

# Information Sheet on Ramsar Wetlands (RIS)

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Designation date Site Reference Number

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**2. Date this sheet was completed/updated:** 16 April 2002

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**3. Country:** Algeria

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**4. Name of the Ramsar site:** Aulnaie d'Aïn Khiar

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**5. Map of site included:**

(a) **hard copy** (required for inclusion of site in the Ramsar List): yes  -or- no

(b) **digital (electronic) format** (optional): yes  -or- no

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**6. Geographical coordinates:**

36° 40' North latitude  
8° 20' East longitude

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**7. General location:** Commune of Berrihane, daïra of Ben M'hidi, wilaya of El Tarf

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**8. Elevation:** Between 0 and 3 metres

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**9. Area:** 180 hectares

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**10. Overview:** Typical of the environment of the Parc National d'El Kala but extremely rare elsewhere in Algeria, the riparian alder woodlands are characterized by a uniform birdlife and vegetation based on *Alnus glutinosa*, *Fraxinus aulnus*, *Glutinoso populus* and *Salix* sp., an arboreal stratum that requires high humidity. The Ain Khiar alder grove is located between the coastal dunes and the farming plain of El Tarf. It receives winter floodwaters from Oued El Kebir, which drains the whole region, transforming it into a marsh area. This small, fragile and unique ecosystem of 50 hectares is very dependant on human intervention upstream from the dunes and downstream on the plains or lakeshores, where intensive agriculture has developed unregulated and which is slowly eating away at the area of the alder grove.

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**11. Ramsar Criteria:** 1

**Criterion that best characterizes the site:** 1

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**12. Justification for application of each Criterion listed in 11. above:**

This ecosystem is of high biological and scientific importance in the Maghreb. Neither of the two neighbouring countries, Morocco and Tunisia, has reported similar formations in their countries. One author, Junqua, reported in 1954 that North African populations of *Alnus glutinosa* are found only in the area of Calle (now called El Kala). Based on this observation, this is an extremely rare natural wetland environment in the Mediterranean region that can be considered a site of international importance. In addition, the fact that it is also a bog, still not studied, increases the intrinsic importance of the site.

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**13. Biogeography**

**14. Physical features of the site:**

**Geology and geomorphology:** The area where the Ain Khiar alder grove is located, like most Algerian coastal areas, is characterized by relatively complex relief and geology. It is possible to identify several large general geomorphologic systems, low hill formations of elevations from 30 to 310 metres along an imaginary north-south line; for example Djebel Korsi, which has an average elevation of 100 metres. These low hills become dunes or sandstone hills closer to the coast and stretch over some 15 kilometres towards the south, stopping at the narrow valley of Oued El Kebir, which drains the whole region, where they form wet environments such as those of the Ain Khiar alder grove.

**Hydrology:** The Ain Khiar alder grove forms part of the El Tarf plain near Oued El Kebir and the catchment basin of the Mexna dam upstream. It is fed by the small streams and brooklets (*khelidjes* and *châabets*) of Boukchrída, El Aloui and Tchaouf. In winter, it receives the floodwaters of Oued El Kebir. Part of a low plain, it sometimes remains flooded even in the summer, above all when the late rains fall in April–May.

**Climate:** Fragmentary data on the climate of the area does not allow a detailed

description of the climatic conditions of this special ecosystem, which benefits from special conditions and a microclimate that has not yet been defined. According to Emberger's classification, most of this area is located in a sub-humid bio-climatic area characterized by cold damp winters and hot dry summers. The volume of annual precipitation varies between 717.2 and 944 millimetres. January is the month of heaviest rain. A large part of the precipitation is the result of the absence of topographical obstacles and proximity of this wetland system to the sea and the surrounding lakes of the region called El Kala. August is the hottest month, and recorded minimum average temperatures are a minimum of 8° C and a maximum of 29.7° C. The most violent winds blow in winter and the weakest in summer. The dominant winds are from the northwest, the opposite of the winds from the southwest, which bring the sirocco that can blow 14 days per year. The maximum number of days of continuous sirocco has been recorded in August when it blows for two to three days.

**Soils:** The soils are marsh soils formed by silt, widely developed on the flooded lowlands, everywhere the impermeability of the ground is tied to Numidian clays. There is silt-laden alluvial material from the valley bottoms of Oued Kebir dating from the Neo-Pleistocene period and low terraces of silt, sand and rounded pebbles in the Oued Kebir valley dating from the recent Pleistocene period.

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#### 15. Physical features of the catchment area:

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**16. Hydrological values:** The hydrological importance of this wetland is its role in storing floodwater, recharging groundwater and retention of sediments.

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#### 17. Wetland types:

**(a) presence: Inland:** N, Ts, Xf, Xp

**(b) dominance:**

N: Seasonal/intermittent/irregular rivers/streams/creeks. (oued)

Xf: Freshwater, tree-dominated wetlands; includes freshwater swamp forests, seasonally flooded forests, wooded swamps on inorganic soils.

Ts: Seasonal/intermittent freshwater marshes/pools

Xp: Forested peatlands

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**18. General ecological features:** The riparian alder woodlands, the only forest formations on the plains with deciduous species, are characterized by a specific composition of bird populations that are well adapted to the woodlands (see list in the annex). Like the high-altitude deciduous forests, they are composed of tall trees, have a heavy density of vegetation and there are varied and abundant tropic resources, especially insects. All of these resources provide habitat for a specific birdlife of great ecological interest. The presence of old trees and standing dead trees favours the populations of woodpeckers and tits, while the presence of water attracts many herons.

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**19. Noteworthy flora:** The Ain Khiar alder grove provides habitat for a flora of *Aulus glutinosa*, *Fraxinus* sp., *Populus* sp., *Salix* sp., an arboreal stratum whose

main characteristic is its requirement of humidity. The trees forming the alder grove are primarily deciduous and can reach an average height of 20 metres. Their density can reach 100 per cent in certain places, with an average density of 80 per cent.

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**20. Noteworthy fauna:** The Aïn Khiar alder grove provides habitat for a birdlife characteristic of this type of environment. Its location in the middle of a degraded forest environment gives it an important role for birdlife. Surveys of birdlife have recorded a total of 42 species. This forest environment is one of those with the greatest number of birds of prey and bird species and many Ardeidae. A list of the species recorded is given in the annex.

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**21. Social and cultural values:** If they exist, they are little known.

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**22. Land tenure/ownership:**

**(a) within the Ramsar site:** The land belongs to the government.

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**(b) in the surrounding area:** There is fallow land belonging to former autonomous farms broken into collective farms (EAC) and individual farms (EAI), and there is private property belonging to 13 persons.

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**23. Current land (including water) use:**

**(a) within the Ramsar site:** Alder grove made up of *Alnus glutinosa*, *Fraxinus* sp. *Populus* sp. and the plants usually associated with them.

**(b) in the surroundings/catchment:** The areas neighbouring the Aïn Khiar alder grove are used for agriculture; mainly cereals, the large-scale growing of tomatoes and groundnuts as a cash crop during the summer.

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

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**(a) within the Ramsar site:** There are cases of degradation and mortality of standing trees caused by illegal and unregulated pumping of water in summer for irrigation, which seriously threatens the existence of this environment.

**(b) in the surrounding area:** There is intentional and natural mortality (during drought) of trees and shrubs through fires or illegal cutting. Illegally cleared land makes up part of the area of agricultural land close to the site.

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**25. Conservation measures taken:** This is a protected site within the framework of the Parc National d'El Kala.

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**26. Conservation measures proposed but not yet implemented:** A management plan for Parc National d'El Kala has been drafted, but not yet put implemented, which provides for a series of targeted actions to be carried out over five years.

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**27. Current scientific research and facilities:** Research by the Université d'Annaba in the field of the fauna and flora for theses in engineering and post-graduate programmes is being carried out occasionally but continuously. The Centre universitaire agro-vétérinaire of the wilaya d'Annaba has also begun to carry out research.

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**28. Current conservation education:** This is part of the overall education and awareness programme developed over many years by the Parc National d'El Kala.

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**29. Current recreation and tourism:** There is no activity at the present time because of the relative isolation of the site.

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**30. Jurisdiction:** The government exercises jurisdiction through the Parc National d'El Kala and specifically by the ministries for water, agriculture and rural development through the local offices for water resources, farming activities and forests.

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**31. Management authority:**

(a) Parc National d'El Kala.

(b) The Direction des ressources en eau, which applies the water code on which all the wetlands depend.

The agency directly responsible for management of the wetland at the local level is the Parc National d'El Kala, Route de la Pépinière, El Kala, 36.000 Wilaya d'El Tarf.

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**32. Bibliographical references:**

Benyacoub S., Chabi.Y., 2000. Diagnose écologique de l'avifaune du Parc National d'El Kala.

Belair,G., 1990. Structure, fonctionnement et perspectives de gestion de quatre écosystèmes lacustres et marécageux. Doctorate thesis, Université des Sciences et Techniques de Montpellier II. (USTL II).

## Annex: Bird populations found in the alder groves and riparian woodlands

	Common name	Species	Abundance
1.	<i>Accipiter nisus</i>	Eurasian sparrowhawk	**
2.	<i>Alcedo atthis</i>	Small blue kingfisher	**
3.	<i>Ardea cinerea</i>	Grey heron	**
4.	<i>Bubulcus ibis</i>	Cattle egret	****
5.	<i>Buteo rufinus</i>	Long-legged buzzard	**
6.	<i>Certhia brachydactyla</i>	Short-toed treecreeper	****
7.	<i>Cettia cetti</i>	Cetti's warbler	****
8.	<i>Chloris chloris</i>	European greenfinch	***
9.	<i>Coccothraustes coccothraustes</i>	Hawfinch	***
10.	<i>Columba palambus</i>	Woodpigeon	***
11.	<i>Cuculus canorus</i>	Eurasian cuckoo	***
12.	<i>Dendrocopos major</i>	Great spotted woodpecker	***
13.	<i>Dendrocopos minor</i>	Lesser spotted woodpecker	**
14.	<i>Egretta garzetta</i>	Little egret	***
15.	<i>Erithacus rubecula</i>	Robin	****
16.	<i>Fringilla coelebs</i>	Chaffinch	****
17.	<i>Gallinula chloropus</i>	Moorhen	***
18.	<i>Hieraaetus pennatus</i>	Booted eagle	**
19.	<i>Hippolais pallida</i>	Olivaceous warbler	**
20.	<i>Milvus migrans</i>	Black kite	**
21.	<i>Muscicapa striata</i>	Spotted/Brown-streaked flycatcher	***
22.	<i>Nycticorax nycticorax</i>	(Black-crowned) night-heron	**
23.	<i>Oriolus oriolus</i>	Eurasian golden oriole	***
24.	<i>Otus scops</i>	Common scops-owl	**
25.	<i>Parus caeruleus</i>	Blue tit	****
26.	<i>Parus major</i>	Great tit	***
27.	<i>Phylloscopus bonelli</i>	Western Bonelli's warbler	***
28.	<i>Phylloscopus collybita</i>	Chiffchaff	***
29.	<i>Picus vaillantii</i>	Levaillant's woodpecker	***
30.	<i>Pycnonotus barbatus</i>	Common bulbul	***
31.	<i>Regulus ignicapillus</i>	Firecrest	***
32.	<i>Serinus serinus</i>	European serin	***
33.	<i>Streptopelia turtur</i>	European turtle dove	***
34.	<i>Strix aluco</i>	Tawny owl	**
35.	<i>Sturnus unicolor</i>	Spotless starling	***
36.	<i>Sylvia atricapilla</i>	Blackcap	***
37.	<i>Sylvia cantillans</i>	Subalpine warbler	**
38.	<i>Sylvia communis</i>	Common whitethroat	**
39.	<i>Sylvia melanocephala</i>	Sardinian warbler	**
40.	<i>Troglodytes troglodytes</i>	Winter wren	****
41.	<i>Turdus merula</i>	Blackbird	***

Abundance:

- \*\*\*\* Abundant species (systematically observed)
  - \*\*\* Common species (frequent contact without being systematic)
  - \*\* Uncommon species (contact requiring a certain effort to find)
  - \* Rare species (random contact)
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