

1. Date this sheet was completed/updated 1/6/98

2. Country: Greece

3. Name of wetland: Amvrakikos Gulf

4. Geographical co-ordinates:

Louros and Arachthos double Delta:	lon: 20° 55' lat: 39° 6'
Katafourko lagoon and Bouka marsh:	lon: 38° 57' lat: 21° 08'
Vonitsa lagoon, Voulkaria lake, Saltini Lake:	lon: 38° 55' lat: 20° 49'
Mazoma lagoon:	lon: 39° 04' lat: 20° 49'

5. Altitude (average and/or max. & min.): 0.5 m (Scattered hills and islets from 50 m up to 250 m)

6. Area (in hectares): 23,649

7. Overview (general summary, in two or three sentences, of the wetland's principal characteristics):

The wetlands of Amvrakikos gulf are a complex ecosystem consisting of the shallow marine waters of the gulf itself, a rare wetland formation of a double delta of Louros and Arachthos rivers, a lagoon system composed of three major lagoons in the north (Rodia, Tsoukalio, Logarou) and some smaller ones along the whole coast of the gulf, the unique geological formations of coastal strips surrounding the lagoons, as well as of large areas of riparian vegetation.

8. Wetland type (please circle the applicable codes for wetland types as listed in Annex I of the Explanatory Note and Guidelines document):

marine-coastal: A · B · C · D · E · F · G · H · J · K

inland: L · M · N · O · P · Q · R · Sp · Ss · Tp
Ts · U · Va · Vt · W · Xf · Xp · Y · Zg · Zk

man-made: 1 · 2 · 3 · 4 · 5 · 6 · 7 · 8 · 9

Please now rank these wetland types by listing them from the most to the least dominant: A, J, L, B, H, Sp, Ss, K, M, Q, 1, 2, 3, D, W, Ts, Xf, Y, 9

9. Ramsar Criteria: (please circle the applicable criteria; see point 12, next page)

1a 1b · 1c · 1d | 2a · 2b · 2c · 2d | 3a · 3b · 3c | 4a · 4b

Please specify the most significant criterion applicable to the site: 3a

10. Map of site included? Please tick yes or no

(Please refer to the Explanatory Note and Guidelines document for information regarding desirable map traits)

11. Name and address of the compiler of this form:

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12. Justification of the criteria selected under point 9, on previous page

Criterion 1: see Section 16

Criterion 2: see Sections 17 and 18

Criterion 3: see Section 18

Criterion 4: see Section 18

13. General location:

It is situated in Western Greece, at the south part of the Ipiros (Epirus). The town of Arta (21,286 people), which is the administrative centre of the Prefecture of Arta, is located Northeast from the wetland centre at a distance of a 10 km.

14. Physical features:

Geology - geomorphology: Amvrakikos Gulf is a semi-closed marine area having a surface of 405 km², connected to the Ionian Sea to the west through a narrow natural channel.

Two rivers, Louros and Arachtos, flow into the northern part of the gulf having formed estuaries and lagoons which are mainly shallow, with narrow sandy strips separating them from the sea. Distinctive features of the northern part of the site are the freshwater marsh of Louros, the lagoons Mazoma (140 ha), Tsopeli (100 ha), Rodia and Tsoukalio (3,200 ha), Logarou (2,530), Koftra- Paliobouka (130 ha) and Agrilos, with depth not exceeding 2 m.

The eastern and southern coasts of the gulf are more diversified than the north, with rocky shores and small coastal wetlands. Located in the eastern coast, the Katafourko lagoon (300 ha) is for the last 15 years fed by a diversion of the Krikeliotis torrent, which has a strong silting action gradually reducing the size of the lagoon. Located a bit southern is the Bouka salt marsh (180 ha), covering an area of 180 ha. On the south coast lies the Vonitsa lagoon (75 ha), in proximity with a number of small carstic lakes. On the south coast lies also the Voukaria lake (500 ha), which was brackish at the past, as it was connected to the sea through a ditch, but nowadays the ditch has been blocked by thick aquatic vegetation and mud, and the salinity has decreased. The Saltini lake in the south west is a very shallow lake (200 ha) to the south of the Aktion airport.

The total area of the lagoons around the coastline is about 60 km². The wider area is mainly composed of sedimentary deposits, and is characterised by flysch, limestone, alluvial depositions and diaperic deposits (salt, gypsum).

Origin: natural/ modified by human activities

Hydrology: Carstic springs are very common at the northern part of the Amvrakikos gulf. Due to the numerous human interventions in the past and to the geology of the area, since the last 20 years the lagoons and the riparian vegetation receive freshwater mainly from precipitation. Since 1953, the flow of Louros river to the sea has been regulated by a hydroelectric/ irrigation dam, which today has a continuous water flow, due to its serious siltation. The mean annual discharge below the dam during the years 1957-1995 was $468 \cdot 10^6 \text{ m}^3 / \text{year}$. Since 1980, the flow of Arachthos river to the sea is regulated by another irrigation dam, 4 km northern of Arta. The mean annual flow below the dam during the years 1982-1995 was $1390 \cdot 10^6 \text{ m}^3 / \text{year}$.

Soil types and chemistry: Relevant data do not exist for the defined Ramsar site

Water quality: The waters of Louros and Arachthos rivers are well oxygenated. Mean nutrient concentrations ($\mu\text{g} / \text{l}$) during the period 1987 - 1991 have as follows:

	Phosphates	Nitrates	Nitrites	Ammonia
Louros	8-210	900-1600	9-160	10-190
Arachthos	5-60	300-1300	5-20	15-75

Values of dissolved oxygen, pH, suspended soils, and microbiological parameters in the river mouths, the lagoons and the marine area (1996-1997) are within existing standards for waters used in aqua-culture and bathing waters.

Seasonally increased salinity at the mouths of the rivers and in some of the lagoons has been noted. Temperature ranges from 8 to 29°C and anoxia has not been observed.

The quality of marine waters depends mainly on the regeneration of the deeper layers of the gulf which is considered small. The concentration of dissolved oxygen is high in the surface layer, in contrast with the deeper layers. High values of phosphates in the marine waters have been attributed to organic pollution from the rivers as well as natural causes.

Tidal variations: Tide is not strong, with minimum, mean and maximum variation 0,01, 0,05 and 0,28 m, respectively.

Catchment area: Amvrakikos gulf has a total catchment area of $4,400 \text{ km}^2$. River Louros has a catchment area of 685 km^2 and a length of 73 km. River Arachthos has a catchment area of 1850 km^2 of a mainly mountainous character and a length of 105,5 km.

Climate: The climate is of Mediterranean type with temperate winter, increased rainfall and sun exposure. The mean rainfall ranges from 868-1193 mm falling mostly from October to March. The mean temperature of August is $29,4^\circ \text{C}$ whereas of January $5,9^\circ \text{C}$.

15. Hydrological value:

Main hydrological values are flood attenuation and maintenance of water quality.

16. Ecological features:

The site is one of the largest wetlands throughout Greece. Wet meadows of *Juncus* and halophytic communities of the class *Arthrocnemetalia* cover large areas and have a good conservation status. The halophilous vegetation, including all representative species of *Arthrocnemum*, *Halocnemum* and *Salicornia*, covers an area of 43 km^2 . These salt marshes are abundant around most of the lagoons as well as of the Arachthos delta where extensive *Tamarisk* associations are also abundant. Threatened bird species such as *Himantopus himantopus*, *Glareola pratincola*, *Burchinus oedecnemus* breed in these salt marshes in considerable populations. The Tsoukalio lagoon is one of the largest of its kind in the entire Mediterranean region and hosts one of the two breeding colonies of the endangered Dalmatian Pelican (*Pelicanus crispus*) in the entire Europe. The fresh water marsh and extended Phragmitetum (reedbed) area in the vicinity of Louros is a breeding ground of

threatened bird species such as *Aythya nyroca*, *Platalea leucorodia*, *Ardea purpurea*, *Plegadis falcinellus*. Close to the reed beds, stands of *Scirpetum maritimi* as well as patches of *Nymphaea alba* and *Iris pseudacorus* occur. Long coastal spits, having a substratum made by broken shells are well maintained, covered mostly by halophilus vegetation and comprising colonies of various tern species. The double delta area annually supports great wild-duck populations (mean 100,000 and max. 170,000 individuals). The remaining stand of gallery woodlands (*Fraxinus*, *Ulmus*, *Populus* and *Salix*) in the Louros-Arachthos double delta covers an area of 2.5 km² and it hosts various heron species roosting and breeding colonies. Mazoma lagoon is more important as a fishery rather than as a bird habitat. It plays an important role in fish productivity at the western part of the gulf, analogous to that of Katafourko lagoon at the eastern part.

The hard-leafed evergreen Mediterranean (maquis) vegetation covers 21 km² and is mainly distributed on the surrounding hills. The species *Pistacia lentiscus*, *Nerium oleander*, *Erica arborea* etc. are present in the islets of Koronisia peninsula, and deciduous woodlands (*Coccifero - Carpinetum*) is found on the Mavrovouni hill.

The western, southern and eastern parts of the gulf also support a variety of habitats and species. The Katafourko lagoon hosts a variety of habitats including saltmarsh, freshmarsh, lagoon, mudflats, sand dunes, in a relatively small area. The Vonitsa lagoon is surrounded by a narrow reedbed and its importance is rather related to fish productivity. The Voukaria lake which has been operating for years as a natural fishery, is surrounded by a reedbed of considerable width of 10-500 meters. Duck populations are rather small, usually counted to a few hundreds of wintering diving ducks. The area is probably interesting as breeding ground of reedbed nesting birds.

17. Noteworthy flora:

The species *Galium intricatum*, *Malcolmia graeca subsp. bicolor*, *Alnus glutinosa*, *Fraxinus angustifolia*, *Spirodela polyrhiza* and *Cotula coronopifolia* are endemic to the Balkan Peninsula. *Salvinia natans* and *Lilium candidum* are protected by the Greek Presidential Decree. The first one is also listed in the WCMC database as “endangered”. Furthermore *Spirodela polyrhiza* is not common in Greece.

18. Noteworthy fauna:

Amvrakikos gulf is important for migratory birds (182 species) that breed, winter, or stage in the area. It hosts the second *Pelecanus crispus* breeding colony (32 p) in Greece and also constitutes an important *Pelecanus crispus* wintering (45 individuals) site. It supports annually great wild duck populations (mean: 100.000 individuals, max.: 170.000 individuals). Among the 182 migratory species present in the site, 70 are listed in Annex I of 79/409/EEC Directive. In addition other 7 resident species are listed in the same Annex.

Breeding species include *Ixobrychus minutus* (50 p), *Nycticorax nycticorax* (70 p), *Ardeola ralloides* (120 p), *Egretta garzetta* (250 p), *Ardea purpurea* (20 p), *Ciconia ciconia* (100 p), *Plegadis falcinellus* (20 p), *Platalea leucorodia* (30 p), *Aythya nyroca* (100 p), *Himantopus himantopus* (300 p), *Burhinus oedicephalus* (30 p), *Glareola pratincola* (150 p), *Sterna hirundo* (60 p), *S. albifrons* (150 p), *S. sandvicensis* (30 p), *Gelochelidon nilotica* (11-50 p), *Caprimulgus europaeus* (11-50 p), *Calandrella brachydactyla* (100 p), *Lanius collurio* (11-50 p).

Wintering species include *Egretta garzetta* (101-250), *Egretta alba* (101-250), *Phalacrocorax carbo* (251-500). Wintering birds with significant numbers not listed on the above annex are *Podiceps cristatus* (501-1000), *Podiceps nigricollis* (501-1000), *Cygnus olor* (101-250), *Anas penelope* (17000), *A. crecca* (14800), *A. platyrhynchos* (930), *A. acuta* (4660), *A. clypeata* (2350), *Aythya ferina* (7100), *Mergus serrator* (101-250), *Fulica atra* (1000), *Charadrius alexandrinus* (101-250), *Vanellus vanellus* (251-500), *Calidris alpina* (101-250), *Tringa totanus* (251-500), *Larus ridibundus* (>3000).

Twenty four species of prey have been observed so far, most of which use it regularly as a vital feeding ground; among them *Haliaeetus albicilla*, *Aquila clanga*, *Circaetus gallicus*, *Circus aeruginosus*, *Aquila pomarina*, *A. chrysaetos* (1 p), *Hieraetus pennatus*, *Gyps fulvus* (1-5 p), *Falco peregrinus* (2 p), *Bubo bubo* (1-5 p).

The rest of the fauna of the broader Amvrakikos area is quite diverse and abundant, with a total of 53 vertebrate taxa other than birds, having been recorded. Seventeen of them are listed in Annex I of 92/43/EEC Directive and the 36 remaining are considered internationally or nationally important. Among the taxa of the first group, seven fish species are threatened in Greece and are mentioned in the national Red Data Book. These fish species are *Valencia letourneuxi*, *Barbus albanicus*, *Psuedophoxinus stymphalicus*, *Barbus peloponnesius*, *Rutilus ylikiensis*, *Cobitis hellenica arachthosensis* and *Economidichthys pygmaeus*. The mammals *Neomys anomalus*, *Dryomys nitedula*, *Canis aureus* and the fish *Leuciscus cephalus albus* are also mentioned in National Red Data Book.

19. Social and cultural values: (e.g. fisheries production, forestry, religious importance, archaeological site etc.)

The most important social and cultural value is that of lagoon fisheries, where the production reached 40% of Greek production during the period 1983-1991. After 1989, a high value was attributed to the potential of the site for modern aqua-culture both on land and in marine waters.

Local aspirations for agriculture have been drastically reduced after the large drainage works carried out since 1950. Within the site, agricultural land is restricted to small areas. There is a value for grazing in the riparian vegetation and the hills surrounding the wetlands.

Another social and cultural value is hunting, as the site used to be a main hunting area before the completion of drainage works. However, habitat modifications have attributed to the decrease of game species and combined with the relative hunting restrictions have had a negative impact on local income from tourism.

Since 1990, the social value of the site as a protected area has increased and has led to the development of a value for eco-tourism, environmental education and bird watching, despite the lack of relevant facilities. Moreover, the area is of great scientific value in the fields of biology, ecology, hydrology and geology and numerous studies have been conducted. Considerable archaeological interest exist in and around the wetland area (ancient towns Amvrakos, Nikopolis etc.) and there is a certain local importance of religious traditions.

Since the first specific conservation measures were taken (1990), all activities have been subject to restrictions -regulations and there is ground in that most of these values today are consistent with the maintenance of natural wetland processes and ecological character.

20. Land tenure/ownership of:

(a) site: The biggest percentage belongs to the State (90%). A considerable part of the Rodia marsh belongs to the Greek Orthodox church (1500 ha). At least 250 ha have been rent to private aqua-culture companies. A very small percentage is private land.

(b) surrounding area: It is both privately and state owned. Cultivation owned by individuals and most of the hilly zone by the state.

21. Current land use:

(a) site : Within the Ramsar site, about 5,500 people are living mostly in small communities. The main economic activity is fisheries : lagoon fisheries have a relatively high production (688 tons in 1995), as well as inland aqua-culture units (1920 tons in 1995) and marine fish cultures (1112 tons in 1995). Grazing, farming, hunting are also present in the site.

(b) surroundings/ catchment : At the wider area the population reaches 76,000 people. The main activities are intense agriculture (part of it is irrigated), pig and cattle raising, urban development, fish culture, felling . Of the local population, 9.8% is employed in the secondary sector (slaughter houses, oil mills, cheese production units), 22.6 % is employed in the tertiary sector and the rest is mainly occupied in the primary sector.

22. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land use and development projects:

The dams in Louros and Arachthos rivers constructed in 1947 and 1985 respectively, the canalisation of parts of their river beds, extensive draining as well as irrigation networks have modified the water balance of the area, with most important effect the lack of fresh water input in the lagoons and the riparian vegetation of the Ramsar site. Heavy demands for irrigation water have also led to a seasonal increase of salinity in a distance up to 5 km from the estuaries of Louros. There are trends of shifts in vegetation types due to lack of freshwater, as well as trends of shifts in fish populations due to increased salinity.

The issue of securing water resources for the maintenance of the Ramsar site in the frame of a Water Resources Management Plan for the catchment area is a priority and it is being currently studied in combination to measures to be taken for the enhancement of ground water conservation, for decreasing water demand for irrigation, for decreasing the down stream effect of the Arachthos dam and for the determination of the minimal continuous water outflow from the same dam.

In the past, pigsties had been considered as the main source of organic pollution of water and soil in the area around Louros and also in the marine area of the Amvrakikos gulf. As a result of the policies applied since 1990, all pigsties have been relocated to the north and are now functioning with waste treatment systems. Industry converting agricultural products e.g. juice factories, has lost its economic importance and the old units are not in operation. Most of the old slaughter houses have become inactive or under-employed and all new units have facilities for waste treatment. Operating olive-mills have reduced in numbers and their modernisation including the use of their treated wastes as fertilisers has been subsidised. The studies and relevant projects for the construction and operation of Sewage Treatment Plants in all large towns of the area are in process.

A big improvement with regard to maintaining the water quality of river Arachthos was the operation of the Sewage Treatment Plant for the city of Arta which removed the inflow of untreated wastes in the river.

Solid waste management is being organised in the area following the legal requirements for the establishment of sanitary Landfills. Unauthorised disposal of wastes still occurs in certain locations like some dikes or canals.

The high numbers of grazing animals in the wetland sites have been considered as a threat to the conservation of *Juncus acutus* and *Tamarix* sp. riparian vegetation. Grazing as it occurs, has been considered as having direct negative impact on some threatened breeding birds, especially the Collared Pratincole. Policies for reducing grazing animals have been identified and are to be enforced soon (see conservation measures planned).

Traditional fisheries have been long operating in the lagoons, and yet there is a trend for modernising and intensifying the management of fisheries in the lagoons. Relevant works carried out in 1990-94 included new catching installations, deepening of ditches and repair of dikes; these were monitored and did not have negative effects on birds. New proposals for improvements of the lagoon fisheries operation are being scrutinised with the aim of identifying possible conflicts with maintaining the ecological character of the lagoons.

Past land reclamation for agriculture in the north of the site has resulted in shrinking and fractionating the riverine forests, but has now ceased to exist. The remaining pressures for extensions of cultivation are localised in small peripheral parts of the wetlands. Unauthorised removal of vegetation and sand extracts are still reported to occur periodically as a result of poor surveillance of this extensive site. Hunting pressure is high during the allowed period and incidents of breaking the hunting regulations have been gradually reduced.

A procedure for approval of Environmental Terms for a number of works and activities through Environmental Impact Assessments/ Studies has been established in Greece in 1990. Aiming to holding back the further loss and degradation of the site, all relevant planned works have since been examined under this procedure by the Environmental Authorities. The majority of projects concerning animal farms, drainage and/or agricultural improvement was rejected whereas only the absolutely necessary and less disturbing ones have been permitted.

23. Conservation measures taken: (national category and legal status of protected areas - including any boundary changes which have been made: management practices: whether an officially approved management plan exists and whether it has been implemented)

A set of management / protection measures and delimitation of zones were established in March 1990 by the Ministries of Agriculture, Environment, Energy and Merchant Marine, renewed in February 1993. A short description of the zones and measures is as follows.

Zone A includes the lower parts -estuaries of the rivers, some of the lagoons, sand spits, wet meadows, hills and coastal areas to the north.

The permitted activities (under specific terms) are : scientific research; observation of nature; grazing except for goats; traditional extensive lagoon fisheries, (in some cases only

co-operative); marine fishing only for professionals and marine aqua-culture units ; agriculture as it stands today (restrictions in the use of fertilisers and pesticides can be placed); housing within the village boundaries only; maintenance works on existing drainage channels; land improvement works on existing fields, as well as maintenance works on archaeological sites.

Zone B includes the rest of the lagoons, wet meadows, and coastal areas in various places around the gulf as well as two freshwater lakes at the south west and part of the river beds of Louros and Arachthos.

The permitted activities (under specific terms) are: scientific research, forestry, tourism; traditional fishing; sea fishing only for professionals; aqua-culture; agriculture as it is already practised; housing only within the boundaries of villages; hunting; grazing; maintenance works on existing drainage channels and land amelioration works as well as works on archaeological places and construction of small hydroelectric, aeolic and solar parks and electricity lines. Every activity that degrades, drains or pollutes the riparian forests has been prohibited.

Zones A and B comprise the Ramsar site and have been proposed for inclusion in the NATURA 2000 network under the code GR2110001. Parts of this zones are already a Special Protection Area for Birds under the code GR2110004. The coastal parts of the area are a Mediterranean Specially Protected Area (Barcelona Convention). Part of the site is also a game refuge.

Measures have also been taken in the buffer zone of the wetland, by defining a third zone. Zone C includes parts of the drainage basin of Louros and Arachthos rivers as well as surrounding agricultural land.

Permitted activities (under specific terms) are: hunting; agriculture and cattle breeding with no further development allowed; land based or marine aqua-culture; excavation; scientific research, drilling; construction of small hydroelectric plants, wind and solar power parks and construction of electricity lines, potential extension of building areas, use of agricultural, tourist, sport and small industrial facilities; housing within the village boundaries and building of green houses, storage rooms, athletic and tourism installations, small industrial units.

These measures and zone boundaries are enforced by the authorities as a result of the Ramsar and SPA designations of the site, until a Presidential Decree is issued establishing the category of protected area under national Law.

A Preliminary Management Scheme has been operating since 1996 on the site, established by Programme Agreement signed by the Ministers of Environment and Agriculture, the Regional Environmental Services and Local Authorities. It comprises a Joint Committee for the steering of the implementation, it has a flexible administration and the required secretariat /co-ordination support is provided by a Local Development Institution named ETANAM. The Programme Agreement has an Annex with the planned works and activities, their time-table (1996-1999) and budget. Priority actions include monitoring of water quality, visitor management (placement of signs, construction of warden houses, observation towers), operation of information centres and warding of this site.

Preliminary Management Schemes have a three fold aim: 1) to respond quicker to the matters that arise concerning the every day management problems of the sites, 2) to carry out projects concerning awareness, infrastructure, monitoring and management., and 3) to co-ordinate relevant authorities in working out the further priorities for the management of the sites.

Additional measures for the conservation of fresh water quality were taken by decision 199/1991 of the Prefectures of Preveza, Arta and Ioannina, whereby it is not allowed to dispose effluents to River Louros (with the exception of aqua-culture units that have to adjust their operation to the environmental terms).

In addition, the Hellenic Ornithological Society is conducting the warding of the breeding colony of *Pelecanus crispus* in collaboration with the Tsoukalio Lagoon Fishermen Co-operative, as well as a project for the management of the Logarou lagoon in relation to bird conservation and an awareness project in the Prefecture of Arta.

The site is included in the Montreux Record since 1990. Under the Management Guidance Procedure a mission that visited Greece in 1988 described the main problems of the area. Another mission that visited Greece in 1989 described the situation further.

24. Conservation measures proposed but not yet implemented: (e.g. management plan in preparation; officially proposed as a protected area etc.)

The site is proposed for the category of National Wetland Park, according to the Law 1650/86 (legal text under preparation, in form of a Presidential Decree)

Further management proposals not yet officially approved have been elaborated for many aspects of the management of the site, as part of the documentation required for the establishment of the National Wetland Park, including the establishment of a permanent Management Scheme. The conservation actions proposed are in accordance with the "Guidelines on Management Planning for Ramsar sites and other Wetlands" and include *inter alia* : promotion of the soft tourism development of coastal areas, e management measures for grazing, management of migrating species in the rivers, improvement of water circulation and regulation of salinity in the lagoons, mapping of the remnants of riparian vegetation in Arta plain and at the beds of Louros and Arachthos, establishment of a game breeding station, evaluation of fauna biodiversity, "on the ground" delineation of the zones of the National Wetland Park, removal of unauthorised solid waste disposal .

A project of financial incentives for the voluntary implementation of environmental measures on agricultural land, under the E.U. agri-environmental regulation 2078/92 is to be submitted for approval. The project includes promotion of biological cultivation, reduction of grazing, long-term pause of cultivation and reduction of the amount of fertilisers used.

Works for the re-diversion of Krikeliotis torrent to its original course and the rehabilitation of the Katafourko lagoon are scheduled for the coming two years.

25. Current scientific research and facilities: (e.g. details of current projects; existence of field station etc.)

Several ecological studies have been produced on subjects such as land use, pollution, sustainable development and conservation management. Currently, an inventory of waterfowl and measures for the conservation of *Numenius tenuirostris* is being carried out by the General Secretariat of Forests and Natural Environment of the Ministry of Agriculture in co-operation with the Hellenic Ornithological Society.

Monitoring of water quality and fisheries management are ongoing projects. A guest house for researchers and volunteers is available near the information Centre.

26. Current conservation education: (e.g. visitors centre, hides, information booklet, facilities for school visits etc.)

An Information Centre in the old port of Koprena has been put in operation by ETANAM with the support of the Hellenic Ornithological Society. Warden houses and observation towers have been built and another Information Centre at Salaora has been recently constructed to be operational soon.

Environmental education and public awareness activities are undertaken at a wider scale by ETANAM under the Programme Agreement implemented in the area.

27. Current recreation and tourism: (state if wetland is used for recreation/tourism; indicate type and frequency/intensity)

The wetlands of the site are not used for recreation or tourism. One camp site is operating near Katafourko and another near Vonitsa, at the eastern and southern coasts of Amvrakikos which are generally considered as the best places for swimming at sea and are visited daily in the summer. In proximity to the site there are villages famous for good fish restaurants, visited by Greek nationals mostly (e.g. Koronisia, Menidi, Koprena). The whole of the surrounding area is undeveloped in terms of tourism, with about 2000 beds available to tourists in 1995. Promotion of bird watching and eco-tourism seems to be an interesting perspective for the site, as it is situated along a frequently used route along the western coast of Greece.

28. Jurisdiction: (territorial e.g. state/region and functional e.g. Dept of Agriculture/Dept. of Environment etc.)

Territorial jurisdiction over the site is split between the Region of Ipiros (western/northern part) and the Region of Dytiki Ellada (western/southern part). Concerning the functional (conservation) jurisdiction, co-ordination lies with the Ministry of Environment in collaboration with the Ministry of Agriculture, the Prefectures of Aetoloakarnania, Arta and Preveza and Local Authorities.

29. Management authority: (name and address of local body directly responsible for managing the wetland)

No single body legally responsible for the direct local management of the wetland exists. The Preliminary Management Scheme is guided by a Joint Committee presided by the Head of the Prefecture of Arta. Communication / Secretarial assistance is provided by :

ETANAM

Chr. Kontou 30,

GR-48100 Preveza

GREECE

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30. Bibliographical references: (scientific/technical only)

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