



Leonardo da Vinci

PROJECT MOBILITY GREECE 25/9-1/10/2011

# Information about nature of Greece and Natura 2000 in Greece



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# 1. Nature of Greece

## Flora

In Greece you can find animals and plants which are typical representatives of the mediterranean fauna and flora. Some species occur exclusively in Greek islands. These plants and animals with restricted area of occurrence are examples of endemic fauna and flora. For instance, there are about 1500 plant species on Crete, 10 % of which are endemits and can be found in this area only. The climate of the south part of the Balkan island is characterized by hot dry summers, mild humid winters and early arrival of spring. Therefore, the local vegetation is particularly attractive and interesting in spring. At the end of the summer and in autumn, the vegetation is usually burnt by the sun or grazed. The local soil suffers from deforestation, grazing and large areas are cultivated. Dense forests, which used to dominate the landscape in ancient times, irretrievably disappeared. Hard wood of *cypresses (Cupressus sempervirens)*, cedars and oaks was being used to build ships, houses and temples. According to the legend, it was in particular a hard cypress wood, which was used to build Noah's arch and Solomon's temple. Cypress is a typical Cretan tree. It is a high narrow tree with a conic-shaped treetop. The cones are round and they fall apart during maturing period. Another tree commonly found on the island is the olive tree, whose fruits are used to make olive oil. The high-quality olive oils come from the Kandanos valley, which is situated in the west part of the Crete, as well as from the village Agía Marína. The legend says that the very first olive plant was given by goddess Athena to the inhabitants of Attica.

We cannot forget to mention some of the domesticated species, such as *Nerium oleander*, *Campsis sp.*, *Bouganvillea*, which are commonly used to decorate gardens, balconys and public places not only in Greece. On the island, other exotic and decorative plants, such as agave, aloe, *Eucalyptus*, *Platanus orientalis* or beautiful *Albizia julibrissin*. The related plant is *Acacia dealbata* which pulls down its leaves in case of irritation. Along the roads, you can notice various kinds of *Cirsium sp.*, *Cynara sp* a *Scolymus hispanicum*, whose flowers attract many kinds of insects.

The vegetation of Greece can be divided into levels according to the altitude

Low areas (low mediterranean level) are up to 500 m above the sea level

In these areas, the macchia abounds. Macchia are densely growing evergreen shrubs, covering more than the half of the island. These plant resins are typically entwined, however, unlike scrubs, they are covered with thorns. The growth of the particular macchia plants varies according to the location, climate and altitude. Typically, we can find there *Pistacia lentiscus*, *Laurus nobilis*, *Paliurus spina christi*, of which the Jesus Christ's crown of thorns was made, as it is said. Among other plants occurring in this area are highly-aromatic rosemary, lavender and *thyme (Thymus)*, *Euphorbia* which can be up to 2 metres high, *Myrthus communis*, *Tamarix a Pteridium aquilinum*, which creates dense vegetation. Moreover, quite common plant is *Rubus* and *Asphodelus* with its beautiful white flowers.

On the beaches, you can notice low thorny herb with blue flowers which is called *Eryngium sp.*

In valleys situated in 500 – 1500 m above the sea level (the higher mediterranean level), the typical vegetation is represented by *Quercus ilex* or *Pinus maritima* with the macchia as the undergrowth. Due to the fact that the plants contain essential oils, the macchia is prone to catch fire, which is quite natural and common phenomenon in this area, especially during the long periods of draughts. In the tree layer of the forests, oaks such as *Ostrya carpinifolia* can be found. In the shrub layer, *Ilex aquifolia* and *Buxus sempervirens* are the most noticeable species. In highlands, wide areas are covered by *Pinus nigra* and *Fagus sylvatica*. On the mountain meadows, *Knautia arvensis* abounds.

The typical feature of mountain areas (above 1500 m, alpine level) is the lack of trees. The forest boundary lies in about 1600 – 1800 metres above sea level. In humid places, alder shrubs with various ferns in the undergrowth, such as tiny *Ceterach officinarum*, occur. In the arid areas, we can commonly find thorny shrubs such as *Juniperus nana* or *Berberis aetnensis*.

## Fauna

The fauna of Greece is very rich. In fact, it is one of the countries with the highest number of reptile species in Europe. On the contrary, the species variability of Crete is rather low due to the isolation of the island. Wild game and many other species have been replaced by the utility livestock already long time ago. However, we can still encounter wild cats, badgers and weasels there.

The rare bird species which occur in this area are a hawk and a falcon. In the rocky mountain areas which are characterized by high rock walls lives *Gypaetus barbatus*, whose wingspan can reach up to 2.80 metres. It lives in 1000 – 1700 metres above sea level, where it builds its nests on steep rocks.

Among amphibians and reptiles, we can observe *Natrix tessellata*, which hunt frogs, tadpoles and fish in the rivers and pools. This snake does not bite and it is absolutely harmless! Furthermore, we can find there green *Rana lessonae* or *Hyla arborea* tadpoles. The intensive croaking of *Hyla arborea* adults can be heard from treetops during nights. Fresh waters are inhabited by predatory *Mauremis caspica*, which skilfully move like fish. In the sea, another turtle species can be found, *Caretta caretta*. When snorkeling along the coast, we can encounter beautifully colourful starfish, cuttlefish, jellyfish, crabs, sea cucumbers and sea anemones.

At night, small lizards *Hemidactylus turcicus* and *Tarentola mauritanica* hunt insects on houses and walls. Geckos can move very quickly on the walls, they can even climb on the glass surfaces and ceilings. They are absolutely harmless and their bodies are extremely fragile.

Macchia is a territory of many reptile species. For instance, *Testudo hermanni* which is active in the morning and in the afternoon when it eats and then it hides again and sleeps during the hottest periods of the day. The most common snake of the Balkans is *Coluber gemonensis*. This snake is not venomous, it hunts lizards, insects and small mammals. This long, narrow, grey snake moves very quickly and you probably notice it crawling to the safety with surprising speed. On the contrary, red snake *Elaphe situla* is quite rare. This snake is gradually dying out, since it becomes a prey of reptile breeders and traffickers due to its interesting coloration.

As to lizards, we can see the smallest European lizard aptly named *Ablepharus kitaibelii* which moves very quickly in fallen leaves. Another lizard is emerald green *Lacerta viridis* and slightly larger *Lacerta trilineata*. Among smaller lizard species are *Podarcis taurica* and *Podarcis muralis*. *Podarcis muralis* occurs on rocky walls, as well as on houses and walls. Also archaic-looking *Pseudopus apodus* which feed on ants belongs among reptiles. In crete we can commonly find *Chalcides ocellatus* which hides under stones and bark of trees. Rather rare is *Chamaeleo chamaeleo* which occurs in Europe exclusively in Crete and in the south of Peloponnese.

Greece is also rich in insects. You will probably notice *Papilio machaon*, *Zygaena*, *Cetonia aurata*, *Melanargia galathea* sitting on the flowers. We can also find cicadas which make specific loud sounds during the day and whose larvae spend three years underground. Almost everywhere under the stones, we can find scorpions. The local species is not venomous, but it is not recommended to touch it without any hand protection. Furthermore, we can see spiders, centipedes, millipedes and woodlice hidden under the stones. In the vegetation occurs *Mantis religiosa* which spends the major part of the day looking out for the prey. Besides, it is possible to find it in the campsite bathrooms, where it looks out for the prey together with geckos. Female mantises are well-known for their habit to eat males during or immediately after mating.

# Flora of Greece



*Ceterach officinarum*



*Pteridium aquilinum*



*Eucalyptus*



*Pinus nigra*



*Quercus ilex*



*Ostrya carpinifolia*



*Laurus nobilis*



*Bougainvillea*



*Platanus orientalis*



*Olea europea*



*Albizia julibrissin*



*Paliurus spina christi*



*Pistacia lentiscus*



*Nerium oleander*



*Campsis sp.*



*Ficus carica*



*Acacia dealbata*



*Myrthus communis*



*Rubus sp.*



*Knautia arvensis*



*Inula verbascifolia*



*Thymus sp.*



*Cupressus sempervirens*



*Asphodelus sp.*



*Cirsium sp.*



*Cynara sp.*



*Scolymus hispanicum*



*Eryngium sp.*

# Fauna of Greece



*Actinia equina*



*Mesobuthus gibbosus*



*Melanargia galathea*



*Papilio machaon*



*Zygaena sp.*



*Cetonia aurata*



*Mantis religiosa*



*Cicadetta argentata*



*Macropipus depurator*



*Hyla arborea*



*Bufo viridis*



*Caretta caretta*



*Testudo hermanni*



*Mauremis caspica*



*Chamaleo chamaleo*



*Hemidactylus turcicus*



*Pseudopus apodus*



*Ablepharus kitaibelii*



*Podarcis taurica*



*Podarcis muralis*



*Chalcides ocellatus*



*Lacerta trilineata*



*Natrix tessellata*



*Elaphe situla*



*Coluber gemonensis*



*Larus argentatus*



*Sylvia melanocephala*



*Lanius senator*

## 2.Natura 2000

**Natura 2000** is an ecological network of protected areas in the territory of the European Union. In May 1992, the governments of the European Communities adopted legislation designed to protect the most seriously threatened habitats and species across Europe. This legislation is called the Habitats Directive and complements the Birds Directive adopted in 1979. These two directives are the basis of the creation of the Natura 2000 network of protected areas.

The Birds Directive requires the establishment of **Special Protection Areas (SPAs)** for birds. The Habitats Directive similarly requires **Special Areas of Conservation (SACs)** to be designated for species other than birds, and for habitats. Together, SPAs and SACs make up the Natura 2000 network of protected areas.

Furthermore, the Natura 2000 network is the EU contribution to the "Emerald network" of Areas of Special Conservation Interest (ASCIs) set up under the Bern Convention on the conservation of European wildlife and natural habitats. Natura 2000 is also a key contribution to the Program of Work of Protected Areas of the Convention on Biological Diversity.

The SPAs are designated directly by each EU Member State, while the SACs follow a more elaborated process: each EU Member State must compile a list of the best wildlife areas containing the habitats and species listed in the Habitats Directive; this list must then be submitted to the European Commission, after which an evaluation and selection process on European level will take place in order to become a Natura 2000 site.

Natura 2000 protects around 18% of land in the 27 EU countries, and it can be considered almost completed in the EU terrestrial environment. In any case, there are still some issues which should be solved, but in general the process to construct Natura 2000 has been very positive. During the process, the European Commission has warned several EU member states over non-compliance with the EU nature directives (Habitats and Birds Directives), in particular in relation with the insufficiency of the Natura 2000 network, e.g. the European Commission started an "infringement procedure" against Poland in April 2006.

Natura 2000 is currently being also enlarged in the marine off-shore environment. The process is currently ongoing, and is expected to be close to completion by 2012.

In respect to wilderness and wild land areas, the European Commission is currently developing guidelines on the relation between Natura 2000 and these areas. Members of the European Parliament in the plenary session of February 3, 2009 backed a report calling for further protection of Europe's wilderness. "The report also calls for more European funding to protect existing sites and "re-wild" ones that are currently being used by humans or agriculture. At present 13% of the forest zone of the 27-member EU is designated as Natura 2000 sites under the existing Birds and Habitats directive



Red zones – Special Protection Areas „Birds areas“ (SPA), Blue zones - Special Areas of Conservation (SAC).

## 3.Natura 2000 in Greece

### Sites of the NATURA 2000 network in Greece

Greece includes at its National List **241 Sites of Community Importance (SCI)** according to the EU Directive 92/43 and has declared **202 Special Protected Areas (SPA)** according to EU Directive 79/49.

The Directive imposes on the state the responsibility for making an appropriate assessment of any plan and/or programme likely to cause a significant effect on the conservation objectives of the site which has or will be designated in future. To accomplish this goal the state is empowered to implement all necessary protection and management measures in regard to the conservation objectives pursued.



Natura 2000 in Greece. Red zones – **Special Protection Areas „Birds areas“ (SPA)**, Blue zones - **Special Areas of Conservation (SAC)**.

**We visit one „Bird Area“ (SPA) and two Special Areas of Conservation (SAC):**

**„Bird Area“ (SPA)  
Special Areas of Conservation (SAC)**

**AMVRAKIKOS KOLPOS, DELTA LOUROU KAI ARACHTHOU  
(PETRA, MYTIKAS, EVRYTERI PERIOCHI)**



The northern section of the site is formed by the deltas of the Louros and Arachthos rivers. It consists of brackish lagoons, a sandy coastal strip, saltmarsh, reedbeds (*Phragmites*), wet meadows, mudflats and remnant patches of alluvial forest. The lagoons are all used as fisheries.

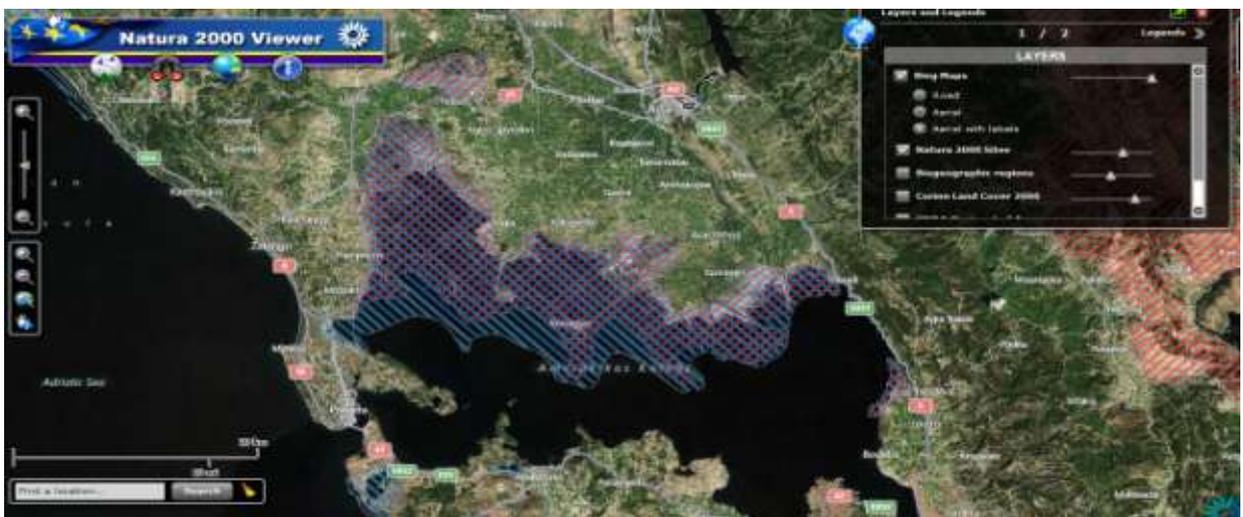
**Habitats:** Artificial landscapes (20%, Arable land; Other urban and industrial areas; Perennial crops, orchards and groves), Grassland (5%, Humid grasslands), Sea/marine area (5%, Sea inlets and coastal features), Shrubland (5%, Sclerophyllous scrub, garrigue and maquis), Wetland (70%, Coastal lagoons;

Fens, transition mires and springs; Rivers and streams; Salt marshes; Sand dunes and beaches; Standing brackish and salt water; Standing freshwater; Water fringe vegetation).

**Land use:** agriculture (25%), fisheries/aquaculture (70%), nature conservation and research, tourism/recreation (5%), urban/industrial/transport (5%), water management (70%). This is an important site for wintering ducks and geese, breeding, passage and wintering raptors and migratory waders. Species of global conservation concern that do not meet IBA criteria: *Phalacrocorax pygmeus* (wintering), *Haliaeetus albicilla* (wintering), *Aquila heliaca* (non-breeding), *Falco naumanni* (passage), *Gallinago media* (passage).

**Conservation issues:** The site is threatened by water-management schemes, large-scale work to improve fish production in the lagoons, intensive agriculture, hunting, and urban and industrial expansion. Part of the area is a candidate SAC.

**Threats:** agricultural intensification/expansion (high), aquaculture/fisheries (high), construction/impact of dyke/dam/barrage (unknown), disturbance to birds (high), drainage (medium), dredging/canalization (high), extraction industry (medium), groundwater abstraction (high), industrialization/urbanization (high), infrastructure (unknown), recreation/tourism (high), unsustainable exploitation (high).



**AREA (HA)**  
28787.5600

**DATE SITE PROPOSED AS ELIGIBLE AS SCI    DATE CONFIRMED AS SCI**

01-Aug-1996

01-Sep-2006

**Longitude**            20.923333**Latitude**            39.024722**BIOGEOGRAPHIC REGION**

Mediterranean

**SPECIES**

**Covered by Article 4 of Directive 79/409/EEC and  
listed in Annex II of Directive 92/43/EEC and  
site assessment for them**

**BIRDS listed on Annex I of Council directive 79/409/EEC**

<b>Species</b>	<b>Season</b>	<b>Year</b>	<b>Min</b>	<b>Max</b>	<b>Acc</b>	<b>Criteria</b>
<i>Anas penelope</i> Eurasian Wigeon	winter	1996	20000	50000	unknown	A4i, B1i, C3
<i>Anas clypeata</i> Northern Shoveler	winter	1996	7000	26000	unknown	A4i, B1i, C3
<i>Anas acuta</i> Northern Pintail	winter	1996	8000	15000	unknown	A4i, B1i, C3
<i>Anas crecca</i> Eurasian Teal	winter	1996	8000	30000	unknown	A4i, B1i, C3
<i>Aythya ferina</i> Common Pochard	winter	1996	5000	22000	unknown	A4i, B1i, C3
<i>Aythya nyroca</i> Ferruginous Duck	breeding	1996	25	100	unknown	A1, B2, C1, C6
<i>Fulica atra</i> Common Coot	winter	1996	20000	47000	unknown	A4i, B1i, C3
<i>Numenius tenuirostris</i> Slender-billed Curlew	passage	0	Rare		unknown	A1, C1
<i>Tringa totanus</i> Common Redshank	winter	1996	800	2300	unknown	B1i, C3
<i>Calidris minuta</i> Little Stint	passage	1996	3000	8000	unknown	A4i, B1i, C3
<i>Calidris ferruginea</i> Curlew Sandpiper	passage	1996	2000	6000	unknown	A4i, B1i, C3
<i>Burhinus oedicanus</i> Eurasian Thick-knee	breeding	1996	8	30	unknown	B2, C6
<i>Haematopus ostralegus</i> Eurasian Oystercatcher	breeding	1996	8	12	unknown	B1i, C3
<i>Himantopus himantopus</i> Black-winged Stilt	breeding	1996	220	360	unknown	A4i, B1i, C2
<i>Charadrius alexandrinus</i> Kentish Plover	resident	1996	300	400	unknown	A4i, B1i, B2, C3
<i>Charadrius alexandrinus</i> Kentish Plover	winter	1996	600	2500	unknown	A4i, B1i, C3
<i>Glareola pratincola</i> Collared Pratincole	breeding	1996	100	160	unknown	A4i, B1i, B2, C2, C6
<i>Sterna nilotica</i> Gull-billed Tern	breeding	1996	80	120	unknown	A4i, B1i, B2, C2, C6
<i>Sterna sandvicensis</i> Sandwich Tern	resident	1996	45	90	unknown	C2
<i>Sterna albifrons</i> Little Tern	breeding	1996	400	550	unknown	A4i, B1i, B2, C2, C6
<i>Chlidonias hybridus</i> Whiskered Tern	breeding	1997	5	6	good	B2, C6
<i>Aquila clanga</i> Greater Spotted Eagle	winter	1996	3	4	unknown	A1, C1
<i>Podiceps nigricollis</i> Black-necked Grebe	winter	1996	900	2200	unknown	A4i, B1i, C3
<i>Phalacrocorax carbo</i> Great Cormorant	winter	1996	1200	1800	unknown	B1i, C3
<i>Egretta garzetta</i> Little Egret	passage	1996	800	1500	unknown	A4i, B1i, C2
<i>Casmerodius albus</i> Great Egret	breeding	1996	130	200	unknown	A4i, B1i, C2
<i>Ardeola ralloides</i> Squacco Heron	breeding	1996	80	150	unknown	A4i, B1i, B2, C2, C6

<i>Nycticorax nycticorax</i> Black-crowned Night-heron	breeding	1996	50	100	unknown	B2, C6
<i>Ixobrychus minutus</i> Little Bittern	breeding	1996	30	60	unknown	C2, C6
<i>Plegadis falcinellus</i> Glossy Ibis	passage	1996	400	1200	unknown	A4i, B1i, C2
<i>Platalea leucorodia</i> Eurasian Spoonbill	breeding	1996	6	10	unknown	B2, C6
<i>Pelecanus crispus</i> Dalmatian Pelican	resident	1996	45	50	unknown	A1, A4i, B1i, B2, C1, C2, C6
<i>Ciconia ciconia</i> White Stork	breeding	1996	70	80	unknown	C6
<i>Calandrella brachydactyla</i> Greater Short-toed Lark	breeding	1996	Abundant		unknown	B2, C6

**MAMMALS listed on Annex II of Council directive 92/43/EEC**

**POPULATION**

CODE	NAME	Migratory		
		Resident	Breed	Winter Stage
1355	<u>Lutra lutra</u>	R		
1366	<u>Monachus monachus</u>	P		
1349	<u>Tursiops truncatus</u>	P		

**AMPHIBIANS AND REPTILES listed on Annex II of Council directive 92/43/EEC**

**POPULATION**

CODE	NAME	Migratory		
		Resident	Breed	Winter Stage
1224	<u>Caretta caretta</u>	P		
1279	<u>Elaphe quatuorlineata</u>	R		
1293	<u>Elaphe situla</u>	V		
1220	<u>Emys orbicularis</u>	C		
1222	<u>Mauremys caspica</u>	C		
1217	<u>Testudo hermanni</u>	C		
1218	<u>Testudo marginata</u>	C		

**FISHES listed on Annex II of Council directive 92/43/EEC**

**POPULATION**

CODE	NAME	Migratory		
		Resident	Breed	Winter Stage
1129	<u>Phoxinellus spp.</u>	C		
1992	<u>Valencia letourneuxi</u>	R		

**INVERTEBRATES listed on Annex II of Council directive 92/43/EEC**

CODE	NAME	POPULATION			
		Resident	Migratory		
			Breed	Winter	Stage
1060	<u>Lycaena dispar</u>	P			



Kareta obecná, Hawksbill sea turtle, Tortue imbriquée, Żółw szylkretowy,  
(*Eretmochelys imbricata*)



Bukač veľký, Eurasian Bittern-Great Bittern, Butor étoilé, Γραυρός, Bąk zwyczajny,  
Bučiak veľký, (*Botaurus stellaris*)



Pelikán bílý, Great White Pelican, Pélican blanc, Pelikan różowy, Pelikán ružový,  
(*Pelecanus onocrotalus*)



Pisila čáponohá, Black-winged Stilt, Échasse blanche, Szczudłak zwyczajny,  
(*Himantopus himantopus*)



Tuleň středomořský, Mediterranean Monk Seal, Phoque moine de Méditerranée, Mniszka  
śródziemnomorska, Tuleň mníšsky, Μονάχος Μονάχους, (*Monachus monachus*)



Vodní buvol, Water Buffalo, *Bubalus bubalis*, Byvol arni, Bawół domowy  
(*Bubalus bubalis*)



Bukáček malý, Little Bittern, Blongios nain, Μικροτσικνιάς, Bączek, (*Ixobrychus minutus*)

### GENERAL SITE CHARACTER

Habitat Classes	% Cover
Marine areas, Sea inlets	47.36
Tidal rivers, Estuaries, Mud flats, Sand flats, Lagoons (including saltwork basins)	20.66
Salt marshes, Salt pastures, Salt steppes	12.66
Coastal sand dunes, Sand beaches, Machair	0.67
Bogs, Marshes, Water fringed vegetation, Fens	0.67
Heath, Scrub, Maquis and Garrigue, Phygrana	1.33
Dry grassland, Steppes	4.00
Humid grassland, Mesophile grassland	4.66
Ricefields	1.33
Other arable land	1.33
Broad-leaved deciduous woodland	0.67
Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites)	4.66
TOTAL HABITAT COVER	100 %

## For Special Areas of Conservation (SAC)

### **EKVOLES ACHERONTA (APO GLOSSA EOS ALONAKI) KAI STENA ACHERONTA**

The inland part of the site consists of arable cultivation and a gorge with cliffs, deciduous forest and scrub. The coastal delta includes brackish marshes and low, scrub-dominated hills. Human activities include arable agriculture, livestock-farming, recreation and hunting.

**Habitats:** Artificial landscapes (20%, Arable land), Coastline/rocky areas (5%, Inland cliffs; Scree and boulders), Forest (20%, Broadleaved deciduous woodland; Broadleaved evergreen woodland), Shrubland (15%, Sclerophyllous scrub, garrigue and maquis), Wetland (40%, Rivers and streams; Sand dunes and beaches; Standing freshwater; Water fringe vegetation)

**Land use:** agriculture (60%), tourism/recreation (20%).

#### **Birds**

The site is important for breeding, passage and wintering *waterbirds* and raptors. Breeding birds include eight of the 21 species in Europe that are restricted (when breeding) to the Mediterranean biome. Species of global conservation concern that do not meet IBA criteria: *Phalacrocorax pygmeus* (wintering), *Pelecanus crispus* (non-breeding), *Aythya nyroca* (non-breeding), *Gallinago media* (passage).



#### **DATE SITE PROPOSED AS ELIGIBLE AS SAC**

01-Aug-1996

01-Sep-2006

#### **SITE CENTRE LOCATION**

**Longitude** 20.501389

**Latitude** 39.233611

positive values = decimal degrees W/ negative values = decimal degrees E (Greenwich)

#### **AREA (HA)**

4627.6700 **BIOGEOGRAPHIC REGION**

Mediterranean

**ECOLOGICAL INFORMATION  
SPECIES**

**Covered by Article 4 of Directive 79/409/EEC and  
listed in Annex II of Directive 92/43/EEC and  
site assessment for them**

**POPULATION**

CODE	NAME	Resident	Migratory		
			Breed	Winter	Stage
1224	<u>Caretta caretta</u>	V			
1279	<u>Elaphe quatuorlineata</u>	C			
1220	<u>Emys orbicularis</u>	C			
1222	<u>Mauremys caspica</u>	C			
1217	<u>Testudo hermanni</u>	C			
1218	<u>Testudo marginata</u>	R			

**FISHES listed on Annex II of Council directive 92/43/EEC**

**POPULATION**

CODE	NAME	Resident	Migratory		
			Breed	Winter	Stage
1152	<u>Aphanius fasciatus</u>	P			
1129	<u>Phoxinellus spp.</u>	C			
1992	<u>Valencia letourneuxi</u>	R			

**INVERTEBRATES listed on Annex II of Council directive 92/43/EEC**

**PLANTS listed on Annex II of Council directive 92/43/EEC**

GROUP	SCIENTIFIC NAME	POPULATION	MOTIVATION
I	<u>Agabus bipustulatus</u>	P	D
P	<u>Alnus glutinosa</u>	>200	D
R	<u>Anguis fragilis</u>	R	C
A	<u>Bufo bufo</u>	R	C
A	<u>Bufo viridis</u>	C	C
B	<u>Cisticola juncidis</u>	P	A
P	<u>Cotula coronopifolia</u>	R	D
M	<u>Crocidura suaveolens</u>	C	C
F	<u>Gasterosteus aculeatus</u>	P	D
A	<u>Hyla arborea</u>	C	C
R	<u>Lacerta trilineata</u>	C	C
P	<u>Lippia nodiflora</u>	R	D

R	<u>Malpolon monspessulanus</u>	C	C
M	<u>Martes foina</u>	C	C
M	<u>Mustela nivalis</u>	C	C
R	<u>Natrix natrix</u>	C	C
R	<u>Natrix tessellata</u>	C	C
M	<u>Neomys anomalus</u>	R	A
R	<u>Ophisaurus apodus</u>	C	C
P	<u>Pancratium maritimum</u>	<50	D
P	<u>Scabiosa epirota</u>	R	D
F	<u>Syngnathus abaster</u>	P	C
R	<u>Vipera ammodytes</u>	R	C

(B=Birds, M= Mammals, A=Amphibians, R=Reptiles, F=Fish, I=Invertebrates, P=Plants)



Želva bahenní (*Emys orbicularis*)  
European pond turtle, Cistude,  
Żółw błotny, Korytnačka močiarna



Želva vroubená, (*Testudo marginata*),  
Marginated tortoise, Żółw obrzeżony



Užovka čtyřpruhá, Four-lined Snake,  
(*Elaphe quatuorlineata*)



Želva zelenavá, (*Testudo hermanni*),  
Tortue d'Hermann, Żółw grecki,  
Korytnačka zelenkastá, Hermann's tortoise

## GENERAL SITE CHARACTER

Habitat Classes	% Cover
Tidal rivers, Estuaries, Mud flats, Sand flats, Lagoons (including saltwork basins)	0.06
Salt marshes, Salt pastures, Salt steppes	3.01
Coastal sand dunes, Sand beaches, Machair	0.33
Shingle, Sea cliffs, Islets	0.42
Inland water bodies (Standing water, Running water)	0.23
Heath, Scrub, Maquis and Garrigue, Phygrana	23.41
Humid grassland, Mesophile grassland	0.01
Other arable land	26.15
Broad-leaved deciduous woodland	5.94
Coniferous woodland	1.35
Evergreen woodland	37.20
Inland rocks, Screes, Sands, Permanent Snow and ice	0.35
Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites)	1.54
TOTAL HABITAT COVER	

## 4. The examples of management

### in Natura 2000 localities

Information about project from:

[http://www.natura.org/natura2000management/gr\\_agras\\_wetland.html](http://www.natura.org/natura2000management/gr_agras_wetland.html)

### Agras Wetland: GR

#### Site profile

<b>Site name:</b>	Agras Wetland (Lake)
<b>Location:</b>	Prefecture of Pella
<b>Land area:</b>	1,480 ha
<b>Nearest urban settlement:</b>	Edessa city (capital of Pella Prefecture)
<b>Natura 2000 ID:</b>	GR 1240004
<b>www:</b>	<a href="http://www.edessacity.gr">www.edessacity.gr</a>
<b>Annual visitor count:</b>	About 1,500
<b>Majority of visitors from:</b>	The majority of the visitors (except schools) in the Wetland Agras are Greek (95%).

#### Site description:

20% of Greek visitors are local people, 50% are from the Region of Central Macedonia and 25% are from other regions. The wetland of Agras is situated 7 km NW of the city of Edessa, at the prefecture of Pella and covers the core area of 600 ha. It extends to the floodplain of Edessa river, at the area historically known as the marshes of Tiavou. The wetland became a water reservoir during the 1950s, after the construction of a dam and dikes by the Public Electricity Corporation, to cover the needs of the Agras hydropower plant. The wetland is a characteristic case of the long-term co-existence of man and nature, the harmony of which has been disturbed over the past few years, due to several problems that the ecosystem is facing. Their impacts provoked the awareness of local community, resulting in the implementation of two LIFE-Nature projects, aiming in the application of multiple purpose wetland management and the conservation of wetland functions and values in a socio-economically compatible way.

Human activities on the site: Fishing, electricity production, agriculture, forestry and grazing.

## Priority species

<b>Species code</b>	<b>Latin name</b>	<b>Common / local name</b>
	<i>Aythya nyroca</i>	
	<i>Chlidonias hybridus</i>	
	<i>Pelecanus crispus</i>	
	<i>Tchybaptus ruficollis</i>	
	<i>Phalacrocorax pygmaeus</i>	
	<i>Cygnus olor</i>	
	<i>Cygnus Cygnus</i>	
	<i>Anas penelope</i>	

## Priority habitats (\* indicates priority habitats)

<b>Habitat code</b>	<b>Common / local name</b>
7210 *	Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i>

## Stakeholder success stories

Cooperation and establishment of two development and protection projects of Life Nature in the wetland area of Agras

Two LIFE NATURE projects are implemented in the area of Wetland Agras, the first by NAGREF and the later (second) by the Municipality of Edessa in collaboration with the Prefecture of Pella, the Pella Development Agency, NAGREF and the consulting firm Endiaitima. The projects aim to implement integrated management measures for the restoration of the SPA site of Agras wetland, taking into consideration the management prescriptions derived by the Environment Management Plan prepared for the site (by the first LIFE NATURE project), and involving the key stakeholders of the protected site. They include actions that are expected to improve wetland habitat conditions and result in the recovery of plant and animal populations, especially of priority bird species and habitats. Furthermore, traditional wetland associated human activities such as fishing and stock raising will be supported, and the local environmental information and interpretation capabilities will be enhanced in a way compatible to the conservation of wetland functions and values. The projects included different project actions, focusing in the co-ordination of the management activities at the site, the preparation of leading documents and plans such as the Wetland Restoration Plan and activities such as planting of riparian vegetation, improvement of wet meadow habitats through controlled grazing, management of reedbed habitats, improvement of bird nesting, foraging and refuge habitat, production of information and public awareness material for the wetland, as well as an integrated Education package for the schools, and the improvement of visitor information infrastructure, with the creation of nature trails, bird hides and interpretation signs. Illegal activities in and around the site were controlled through the operation of the wetland guarding project.

Establishment of an INTERREG project which includes actions such as the construction of an information centre in the Vrytta village and some nature trails in the same area (springs of Vrytta etc.)

Supplementary actions for the protection of the wetland Agras were similar to other INTERREG projects. According to this project an old (former) School in the village of Vrytta was renovated in order to greet visitors and enhance new information capabilities for the wetland and its natural beauties. Also, the same building offers all an night service for volunteers. Furthermore, a natural trail in the west part of the wetland (Vrytta springs) has been constructed and visitors may have recreation facilities and opportunities to be informed on site characteristics etc.

Establishment of ETERPS projects (environmental project) in the area according to nature protection and monitoring actions.

An integrated monitoring scheme was implemented during the first LIFE NATURE projects in the wetland according to three core elements - monitoring of habitats, monitoring of water and monitoring of bird species - providing valuable results concerning protection, effectiveness of project actions and the state of the wetland. Different cooperation activities and the active interest by local Authorities contributed to the establishment of further environmental projects (ETERPS) and activities. Infrastructure for water monitoring and cooperations with Hellenic Ornithological Society for bird monitoring are two examples.

### **Site management profile**

"The main management and protection measures in the wetland area, Agras"

#### Key site management issues:

Identification and organizing of the key stakeholders in the area

Studying the relationship between abiotic and biotic parameters of the ecosystem

#### Integration of Natura 2000 in overall site management:

By appointing the natural values in the protected area of Agras wetland and secondly by sensitizing local society and the authorities.

#### Key site management objectives:

To join landowners, society, authorities and scientists in the framework of the project

Best management of the site

Increase the communication between the responsible services- authorities and society regarding the protection and management of the wetland

#### Stakeholders targeted as part of management action:

Municipality of Edessa,

Prefecture of Pella,

FRI / NAGREF,

Development Agency of Pella and Endiaitima (NGO).

## **Description of work carried out / methods and methodology:**

### Methods:

Information about the current and future status of the site

Meetings

Pilot actions

Monitoring

Actions fulfilled by NAGREF:

Elaboration of a management plan for the wet meadow habitats

Management of the wet meadow through controlled grazing

Reestablishment of riparian stands

Implementation of monitoring system in the wetland

### Results of action and activities:

Management body of wetland Agras and relationships between important parameters of the ecosystem.

The information center is open almost every day and can supply information material to visitors. Guided tours are possible too.

### Indication of budget allocation for these tasks:

Euros 1,000,000