

The Mediterranean Disturbance Wetlands Management in Algeria: A Case Study on *Chott Ech Chergui*

BY

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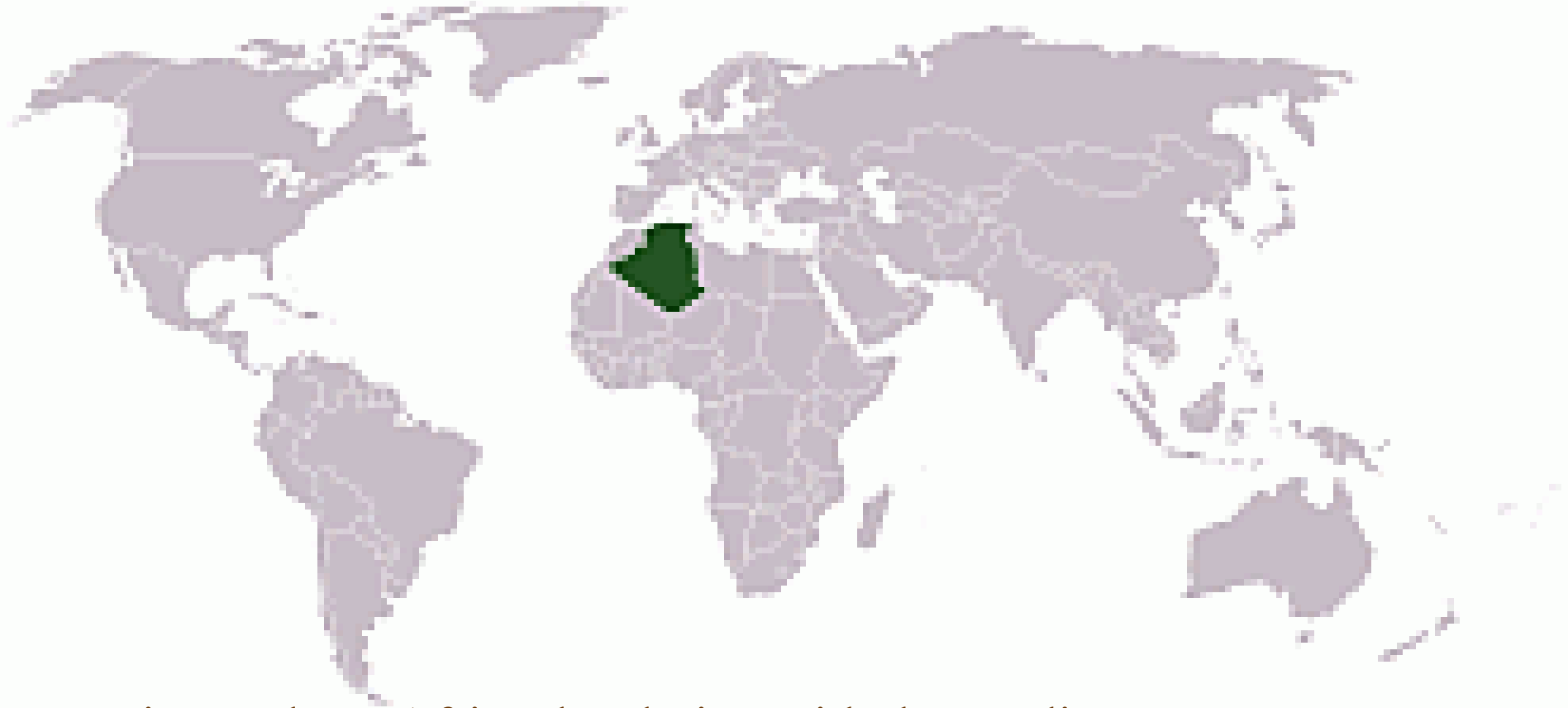
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Geographical Location of Algeria



It is Northern Africa, bordering with the Mediterranean sea, between Morocco and Tunisia other border countries Lybia, Niger, Mali, Mauritania and W. Sahara. The 2nd largest country in Africa after Sudan. The area is 2,381,740 sq.km, Algiers is the Capital city.

Introduction

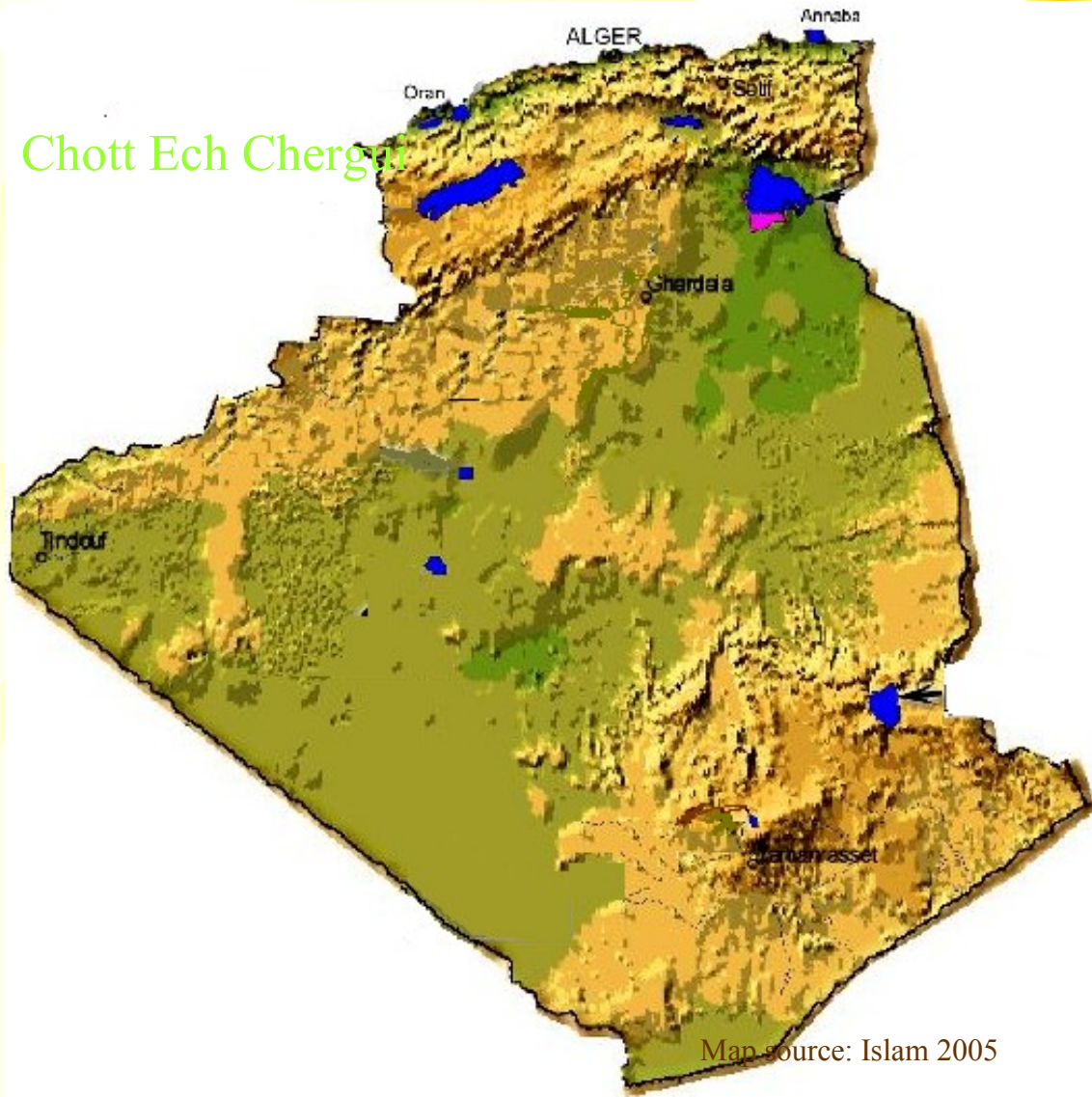
For Thousands of years, the Wetlands around the Mediterranean basin have provided essential services to the people of the region water, food, materials, transport and have acted as a backdrop to their social and cultural activities.

- In the 20th century, Mediterranean wetlands have been destroyed and degraded to present water borne diseases, to expand agriculture and to create room for construction of housing, industrial and tourist facilities for increasing human populations.
- Spain has lost 60% of its original wetlands, while 15% of the area of lakes and marshes in northern and central Tunisia, but 84% of the wetland in the Tunisian catchment of the river Medjerdah, the major river flowing from Algeria into northern Tunisia were lost between 1881 and 1987. Algerian Chotts are under threatened.

The Location of Chott Ech Chergui Wetland

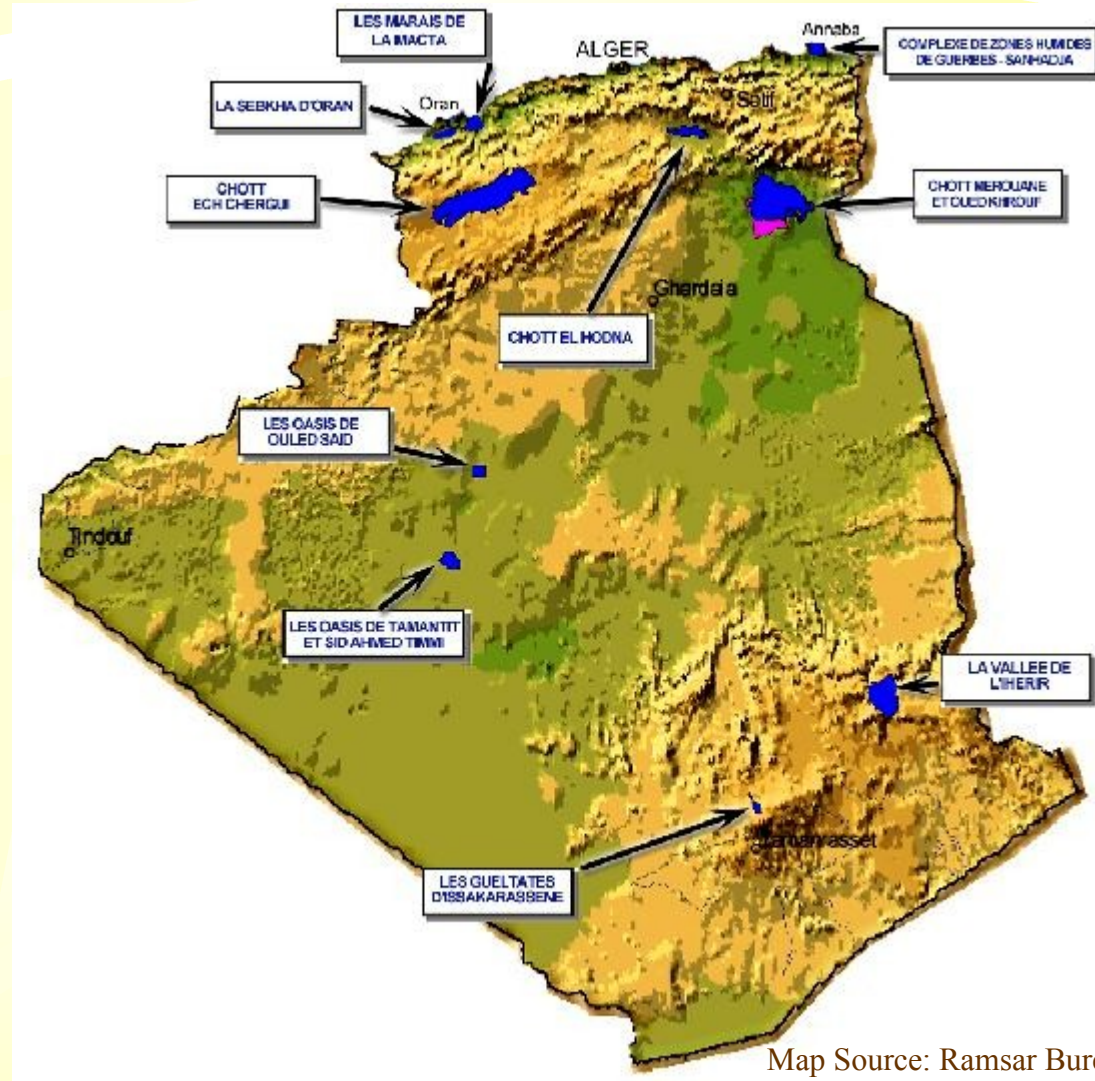
Chott Ech Chergui is located on the high Oran plains, 80 km Southeast of the Wilaya district and 530 km Southwest of Alger.

Chott mean the depression surrounding a salt marsh or lake, especially in North Africa. Another meaning in French, from arabic -salt, bank or coast in the paper Chott Ech Chergui is the name of a largest wetlands of north west Algeria



Wetlands Site Location in Algeria

Almost 13 wetlands in Algeria and 3 are the biggest Chotts in the Northern portion of Country.



The Location of Chott Ech Chergui

Mediterranean Sea

ALGER

Annaba

Chott Ech Chergui

Oran

Souf

Coordinates: 34° 27'N and 00° 50'E

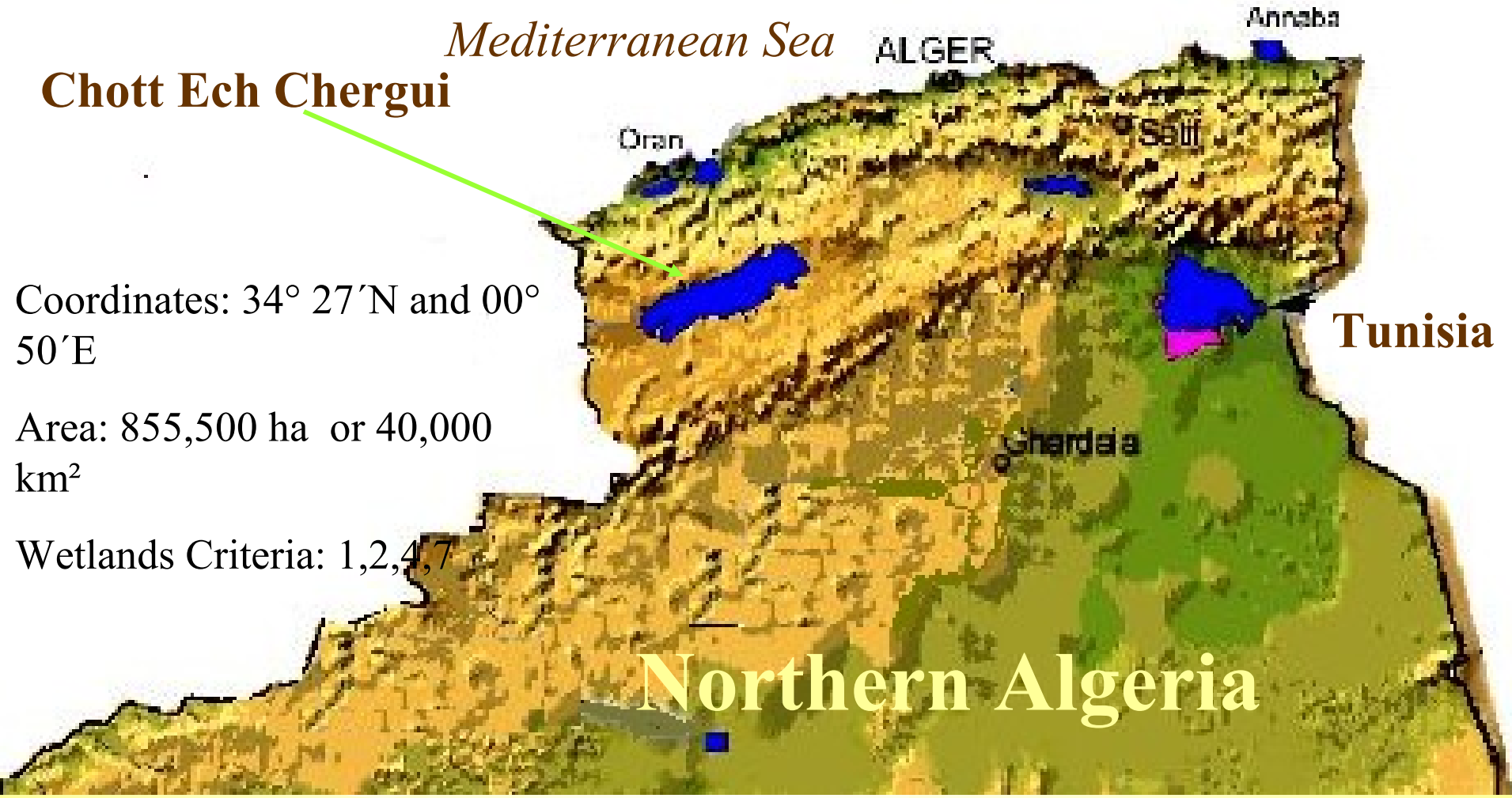
Area: 855,500 ha or 40,000 km²

Wetlands Criteria: 1,2,4,7

Tunisia

Ghardaia

Northern Algeria



Objectives of this Study

The objectives of this paper are as follows;

- To obtain understanding about Mediterranean wetlands characteristics.
- Discuss about the importance in the local economy and adequate management strategies for ecosystems protection
- Make Recommendations for future development and comprehensive management of Chott Ech Chergui wetland in Mediterranean basin area

Importance of Mediterranean Wetlands

- In fact, METs are second only to the tropics in terrestrial biodiversity
- Several Areas of MTEs have been identified as among the first few plant biodiversity hot-spots of the world
- Many of the world's agricultural, horticultural and medical plants are of Mediterranean origin.
- MTEs are feeding and nesting grounds for an important number of migratory birds



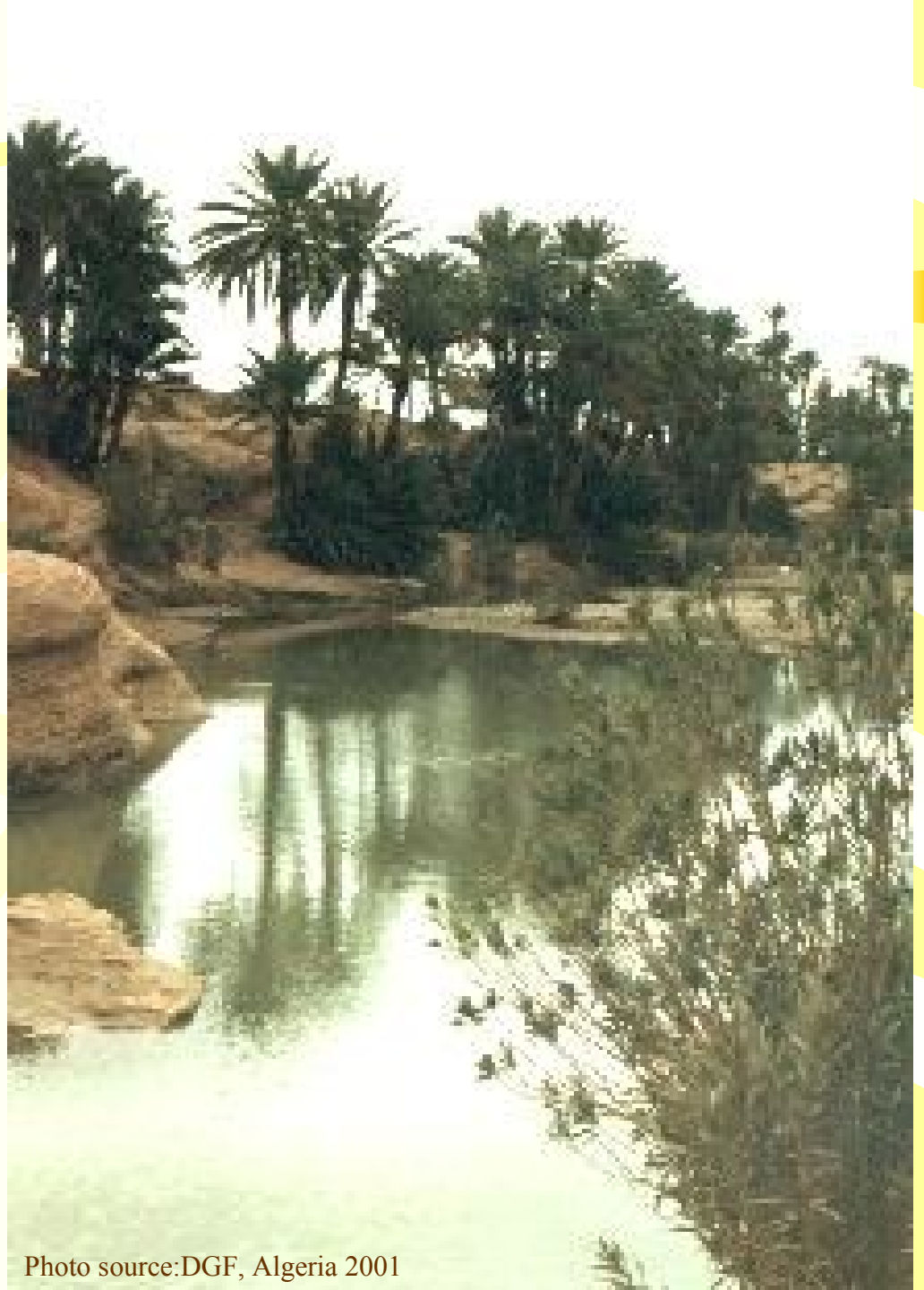
Wetland Types of Chott Ech Chergui

- The Considered types: Sp, Ss, Tp, Xf, and Zg
- Chott Ech Chergui is an area with abundant saltwater and brackish wetlands and thermal hot springs. Largest closed water basin in Algeria with an area 40, 000 sq.km
- It is representative of the Mediterranean wetlands, especially of its diversity of habitats, and green steppes around the *Chott and sebkhas*



Hydrology

- Chott Ech Chergui is a closed basin with slight relief
- Average water depth 25cm which is absorbed into the ground and enters underground circulation flowing to the lowest part of the basin
- The loam soils, lying over the calcarous rocks
- The climate is semi-arid, cold winter, hot summer.
- Temperature and rainfall- 14.8° c and 276 mm



Geomorphological Features



Photo Source: DGF, Algeria 2001

Endangered and Vulnerable Species

Such as a relic forest of Aleppo pine (*Pinetun alepensis*) substratum of threatened



Aythya nyroca

Shrubs (*Quercus ilex*)

- *Juniperus oxycedrus*

- *Pistacia lentiscus*

- *Rosmarinus tourniforti*

- *Jasmenum fructicans*

Chott Ech Chergui is very important Nesting and wintering site for several species of migratory waterbirds among which are at least two vulnerable species of Anatidae;

- *Aythya nyroca*

- Marmaronetta wildlife- bustard (*Chlamydotis undulata*) and mountain gazelle (*Gazella gazella*)

Biological Notes for Chott Ech Chergui Wetland

There are Three characteristic of wetland species are available;

- *Tamarix boveana*
- *Tamarix gallica*
- *Ziziphus lotus*

A humid forest of Tamrisk is found in the south-western part
Of the Chott Ech Chergui Wetland area

Human Activities and Threats

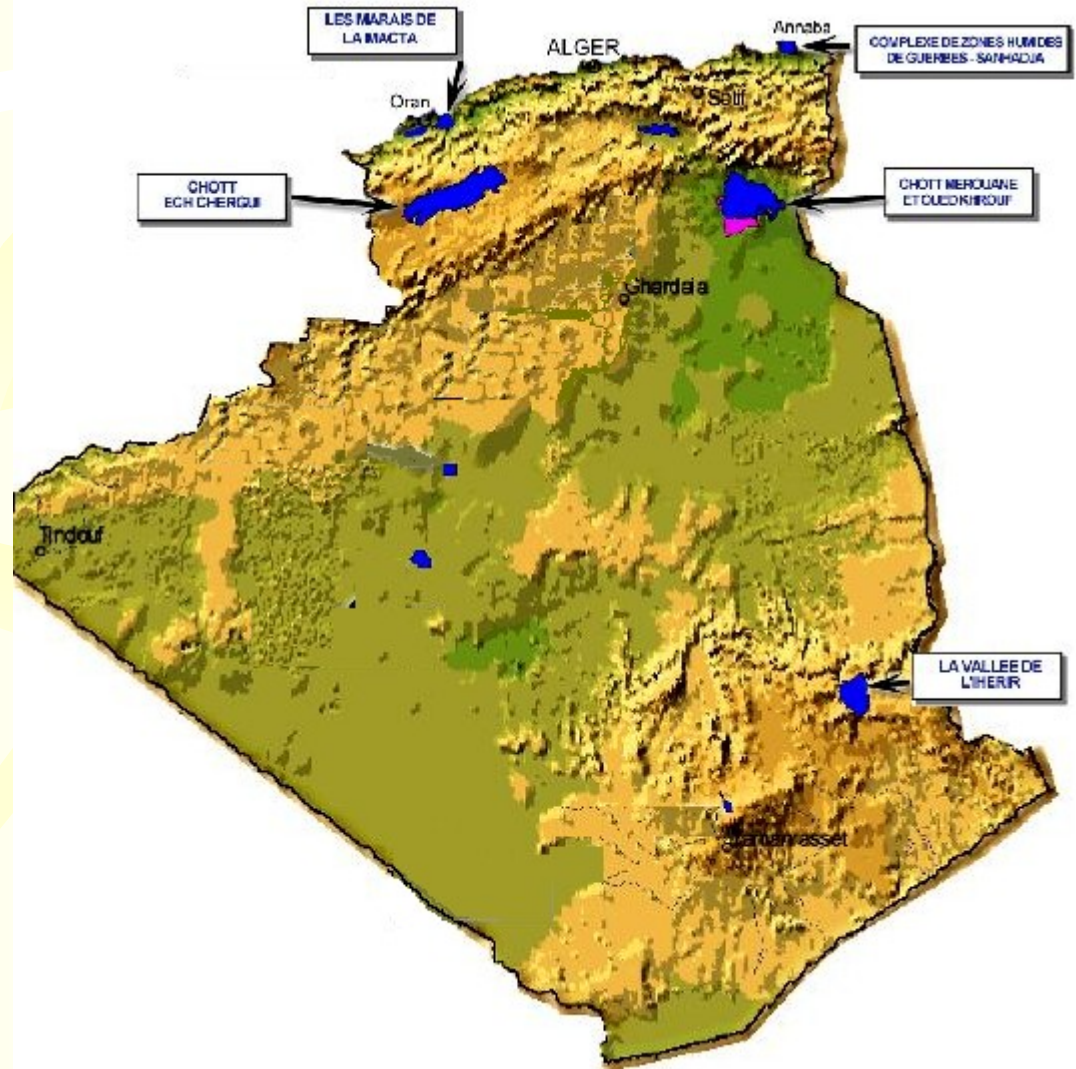
- **The land is government ownership**
- **Two Settlements over there**
- **Most Important is livestock raising**
- **Other activities are agriculture and Tourism**
- **Collection of Fuelwoods**
- **Salt marsh for Nesting**
- **Indigenous Medicinal Plants collection**



Photo source: DGF, Algeria, 2001

Role of Chott Ech Chergui

- Local Economy- balance ecosystems through such activities, two villeagers around the *Chott* are independent on this wetlands
- Mediterranean medicinal plants suppliers
- Irrigation for agriculture
- Fishing for locals
- Livestock grazing for sheeps and camels
- Tourism



Map Source : Ramsar bureau web 2004

Potential Threats

The Potential Threats of Chott Ech Cergui

- **Over Grazing**
- **Poaching**
- **Desertification**
- **The Burning of tamarisk**
- **Cutting of firewood**
- **Collection of fodder**
- **Global warming**
- **Substantial use of storage water**
- **Tourism is the threats for local Culture and Heritage**

Present Management

The Management Authorities are the Water Service of the Wilaya of Saida district and The forestry administration of Chott Ech Chergui

- **No Management plan until now for wetlands management**
- **No integration between two administrative departments**
- **Local participation in policy making and management process would be a practical solution for management and protection of Ecosystems**
- **A national wetlands management plan is necessary and it is essential right now.**

Conservation Measures

There are no Conservation measures have been taken until now

- **The Forestry Administration of Chott Ech Chergui intends to list the area as a nature reserve for its biological diversity**
- **The conservation strategies and policies are still missing , so the site protection , promotion and development process are inadequate.**

National Wetlands Policy Should be Ensure the Following

- **To stop wetlands conversion and degradation**
- **Maintain the ecological process and Mediterranean ecosystems function of wetlands**
- **To establish policy and principles for wetlands resources utilisation on a wise and sustainable basis**
- **Protect biological diversity and ecological process while ensuring the local benefits**
- **Ensure the participation of local community , NGOs and other concern agencies in policy making process**
- **Ensure the application of SEAs and EIA and use GIS software would be a proper tool for wetland management and conservation in Algeria**

Concluding Remarks

- **The highest priority should be given to the protection of the last richest plant refugees of the semiarid eco-tone in Algeria and Mediterranean region**
- **This high cultural and natural valued area which is serving as buffer zone with nature reserves and parks, should be declared as manage landscape are and biosphere reserve**
- **For the greater benefits the hard economic benefits should be continued and the traditional Agropastoral land uses should be restored**
- **Highly disturbed wetlands site , multipurpose restoration aforestation and water storage should be carried out, using **Chiefly Mediterranean** indigenous plants**

Conclusions

The Mediterranean Wetlands habited is affected by human activities such as Chott Ech Chergui . The role of Mediterranean wetlands had and have a incomperable role in Mediterranean economy and balance ecosystems.

- For the protection of such *Chott* it is necessary to develop a integrated national wetlands management plan .**
- Community involement should be considered as priority basis in policy making and implementation stage.**

Thank You
For Your Attention