

Destination –  
Distance from  
Heraklion

## Relevance to the conference theme

### 1. Trip to the area of Anogeia and hiking to the Psiloreitis Geopark

Site type: Mountain range, caves

ES types: all but mostly provisioning and regulating

Distance from Heraklion ~ 40km

The first field trip will take visitors to the area of Anogeia and lead them to a hike across the [Psiloreitis Geopark](#) across which several Natura 2000 protected areas are designated. The participants will also have the opportunity to visit the [Skinakas Observatory](#). It is a mountain range with great importance for its natural and cultural heritage. Participants will be guided through the Geopark by local guides and will have the opportunity to explore the role this heritage plays for the well-being of the local and Cretan community. Hiking shoes, sunproof clothing and sunscreen are recommended. The area has been widely researched through several European and Nationally funded schemes.

#### Information on the area.

**Anogeia** is a site of high importance for its natural and cultural heritage within Greece and Crete in particular. Psiloreitis Geopark located within the region of Anogeia covers an area of 1,272 km<sup>2</sup> and was initially designated as such in 2001 with the scientific support from Natural History Museum of the University of Crete. Due to its rich geodiversity, the landscape of exceptional beauty and its undeniable history and tradition, the geopark of Psilorititis became a part of the network of European Geoparks and a bit later part of the global network of Geoparks. The wider area of Anogeia was a very important place of worship in antiquity, as on the nearby Plateau of Nida there is the Ideon Andron, a cave in which, according to the legend, the god Zeus was raised. The latter, together with Kamara Cave (where the E4 hiking path passes) have been designated as "Landscapes of Special Natural Beauty" (Government Gazette 666/B/23-9-1970). In the Municipality of Anogeia is also the Observatory of Skinakas (1,750m), a research facility of the University of Crete and the Greek Foundation of Research and Technology (FORTH).

#### Relevance to the conference theme:

*Provisioning ES:* Psilorititis is a mountain range in the center of which is the Municipality of Anogeia. The mountain mainly consists of limestone, which due to its water permeability makes it the largest reservoir in Central Crete, supplying water to many springs on the northern coasts of the prefectures of Heraklion and Rethymno. Numerous canyons and caves contribute to this and in fact in the area is the third (3rd) deepest and longest cave gorge in Greece, "Tafkoura" with a depth of 860 meters and a length of over 6.5 km, as well as some other of the deepest in the country: the "tafkos at Petradolakia", (-475m), the "Diplotafki" (-400m) and the "Koritsi" (-223m). Those form the current water flow networks towards the northern part of the island. Within this landscape approximately 40% of the endemic plants of Crete are found in the wider area of Anogeia. Local population mainly engages in animal husbandry thanks to which traditional, stone-built "mitata" with their paddocks are scattered in the area. Anogeia is famous for its special culinary tradition (e.g. antikristo) and the production of high quality dairy products (e.g. cheese, milk, yogurt).

*Regulating ES:* Psilorititis is one of the three most important biodiversity hotspots of the island. It includes five peaks that exceed 2,000 meters. The entire area has been declared protected within the Natura 2000 European Network [GR4310009 (SPA), GR4330005 (SCI), GR4330009 (SPA)] because of its great ecological importance. In Psilorititis, in addition to the 155 species of

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avifauna, 3 amphibian species of Crete, 8 of the 12 reptiles, all mammals (except chiroptera), and a large number of invertebrates that present a high degree of endemism, especially the cave-dwelling species, have been recorded.

*Cultural ES:* Psiloritis was and has always been a source of inspiration and creativity for many artists in the field of music, weaving, woodcarving (Museum in Axos), lithography & painting, ceramics and pottery. At the same time, the Natural Park contributes to environmental education and awareness both through its close cooperation with the Center for Environmental Education of Anogeia and with two local museums it has developed and which concern environmental education programs implemented by school groups in the classroom and in the field.

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### 2. Elounta – Plaka – Spinalonga island

Site type: Coastal  
zone, fisheries  
activities, cultural  
heritage, impact of  
marine invasive  
species to marine  
biodiversity

ES types: all but  
mostly provisioning  
and cultural

Distance from Heraklion ~  
67km

The second field trip will take visitors to the areas of Plaka and Spinalonga island. The participants will join the area by bus should have with them comfortable shoes, sunglasses, sunproof clothing and sunscreen. The area has been widely researched through several European and Nationally funded schemes.

**Plaka area and Spinalonga island** are two locations of high value for their natural and cultural heritage. The area of Plaka is proposed for inclusion as a UNESCO world heritage site and is a picturesque fishing village that has been designated as a traditional settlement (Government Gazette 594D/78). Over the years it turned into a meeting point for visitors to the legendary Spinalonga (refuge of rebels during the Turkish occupation which later and for a total of 54 consecutive years operated as a leper home 1903- 1957). Within the area, Mirabello Bay is a nationally protected coastal area. A unique feature of the area is Lake Voulismeni (a small karst sinkhole) in which water flows into the sea through a small channel.

The area evolved historically from a commercial port in the era of copper metallurgy, to an important tourist resort with the most modern ultra-luxury hotel facilities on the island. Over time, we can say that the area is a typical example of landscape ecosystem services with the scattered windmills (Elounda and Vroucha) and fortresses (Spinaloga and Mirabello), the salt extraction sites of Elounda and the surrounding islets: Kalydon (Spinaloga), Agioi Pantas and Mikronisi, to be landscapes of special natural beauty (Government Gazette 666B/70 & GOVERNMENT 176B/82). An interesting issue is the carrying capacity of both the landscape and the ecosystems, which face an extreme pressure over the years through high demand for the provisioning and cultural ES they provide.

#### Provisioning Coastal Ecosystem Services:

- Production of building materials: In the area of Elounda in the past, the inhabitants were engaged in the extraction of akonopetra, a fine-grained emery which is unique in Greece, from which tools are made for sharpening.
- Food production (fish, molluscs, etc.): The Bay of Elounda, with an area of approximately 5 square kilometers, is characterized by a great cultural-aesthetic-ecological value and is a sensitive habitat for juvenile fish of great economic importance that feeds the stock of the corresponding adult populations in the wider fishing grounds of the north-eastern Cretan continental shelf.
- Salt production sites: The sites were built in the 15th century by the Venetians who exported salt to Europe and until 1972 the salt pans of Elounda produced salt of excellent quality.
- Energy production: In the past from the windmills at the windmill site and today from the wind park in the community of Brucha.

#### Regulating Services:

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- Dispersal of waste after its treatment, flood protection, monitoring of water and air quality, monitoring of soil erosion, protection from extreme events (e.g. tsunami), climate regulation, biological control, provision of habitats for animals and plants, oxygen production, soil formation, genetic biodiversity, nutrient cycling, hydrological cycle - water cycle.

### Cultural Services:

- Tourism: Yachting, diving tourism and in general "luxury" tourism.
- Water sports: In addition to swimming and snorkeling, the bay of Elounda and the whole bay of Mirabello offer opportunities for water sports such as sailing, scuba diving and kayaking towards the island of Spinalonga as well as, cliff diving and stand-up paddleboarding (sup and sup surf).
- Source of inspiration and recreation: Spinalonga Island, the island of Lepers, became world-famous through Victoria Hislop's best-selling novel "The Island" (2005), which won the British Award for Best Debut Author in 2007.
- Education and research: The Ephorate of Marine Antiquities, HCMR and FORTH research institutes in Greece have been carrying out fundamental research archaeological and ecological interest in the area. The first one is about the ruins of ancient Olounda in the sea and the next two are about the movement of invasive species (e.g. German sea bream, sea bream, etc.) into the Mirambellos bay due to the change in sea water temperature, and its protection from erosion and extreme weather events. Environmental education programs on wind energy and salt marshes are often organized in the schools of the Municipality.

### 3. Aposelemi water reservoir - Lasithi Plateau

The purpose of this third trip is to be guided through a local case study in which water supply flows from a mountainous region to the cities, as well as the role of this demand for water in the development of a mountainous region, in its society and culture, and in the projects carried out for the sustainable exploitation of these ecosystem services. Participants will be guided through the area the administrator of the reservoir (The Development Organization of Crete - OAC S.A.) and will have the opportunity to explore the role this heritage plays for the well-being of the local and Cretan community. Comfortable shoes, sunproof

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Site type: Mountain,  
water reservoir,  
dam construction,  
Windmills

ES types: mostly  
water provision  
services, but also  
high biodiversity  
support and cultural  
heritage sites

Distance from Heraklion  
until the dam ~33km

Distance from Heraklion  
until Psychro plateau ~60km

clothing and sunscreen are recommended. The area has been widely researched through several European and Nationally funded schemes.

**The Diktis mountain range**, with the highest peak, Spathi (2,148 m), is one of the three main mountain ranges of Crete and a biodiversity hotspot in Greece. Plateaus, sinkholes, steep peaks, gorges develop on the strongly karstic limestone bedrock of the mountain range. The ecological importance of the area is due to the wide variety of habitats (most of them well preserved), the dense forest and maquis vegetation, while it is home to typical endemic species of flora and fauna of Crete and Greece in general. Several of the flora species recorded in Dikti are narrow-endemic and are found exclusively in the mountains of the region. The habitats of the area are very important for a number of protected predators, which either nest in the area or appear sporadically. The Lasithi plateau, located at an altitude of 800 m, is the largest plateau of Crete, with 18 villages and important cultivated areas, in which five (5) varieties of potatoes, apples, cherries, cereals, legumes and all kinds of vegetables are produced. The area is very important for beekeeping, as well as for the supply of water to the Aposelemis reservoir. The entire area of the Dikti mountain range is a designated Landscape of Special Natural Beauty (Government Gazette 666/B/1970).

**Provisioning services:** Water supply and irrigation – the Aposelemis reservoir has a capacity of 27.3 million m<sup>2</sup> of water (at an overflow height of 216 m) and irrigates Heraklion and Agios Nikolaos. Food, timber, hunting and medicinal materials, pastures, but also for the exercise of small-scale agricultural practices. Well-known aromatic plants are sage, oregano, thurbi, etc., which are found in phryganic ecosystems. Among the services of the forest ecosystems of the region are the provision of edible grasses, the provision of fodder for livestock species and beekeeping. The Lasithi Plateau supplies all of Crete, mainly with potatoes and vegetables. The area is famous for its excellent quality dairy products and honey production.

**Regulating services:** local climate, air quality, water cycle, while vegetation and soil contribute to the protection from various natural hazards and the effects of extreme weather events such as avalanches, landslides, etc. Among the services of the forest ecosystems of the region is the protection against floods and erosion, etc.

**Cultural services:** recreation, tourism, artistic inspiration, mountaineering, rock climbing, hiking, canyoning, mountain biking, caving, horseback riding, bird watching, paragliding in Dikti. The caves and peaks have remained sacred places to this day. Christian hermitages and monasteries. The Dikteo Andros cave which is and still is a Site of Special Natural Beauty (Government Gazette 666/B/23-9-1970) was a very important place of worship in Minoan Crete and according to ancient tradition, it is the cave where Rhea fled to give birth to Zues, the cave of Trapeza (or Kronio) and the Windmills (near the village of Pinakiano) on the Lasithi Plateau, the Minoan settlement and the cemetery on Mount Karfi, the Psychro with the windmills that are a characteristic and integral element of the landscape, but also of life on the Lasithi Plateau, and which are part of the intangible cultural heritage of Greece.

Other recommended areas for individual visits:

A) [Archaeological Museum of Heraklion](#) (accessible on foot, Eleftheria Square) and [Archaeological Site of Knossos Palace](#) (City Bus 2 from Astoria stop). There is a single ticket with a cost of 20 euros / person.

B) [Historical Museum of Heraklion](#) (accessible on foot, Sofoklis Venizelou Street).

C) [Museum of Natural History of Crete](#) (accessible on foot, Sofoklis Venizelou street).