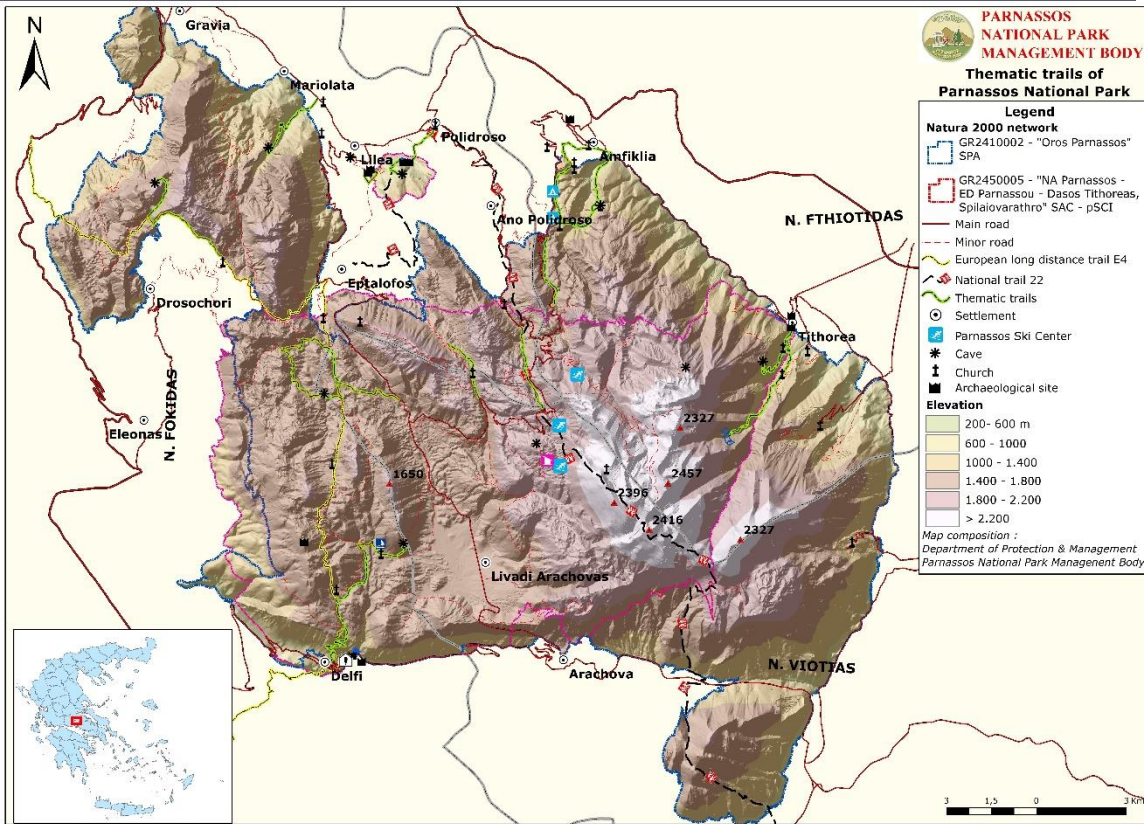


Table Selected “thematic trails” at Parnassos National Park



	Points of interest/ Trail features:	Trail signs:	Recommended visitor season:	Degree of difficulty:
<b>Delphi – E4 – Kroki</b>	The traditional settlement of Delphi and the archeological site, “the landscape of Delphi” outstanding views, the wild beauty of the steep slopes, rocky cliffs “Phaedriades”, wildflowers the panoramic view towards the gulf of Corinth, the settlements Itea – Crissa , “Amfissa” Olive grove	Good directional signs (red - white square mark) and from Kroki to Delphi signs E4 trail (yellow - black - white square frame)	February to November	Medium to Moderate
<b>Paleonanagia Livadi Arachovas – “Korikion Andron”</b>	Livadi Arachovas’ polje, outstanding view, the beautiful chapel St. Triada surrounded by perennial kerme oaks, “Korikion Andron” Cave, the entrance of cave: the panoramic view towards the gulf of Corinth, Kirfi Mt. and Gerodovrachos (2396 m), flora and fauna of Mt. Parnassos	Good directional signs (red - white triangular frame)	February to November	Easy to Moderate
<b>Tithorea- Od.Androutsou cave</b>	The traditional settlement of Tithorea, Kahala gorge, waterfall, outstanding views, ruins of ancient fortification, the wild beauty of the steep karstic slopes, the beautiful chapel St. George surrounded by perennial oaks, Od. Androutsos karstic cave, flora & fauna of Mt Parnassos, the fir forest ( <i>Abies cephalonica</i> )	Good directional signs (red - white square mark)	April to November	Medium to Moderate
<b>Tithorea- “Tripi” waterfall</b>	The traditional settlement of Tithorea, Kahala gorge, outstanding views, ruins of ancient fortification, the wild beauty of the steep karstic slopes, geomorphology, waterfall “Tripi” 80 m height	Not good directional signs	May to September	Difficult to Moderate
<b>“Varko” – Ag.Nicholaos – “Petra” Eptalofou</b>	The Parnassos National Park, priority habitat types, the fir forest ( <i>Abies cephalonica</i> ), flora & fauna, wetland ecosystems	Good directional signs (red square frame)	April to November	Easy to Moderate
<b>Mparoutospilia cave</b>	The geology of the region, limestone formations, the gorgeous entrance of Mparoutospilia cave	Good directional signs	April to November	Easy to Moderate

## Conclusions:

A dense network of paths is can be found at Parnassos Mt. and in the limits of Parnassos National Park. The trails of the Parnassos Mt., are of great ecological (geo-and biodiversity), archaeological, scientific and research interest.

Parnassos network of trails includes numerous hiking trails, walking trails, recreational trails, trekking trails, and mountaineering routes, including thematic trails (nature trails, geological trails, ecological trails, cultural heritage trails).

Following their route, the traveler can enjoy many of the special features, geo-and biodiversity, archaeological sites and offer hikers opportunities for exercise, recreation and environmental education. These include, among others: 1. the extensive fir forests, 2. rare and impressive species of plants and rich fauna, 3. the fragile environment of mountain meadows and small temporary ponds of high altitude, 4. the karst landscape, dolines and poljes, karst springs, 5. the impressive gorges, steep slopes and intense morphological contrasts 6. Sinkholes and caves 7. Archaeological and cultural sites

The ecotourism promotion, the development and the efficient management of the trails at Mt. Parnassos, the protection and enhancement of the landscape, the natural and built environment and geo-biodiversity that surround them, need compliance to the relevant rules in to be maintained.

These rules include proper signage, regular maintenance and, in some cases, monitoring and guarding as well as promotion. The appropriate signage and maintenance are prerequisites for the safe use of the trails.

Consequently, the trails have to be managed systematically, namely to be maintained in a satisfactory level of cleanliness and safety conditions. This applies to the maintenance of constructions too.

The proper design and construction of new trails or “improved” routes in the pre-existing trails can reduce the cost of maintenance and management while increasing the promotion of the surrounding area and the quality of information provided to the visitor.

Combining the above can create favorable conditions for the attainment of the purposes the trail is created for.





**Every Monumental Site is strongly connected to the environment it was “born” and cannot be disconnected.**  
This was well known during ancient times; We can perceive this every time we visit an Archaeological site, ascertaining how wisely the architects of those times chose the locations to build.

In Greece, the constant residential use from the antiquity to nowadays has created an extensive archaeological palimpsest and a great but complex cultural and natural environment.





The term ***Cultural Landscape*** was first mentioned by the geographer C. O. Sauer during a lecture on 1925.

“culture is the agent,  
the natural area is the medium,  
the cultural landscape the result”

*The Cultural Landscapes have been acknowledged as the connection between nature and culture.*



**According to UNESCO, Cultural Landscapes fall into three main categories (Operational Guidelines 2008, Annex3):**

**Landscapes designed and created intentionally by man.** This embraces garden and parkland landscapes constructed for aesthetic reasons which are often (but not always) associated with religious or other monumental buildings and ensembles.

**Landscapes organically evolved landscape.** These result from an initial social, economic, administrative, and/or religious imperative and have developed their present form by association with and in response to its natural environment. Such landscapes reflect that process of evolution in their form and component features. They fall into two sub-categories:

- a **relict (or fossil) landscape** is one in which an evolutionary process came to an end at some time in the past, either abruptly or over a period. Its significant distinguishing features are, however, still visible in material form.
- **continuing landscape** is one which retains an active social role in contemporary society closely associated with the traditional way of life, and in which the evolutionary process is still in progress. At the same time it exhibits significant material evidence of its evolution over time.

**Landscapes associative cultural landscape.** The inclusion of such landscapes on the World Heritage List is justifiable by virtue of the powerful religious, artistic or cultural associations of the natural element rather than material cultural evidence, which may be insignificant or even absent.

The geographical pattern of a landscape is formed by **three types of elements**:

- **Patches**, such as a lake, a cluster of trees etc. They are defined as non- linear surface areas that are characterized by different vegetation and landscape in comparison with their surroundings. They are units of land or habitats heterogeneous when compared to the total area.
- **Corridors**, such as rivers, roads etc. They are linear patches used by water, fauna or human and are distinguished into linear (fences, slopes), stripes (fireproof zones), networks (roads, paths, ecological networks) and water corridors.
- **Matrix**, is the "background ecological system" of a landscape with a high degree of connectivity and plays an important role on the function of the landscape. Matrix is the surface where patches and corridors are placed and has a strong influence on every process that takes place.



In Cultural Landscapes:

- **formation of the patches**
- **quality**
- **function**

are the results of the interaction between natural forces and civilizations during centuries.

For the conservation of Cultural Landscapes **Human management** is necessary, as this type of landscapes are fragile and have a tendency towards returning to their natural form when human intervention disappears or declines.

By studying on **the history of ecosystems** (natural landscape) and by watching the **state of being of humans** who live in or around them, we can understand how they resulted in the current state and how their development and alterations can be a subject of sustainable management.



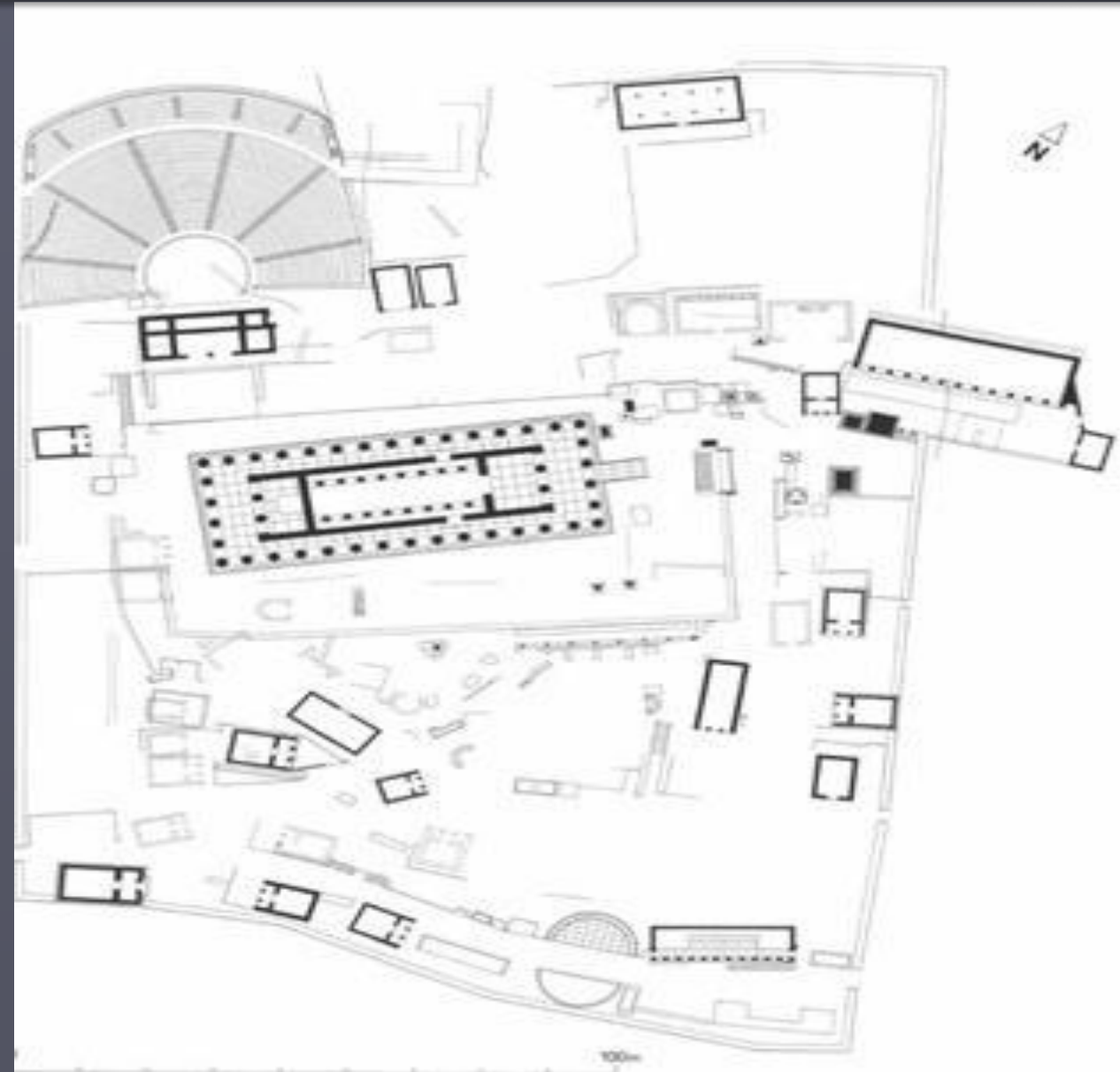
Cultural Landscapes “**essentially concern the coexistence of the three dimensions of time in space past- present- future**”, which form the term of historicity with the most profound way:

- *They are vivid evidence that origin from historical times of the past*
- *Interpret the present through social and cultural filters*
- *Specify their future*

According to ICOMOS (International Council on Monuments and Sites), the archaeological site of Delphi was listed on 1986 as a World Heritage Site of UNESCO and recognized as:

### **Site of Outstanding Universal Value**

*“Of cultural and/or natural significance which is so exceptional as to transcend national boundaries and to be of common importance for present and future generations of all humanity”.*



Delphi is characterized as a unique monument and a priceless legacy bequeathed by the ancient Greek world to following generations, according to the following criteria:

(i): The layout of Delphi is a unique artistic achievement. Mt. Parnassus is a veritable masterpiece and is where a series of monuments were built whose modular elements – terraces, temples, treasuries, etc. – combine a strong expression of the physical and moral values of a site which may be described *as magical*.



ii): Delphi had an **immense impact throughout the ancient world** dynasts, city-states and historical figures, who deemed that sending a valuable gift to the sanctuary, would ensure the favour of the god. The Sanctuary at Delphi, the object of great generosity and the crossroads of a wide variety of influences, was in turn imitated throughout the ancient world. Its influence extended as far as Bactria, following the conquest of Asia by Alexander the Great. Even pillaging of the Sanctuary by the emperor Nero and by Constantine the Great, who transported spoils from it to Rome and Constantinople, added to the artistic influence of Delphi.

(iii): Delphi bears a unique **testimony to the religion and civilization** of ancient Greece. At the legendary site where Apollo slew the serpent Python, celestial cults replaced chthonian cults and introduced the old heritage of myths originating from primitive times. The Delphic oracle, over which four sacred wars were fought, is one of the focal points of Greek political history, while the Theatre and the Stadium, where the Pythian Games took place every four years, were places of community celebrations reflecting triumphant Hellenism.





(iv): Delphi, situated in a *magnificent natural setting* which is still intact, is an outstanding architectural ensemble and an example of a great Pan-Hellenic sanctuary.

Criterion

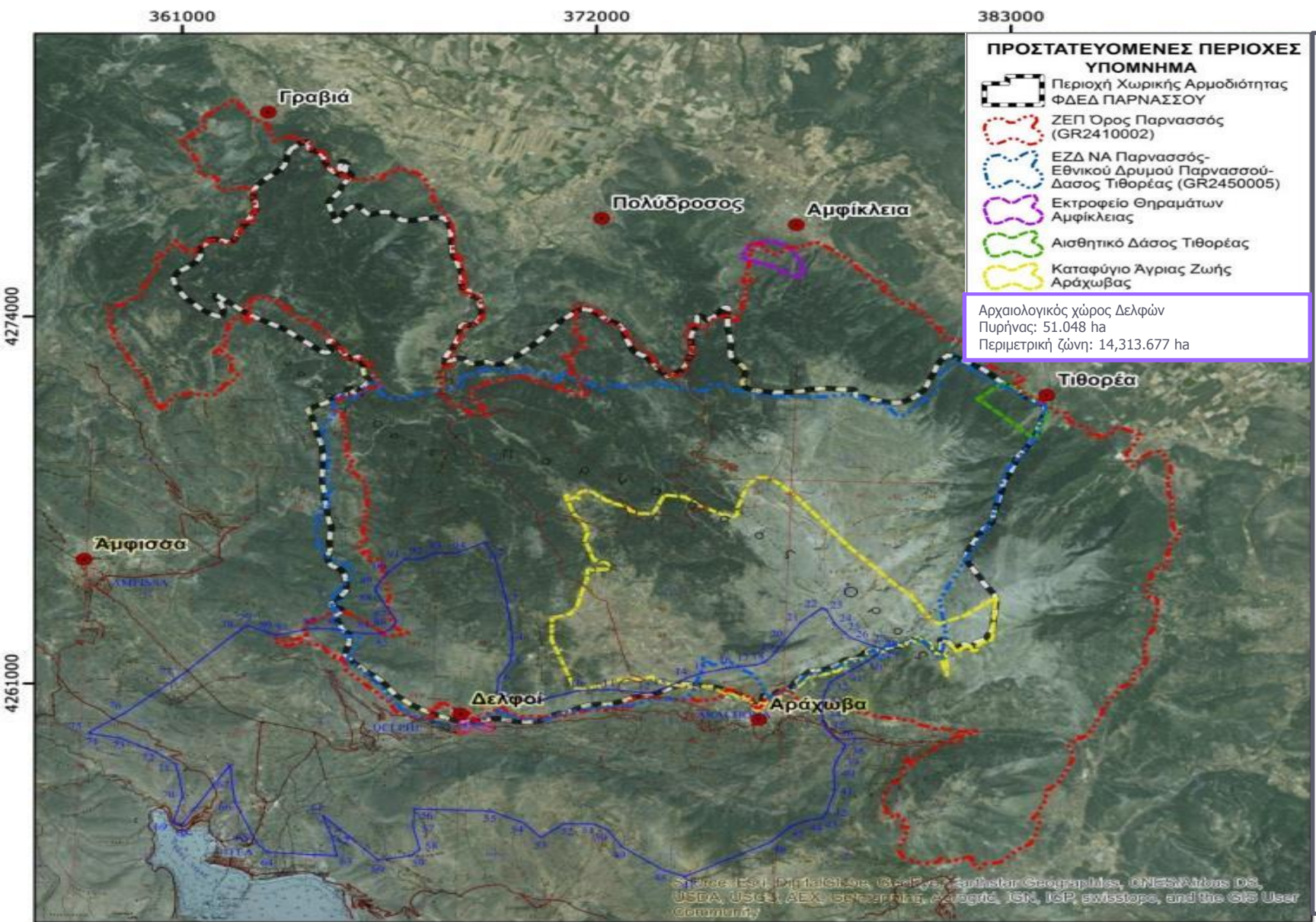
(vi): According to the ancients, the Temple of Apollo was where the Omphalos was located, that is, the navel of the universe, the centre of the earth. Delphi is consequently directly and tangibly associated with a belief of *manifest universal significance*.



*Even if many Cultural Landscapes are protected according to law due to their identity,*

**Not every protected area is a Cultural Landscape.**





Parnassos National Park's Management Body borders are between:

Three regions

- Viotia
- Fokida
- Phthiotis

Four Municipalities

- Municipality of Livadia
- Municipality of Amfiklia
- Municipality of Delphi
- Municipality Distomo - Arachova - Antikyra.

Eigtheen settlements

Parnassos consists a complex ecosystem, where various landscapes and biotopes are located having as a result a character of rich and rare biodiversity.



Of the 854 taxa recorded (691 species and 153 subspecies including 10 varieties), 5 are local endemites:

- *Centaurea musarum*
- *Hieracium gaudryi*
- *Eryssimum parnassi*
- *Euphorbia orphanidis*
- *Bupleurum capillare*
- *Campanula ripicula*

Parnassos Mt. hosts plant species found in other Mediterranean regions (Mediterranean /sub Mediterranean species, while others are recorded to be of various categories of endangerment.

(according to UNEP-WCMC , Presidential Decree 67/1981, UNEP, R.D.B. and Bern Convention).



Due to human interventions without control since the antiquity, among Parnassos large expanses of flora could be characterized as degraded, sparse and usually with the parent material and the rocky terrain being the dominant elements of the landscape.



The **Landscapes of Parnassos** are characterized by diversity and multiple diversions among the seasons, due to the geological formations, the weather alterations and the multiple plant species that can be seen every season.



As a result, the quality and the significance of the area lies to the ecological and aesthetical values of it's natural elements, mostly to it's biodiversity, to the cultural value of the archaeological sites and it's historical monuments.

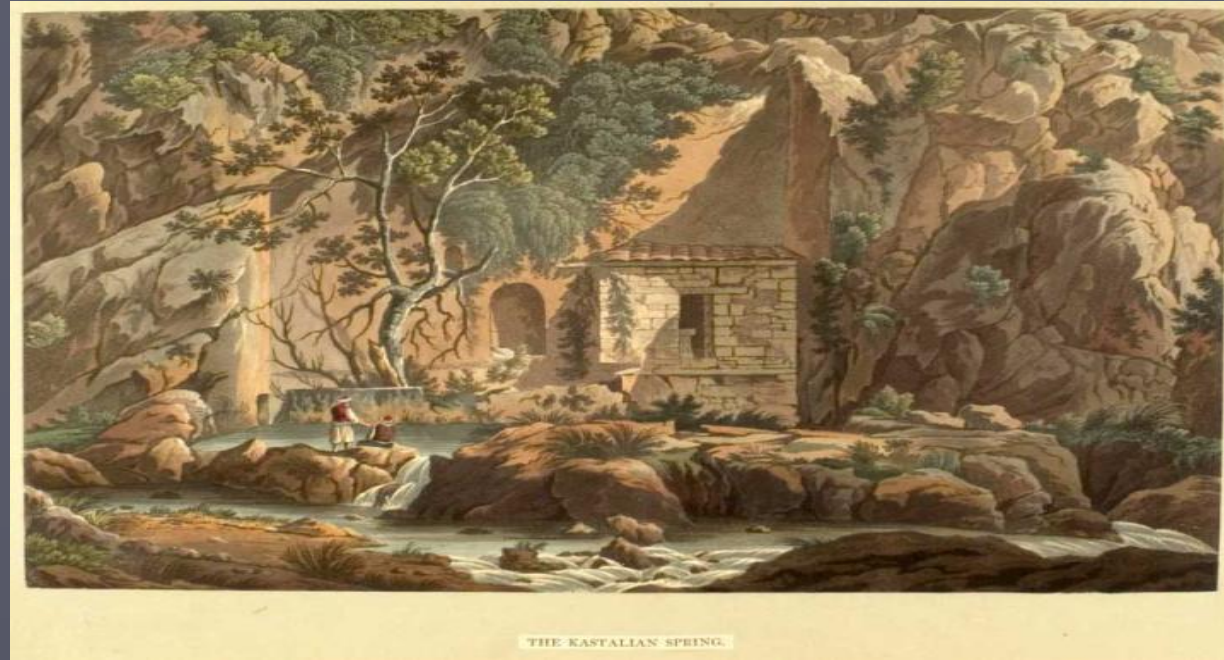




According to ICOMOS the Sanctuary of Delphi **cannot be separated by the surrounding environment** and its' primal characteristics were the cause for religions to emerge (Corycian Cave Κωρύκειο άντρο, The Castalian spring, 'Chiasma').

However, the above mentioned could never be considered as a group of ruins or an archeological site with the usual concept of the term.

The landscape arises it's true meaning through the human ruins and so it had to be included to the protection zone, or else one of the most important monuments of the world would have lost it's meaning.

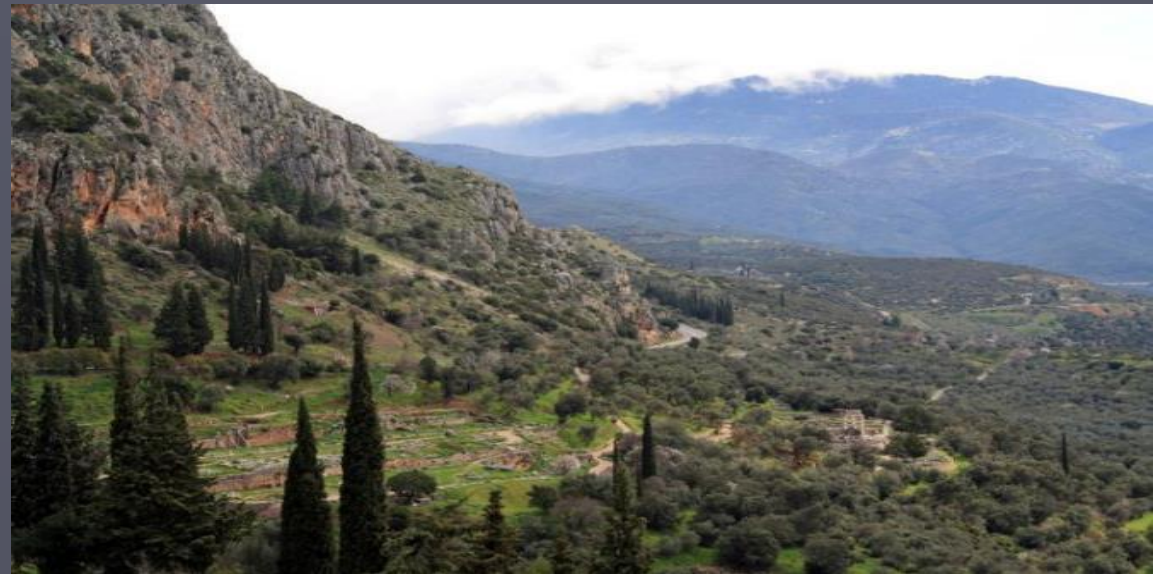


The evolution of agriculture, forestry, infrastructure, tourism, leisure and in a broader level in global economy in many cases accelerate the transformation of landscapes.

### **Cultural Landscapes:**

- Are the result of interactions between human activities and nature during centuries
- It consists an important part of human quality of life everywhere in the world

Its' conservation and management is imperative , as landscapes and natural environment are the cornerstone of tourism industry.



According to the “European landscape convention”, landscapes play an important part for public interest through culture, ecology, environment and society, and moreover consist such a valuable recourse for the economy that through their protection, management and design we can contribute to the development of new working opportunities.

Landscape contributes to the formation of local cultures and that it is a basic component of the European natural and cultural heritage, contributing to human well-being and consolidation of the European identity.



## Benefits of the local communities through protected areas

- National Heritage Sites provide **economic benefits** to the local communities through their commitment for protection of the heritage and economic development.
- They **protect history, preserve natural resources and provide benefits** of leisure, tourism and educational programs.
- According to economic impact researches of the Essex National Heritage Commission, **the National Heritage Sites contribution to the American economy amount to 12,9 billion** dollars. The economical benefits of these areas mainly come through tourism and visiting sites, while the National Park Management Bodies act catalytically for the economic development of the areas.



- **Monitoring and control of the formation processes of landscapes.**  
The embody of the formation processes to the regional and local planning is imperative for the protection of the European cultural and natural heritage and for the preservation of the multi-functional landscapes
- **“Active Protection of Landscapes”** in order to maintain and preserve its’ particular or significant characteristics as heritage due to natural processes or human activities.
- **“Management of Landscapes”** through sustainable development in order to protect in a regular basis the maintenance of landscapes so that every possible alterations caused by social, economical or natural processes to be directed properly and harmonized.
- **“Design of Landscapes”** with long-term perspectives, in order to preserve or create new landscapes.
- Adoption of a culture that comes from an holistic and balanced image of the natural and cultural environment and landscape.

- **Tracking and mapping** of the most characteristic landscapes of Parnassos.
- **Development of a “Cultural Landscape Network”**
  - designed and created intentionally by man landscapes
  - organically evolved landscapes
  - relict (or fossil) landscapes
  - continuing landscapes
  - landscapes associative cultural landscape.
- **Merge of the National Park of Parnassos area and the Protected Area of Delphi.**

# THE PROTECTION OF FORESTS AND NATURAL ENVIRONMENT OF GREECE FROM ANCIENT TIMES UNTIL NOWADAYS



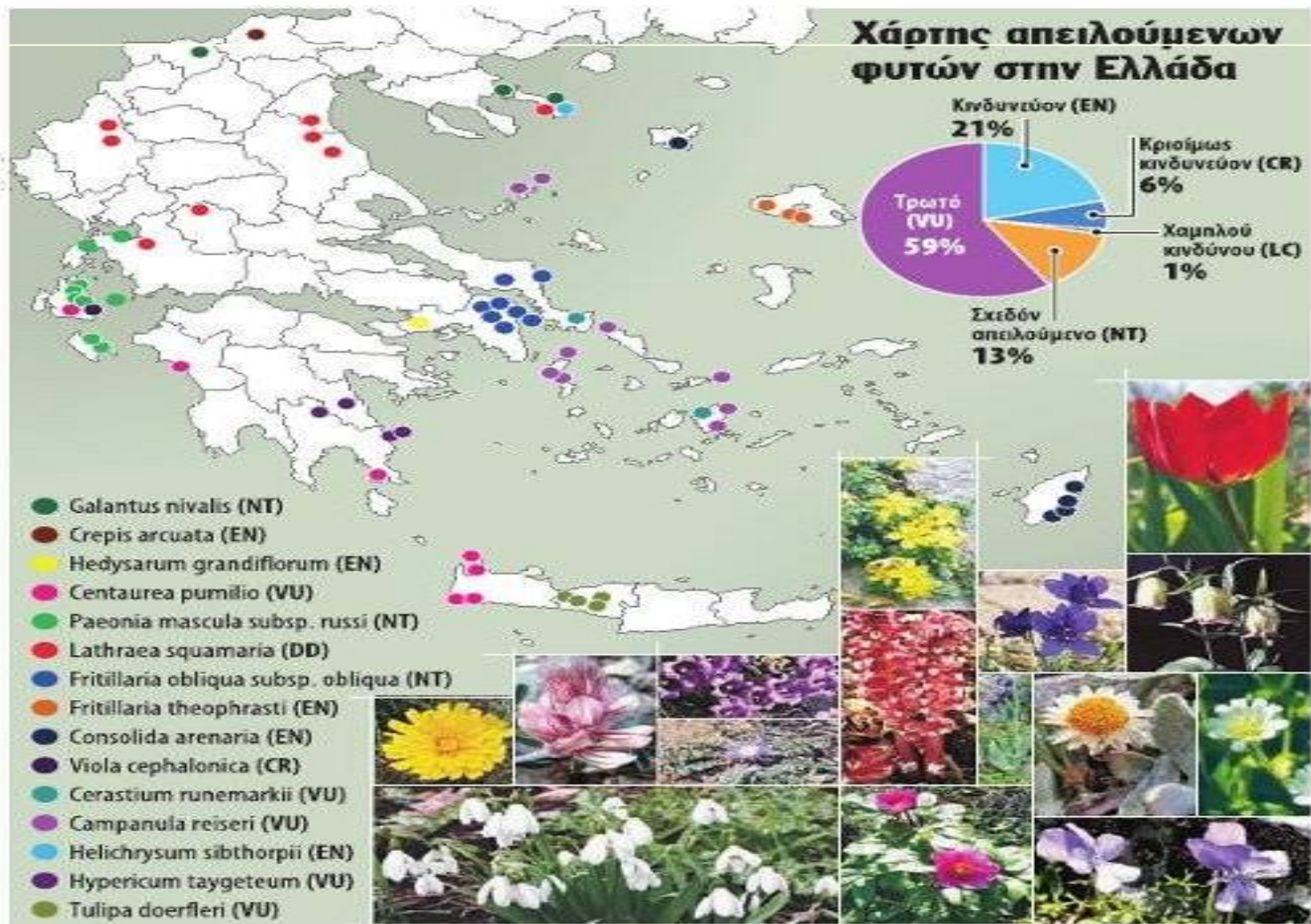
**Greece is a mountainous country with a great variety of reliefs, geological formations, soil types, microclimates and microenvironments.**



***This fact has a direct impact not only on vegetation and flora, but also on the biodiversity in general.***



Greece is among the European countries with the highest floristic biodiversity. *Despite the catastrophic human activities since the ancient times , almost 6.500 plant taxa have survived.*



ΠΗΓΗ: βιβλίο Ερυθρών Δεδομένων των Σπανίων και Απειλούμενων Φυτών της Ελλάδας, ΕΛΛΗΝΙΚΗ ΒΟΤΑΝΙΚΗ ΕΤΑΙΡΕΙΑ, ΠΑΝΕΠΙΣΤΗΜΙΟ ΠΑΤΡΩΝ, ΤΜΗΜΑ ΒΙΟΛΟΓΙΑΣ, ΤΟΜΕΑΣ ΒΙΟΛΟΓΙΑΣ ΦΥΤΩΝ



Ophrys aegaea

Even more impressive is the number of endemic plants.



*700 endemic species(taxa) are located in Greece*

Greece is known as a country with xerothermic climate, rocky islands and attractive seashores, even though its plant species variety is extremely rich.



*Fritillaria graeca*



*Tulipa australis*



*Tulipa Undulatifolia*

***In order to see the miracle of natural environment someone has to visit the inlands and climb the mountains.***

There are mountains that remained relatively “untouched” since the ancient times and nowadays are characterized as botanical edens, with unique species.



***Mounts Olympus, Taygetus, Athos, the mountains of Crete, Rodopi, Grammos, Evritania and Pindos are some of them.***

Many plants have pharmaceutical properties, some of which were even mentioned by Aristoteles, Theophrastus and Dioscurides.





Thank you for your attention

