

## Information Sheet on Ramsar Wetlands

1. Date this sheet was completed/updated: 28 January 2001

2. Country: Algeria

3. Name of wetland: Marais de la Macta

4. Geographical coordinates:

35° 41' North latitude  
0° 10' West longitude

5. Altitude: 0 to 9 metres

6. Area: 44,500 hectares

7. Overview:

The Macta Plain is a triangular depression defined by a dune barrier separating it from the Gulf of Arzew, by the Arzew Sebkh mountains to the northwest and to the northeast by the southern slope of the Mostaghanem plateau, the Sig Plain and the Habra, which is its continuation, reach the foothills of the Tell Atlas in the south, and by the Ouled Ali Hills between Béni Chougrane and Mohammadia. These plains are fed by a series of *oueds*, the most important of which are from west to east Oued Sig, Oued Habra and Oued Tinn. The Macta Plain has areas of open water, marshes and humid steppes below 9 metres in elevation.

8. Wetland type:

Marin: A, B, C, D, E, F, G, H, I, J, K, Zk(a)

Continental: L, M, N, O, P, Q, R, Sp, Ss, Ts, U, Va, Vt, W, Xf, Xp, Y, Zg, Zk(b)

9. Ramsar criteria: 1, 2, 3, 4, 5, 6, 7, 8

Criteria that best characterize the site: 310

Map of site included? Please tick yes -or- no

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

Mme Ameur Naziha  
Chef de bureau des zones humides  
Direction de la Protection de la Flore et de la Faune  
Direction Générale des Forêts, Chemin Doudou Mokhtar  
Ben Aknoun, Alger, Algeria  
Tel.: (213 2) 91 53 14/52 86

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

Criterion 1:

The Marais de la Macta represents a rare type of wetland in North Africa because of its diversity of environments and *sansouires* similar to the environment of the Camargue in France. This site is unique in Algeria because of the presence of a diversity of associations of annual Salsolaceae, which seldom form these associations in other regions.

Criterion 3:

The Marais de la Macta contain wide biological diversity, and there is a variety of halophylic plant species, many invertebrates and fish. The bird life has been studied by ornithologists, who have proposed protection for this site since the 1970s (see annex). Metzmacher recorded 47 species of waterfowl, including 17 waders, 11 marine species, 16 species of birds of prey and many terrestrial species, as well as rare species such as the little bustard (*Tetrax tetrax*) and the *sarcelle marbrée*. The presence of heavy vegetation allows species such as the *poule sultane*, the *butor étoilé* and the *héron pourpré* to nest. The nesting here of several species (the *sarcelle marbrée* and the *tadome casarca*) has been confirmed in the past. The little bustard and the pink flamingo have been recorded here year round (Ledant et al. 1981). Fish in this region are represented by the eel (*Anguilla anguilla*), which penetrates into this area through the outlet of the *oued* to the Mediterranean, plus the carp (*Cyprinus carpio*), the *barbeau* (*Barbus sp.*) and the *gambuse* (*Gambusia affinis*). Many amphibians and reptiles are also present. In spite of its importance, this site has hardly been studied compared to the wetlands of El-Kala.

13. General location:

The Marais de la Macta is located mainly in the wilaya of Mascara and partly in the wilaya of Mostaghanem and Oran. The marshes are located 17 kilometres from the city of Mohammadia and about 50 kilometres east of Oran.

14. Physical features:

Geology: The Macta Plain is a subcoastal area separated from the Gulf of Arzew by a series of dunes. There are variations in the alluvium, and some soils are formed by alluvial salifer clay. The marshes themselves are on silt-clay alluvial deposits. The geological formations date from the *Mécanisiez* and are responsible for the salinization of the subcoastal plains in the region of Oran. Another source of salinization is evaporation of the lagoon that formed on the Habra Plain after the collapse of the *Thyrréneide* and the pre-Flandrian intrusion, which again filled the large depression with sea water. Evaporation of this volume of water has contributed to an increase in the amount of salt in the alluvial strata. The clay soils in most of the low plain have a high level of chloride in their surface horizons.

Hydrology: The Marais de la Macta is part of the large watershed of the Macta covering 1,368,677 hectares. It is supplied by three permanent *oueds*: Oued Tinn, Oued Habra and Oued Sig. Oued Sig supplies more water to the low plain than the two others, which are partly channelled up to the Macta River and now drain directly into the Mediterranean. The low topography of this plain prevents run-off from draining easily through a dense network of streams. This facilitates the flooding of the northern part where the altitude is less than 1 metre. Water salinity can reach 3.7 to 11.3 g/l. In Lake Bounefer, salinity varies between 12 and 60 g/l.

Climate: The rains in this region are often torrential and fall during an average of about fifty days per year from October to April–May. The winter is characterized by mild temperatures. The dry season is from June to September with July and August completely dry and very hot. The average temperature for the hottest month is 33° C, while that of the coldest month is 8° C. These plains are swept by winds, which, depending on their origin and the season, soften or exacerbate the climate. Most of them blow from the northwest or the west; more rarely from the north, except in summer. A southerly wind, the *sirocco*, can rise in any season. It should be pointed out that the drought that affected Western Algeria during the past ten years has determined the amount of water in the wetlands, especially in the Macta.

#### 15. Hydrological values:

The real function of the marshes has not been studied, but this wetland is a sediment sump that mitigates flooding because of its low altitude.

#### 16. Ecological features:

Several habitats are identifiable on the plain: the wetlands, which are formed by marshes, a low plain, small lakes (*sebkhass*), areas of steppe formed by halophytic plant associations, wooded areas and cultivated fields. The Macta Plain has bodies of water, marshes and humid steppes located in most cases below 9 metres. The wettest area is approximately 100 square kilometres, but clearly varies according to rainfall. Its northern and western boundaries are well marked, while those of the south-west, the marshes themselves, are usually identifiable because of the existence of clay dikes. In the western part of the plain, there are open bodies of water with vegetation, which are closely related to these marshes. Permanent ponds fed by water from Oued Sig are permanent year round. To the west of Oued Tinn, there are several large and shallow temporary bodies of water surrounded by areas of bush and tamarisk. The area around Oued Habra also has areas of seasonally flooded tamarisk that are difficult to access.

On the low plains, a large area of *halipède* steppe marks the transition from the wetlands to farmland. The steppe serves as a nesting site for birds and is a grazing area. Fields of cereals and vineyards are found on the plateaux and on the plains that are unaffected by salinity. The wooded areas on the flanks of the Sig Hills are formed mostly of Aleppo pine (*Pinus alepensis*) and those

on the dunes of the Macta Plain of juniper. The wooded areas of tamarisk, which formerly covered large areas, have retreated and now cover only very small patches.

#### 17. Noteworthy flora:

The Marais de la Macta is home to a diversified flora represented by associations of annual Salsolaceae, which according to Simmoneau are rare in North Africa. There is also *Salicornia europea*, which is extremely rare in North Africa and especially in Algeria, plus *Spergularia doumerguaei*, endemic to the coast around Oran, which has been found in only 2 or 3 places. There is also *Sueda maritima*, which rarely forms large populations. Many associations were identified in this wetland by Tafer in 1993. There are:

- an association of *Scirpus maritimus*, which includes *Juncus maritus*, *Juncus subulatus*, *Ranunculus aquatilis* and *Rumex crispus*.
- an association of *Scirpus maritimus* and *Juncus subulatus*
- an association of *Tamarix africana* and *Salsola oppositifolia*
- an association of *Atriplex halimus*
- an association of *Sueda fruticosa*
- an association of *Inula crithmoides*
- an association of *Salicornia fruticosa*
- an association of *Arthrocnemum macrostachyum*

In the flooded parts, *Potamogeton pectinatus*, *Ruppia maritima* and *Zanichellia palustris* grow.

#### 18. Noteworthy fauna:

The Macta is known for the bird life that it contains, especially during the winter. Several migratory species nest in this area. In studies of this region, Metzmacher identified the following species:

Waterfowl:

**Anatidae:** oie cendrée, tadorne de Belon, tadorne casarca, canard colvert, sarcelle d'hiver, sarcelle marbrée, sarcelle d'été, canard chipeau, canard siffleur, canard pilet, canard souchet, fuligule milouin, fuligule morillon, fuligule nyroca, nette rousse, macreuse noire

**Ardeidea:** héron pourpré, little egret (*Egretta garzetta*), cattle egret (*Bubulcus ibis*), héron crabier, héron bihoreau, héron cendré, butor étoilé, butor blongios, échasse blanche

**Ciconiidae:** cigogne blanche

**Gruidae:** grue cendrée

**Laridae:** goéland brun, goéland argenté, goéland d'audouin, goléand railleur, mouette mélanocéphale, mouette rieuse, mouette pygmée

**Limicoles:** avocette-huitrier pie, grand gravelot, petit gravelot, gravelot à collier interrompu, pluvier argenté, pluvier doré, vanneau huppé, tourne pierre à collier, bécassine des marais, bécassine sourde, courlis corlieu, courlis cendré, barge à queue noire, barge rousse, chevalier guignette, chevalier cul-blanc, chevalier sylvain, chevalier gambette, chevalier arlequin, chevalier

*aboyeur, chevalier stagnalite, chevalier combattant, bécasseau variable, bécasseau minute, bécasseau de Temminck, bécasseau sanderling, bécasseau cocrli* **Phalacrocoracidae**: *grand cormoran*

**Phoenicopteridae**: *flamant rose*

**Podicipedidae**: *grébe huppé, grébe à cou noir, grébe castagneux*

**Rallidae**: *râle d'eau, poule d'eau, poule sultane, foulque macroule*

**Stercorariidae**: *grand labbe*

**Sulidae**: *fou de Bassan*

**Ternidae**: *sterne naine, sterne caugek, sterne hansel, sterne caspienne, strene pierregarin, guifette noire, guifette leucoptère, guifette moustac*

**Threskiornithidae**: *ibis falcinelle, spatule blanche*

Birds of prey: *percnoptère d'Égypte, aigle royal, aigle ravisseur, aigle de Bonelli, aigle botté, buse féroce, milan noir, busard des roseaux, busard Saint Martin, busard cendré, circaète Jean le blanc, balbuzard pêcheur, faucon pèlerin, faucon d'Eléonore, faucon lanier, faucon crécerelle, chouette effraie, hibou grand duc, hibou moyen duc, chouette chevêche*

Land birds: *œdicnème criard, glaréole à collier, outarde canepetière, perdrix gabra, caille des blés*

Other non-passeriformes: *pigeon biset, pigeon ramier, tourterelle des bois, coucou gris, coucou geai, martinet pâle, martinet noir, martinet alpin, martin pêcheur d'Europe, huppé fasciée, torcol fourmilier*

#### 19. Social and cultural values:

The Macta wetland is used by local inhabitants and nomads during the dry season for grazing sheep and cattle because of the presence of halophylic species sought by the ungulates.

#### 20. Land tenure/ownership of:

At the site: The lakes and the flooded areas are part of the public aquatic domain.

In the surrounding area: The surrounding area is public land, but there are several enclaves of private land.

#### 21. Current land use:

The main activities found in this wetland are agriculture and livestock raising. There are many collective (EAC) and individual farms (EAI) on the edge of the site (126 EAC and 20 EAI), which cover about 10,000 hectares. Bee-keeping is also carried out. The Marais de la Macta offers a grazing area for cattle almost year round and is used during the period of summer migration by nomads for grazing sheep.

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

The partial blocking of the entrance to Oued Sig in the summer leads to a partial drying of the large bodies of water, which in turn affects the bird and fish populations during periods of drought. The woodlands on the Macta dunes have degraded, because of unorganised cutting of tamarisk and other species by local inhabitants. The *oueds* have been polluted several times. The Marais de la Macta and specifically the steppes and farmland have been subjected to an important human activity based on agriculture and livestock raising that should be regulated or even prohibited in areas of great biological interest. Drought is perhaps the most negative natural factor now affecting the Macta.

#### 23. Conservation measures taken:

At the present time, there is no specific conservation status for this area. The wooded areas are managed by the forestry administration, and the wetlands are part of the public aquatic domain. Farmland is either private or public property.

#### 24. Conservation measures proposed but not yet implemented:

Many scientific studies have confirmed the international importance of the Marais de la Macta. In 1983, M. Metzmacher of the Institut de Zoologie at Liège, Bernard Ochando-Bléda of the Institut National Agronomique of El-Harrach, Jean-Paul Jacob of the Belgian Institut royal des sciences naturelles, Annie Jacob Remacle of the Faculté des Sciences Agronomiques at Gembloux, Dolf van Wijk of the Faculté des Sciences catholiques at Toernooiveld (Netherlands), Paul Rutjes of the Ministère de l'Agriculture et de la pêche (Netherlands) pointed out the need to preserve the Marais de la Macta and proposed its designation as protected areas. At the end of the 1980s, the first attempt to designate the Marais de la Macta as a nature reserve by the government was begun without results. The Direction Générale des Forêts is now studying that request, and steps are now being taken for designating it as a nature reserve, which should be completed this year.

#### 25. Current scientific research and facilities:

The Marais de la Macta benefited from financial help from the FPS of the Ramsar Convention in 1996 through the Agence Nationale pour la protection de la Nature. While the results of that study are not available, they should be ready soon.

#### 26. Current conservation education:

Only one local NGO is currently active in the promotion of education and public awareness about conservation. The Conservation des forêts territoriales for this area intends to carry out an awareness campaign within the project for designation.

#### 27. Current recreation and tourism:

There is no significant tourism in the wetland, but in the nearby dune area, which connects with the Mediterranean, there are visitors in the summer from the nearby wilaya. The designation of the nature reserve provides for the annexation of this part, because it is a very rich ecological area and will be a buffer area for the wetland.

#### 28. Jurisdiction:

Territorial jurisdiction is the responsibility of the government through the wilaya, namely Mascara, Oran and Mostaganem. Functional jurisdiction is provided by the services of the ministries for water, agriculture and the environment.

#### 29. Management authority:

Conservation des Forêts de Mascara will be responsible for the management of this site after it has been designated as a nature reserve.

#### 30. References: