

Information Sheet on Ramsar Wetlands

1. **Date this sheet was completed/updated:** February 1996
2. **Country:** VENEZUELA
3. **Name of wetland:** Refugio de Fauna Silvestre and Reserva de Pesca Ciénaga de Los Olivitos

4. **Geographical coordinates:**

10°50'52"N - 10°58'48"N
71°19'11"W - 71°33'12"W

5. **Altitude:** at sea level
6. **Area:** 26,000 hectares

7. **Overview:**

This area is a marine coastal wetland subject to the influence of tides with its hydrology determined by the water received from the Bahía de El Tablazo and the Gulf of Venezuela to the west and from the Palmar and Cocuiza rivers to the east. There are four habitats represented here: mangrove, lagoon, salt marsh and beach. A large number of migratory birds are found here including the flamingo and important commercial species of fish.

8. **Wetland type:**

5, 7, 8, 9

9. **Ramsar criteria:**

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

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

Dirección de Areas Naturales Protegidas del Servicio Autónomo PROFAUNA
Ministerio del Ambiente y de los Recursos Naturales Renovables (MARNR)

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

The Refugio de Fauna Silvestre Ciénaga de Los Olivitos is of great ecological and social importance because it is the home for many species of aquatic vertebrates and invertebrates which are the basis for the local economy based on fishing. In addition, it is the habitat of a

large number of species of migratory and resident birds such as the flamingo (*Phoenicopterus ruber*) and aquatic shorebirds that use the site for reproduction, feeding and resting. This region is also a reserve for species threatened with extinction such as the *caimán de la costa* (*Crocodylus acutus*), the manatee (*Trichechus manatus*) and sea turtles.

This region is also surrounded by important industrial activities such as the extraction of salt and shrimp hatcheries operating under permit whose activities has been studied for their effect on the environment. It is an example of sustainable development combined with environmental conservation.

13. General location:

This reserve is in the municipalities of Miranda and Insular Almirante Padilla in the state of Zulia, 50 kilometres from the city of Maracaibo.

14. Physical features:

Geology: This area belongs geologically to the Lake Maracaibo basin and is from the Cretaceous period, a result of the uplifting of the Venezuelan Andes and the Sierra de Perijá whose basin sank gradually after the Eocene accumulating a large layer of sediments.

Geomorphology: This area is a submerged coastal plain exposed simultaneously to marine and terrestrial influences having a flat topography with slopes of less than 1 per cent. The main types of relief are dunes, beaches, pools, swamps, a estuary lined with mangroves, alluvial deposits and a subsurface of marine clays.

Hydrology: The hydrology of the Los Olivitos swamp is influenced by the water which it receives from the Bahía del El Tablazo and the Gulf of Venezuela through the Nuevo, Oribor, Perejil and Viejo canals that are subject to semidiurnal/diurnal tides and on the other hand by the runoff from the Cocuiza and Palmar river basins which have an unstable regime and which flood sporadically. Both rivers loose their water in broad alluvial fans before reaching the swamp.

Soils: The soils in the swamp are the result of alluvial deposits and are formed by poorly sorted particles of gravel, sand, clay and muds. They have little organic material and are frequently flooded. Because of these conditions, this area has a low agricultural capacity placing it in classes VII and VIII, making it an important environmental buffer zone.

Water quality: The waters in the swamp are highly productive and subject to sea and river influences. Salinity increases with depth, but decreases throughout the area during the rainy season. Solids in suspension range from 250 mg/l to 1,200 mg/l. Dissolved oxygen is found at 90 per cent of saturation. Water is transparent between 0.7 and 1.1 metres. No presence has been found of heavy metals or organic chlorides. Concentrations of mercury in the sediment reach values of 0.03 mg/kg; quite low in relation to that found in neighbouring areas.

Tides: Semidiurnal tides predominate in this area. There is a node where the tidal difference and the tidal velocity are greatest and a node where the difference in tides and the velocity is the least.

Climate: This area has a dry climate and is situated in the tropical thorny bush characteristic of the western coast of Venezuela. Precipitation, between 250 mm and 500 mm, has a bimodal pattern with intense rains of short duration. Evaporation is high with an annual average of 2,978 mm and an annual temperature of 27.8°C.

15. Hydrological values:

The Ciénaga de Los Olivitos has large areas of natural salt flats that are exploited on a small scale by 71 independent land owners and on a larger scale by only one company. There are also four companies raising shrimp subject to regulations and forced to evacuate water towards the south and east of the swamp.

The physical limitations of the soil and water resources make this reserve unfit for agriculture, ranching or for human settlement.

16. Ecological features:

There are four types of habitat in the Ciénaga de Los Olivitos: mangroves located in the western part of the swamp in parallel bands the length of the Bahía del El Tablazo forming a surface of roughly 4,000 hectares.

The lagoons cover a surface of 20,000 hectares. Salt flats are located on the eastern and southern edges of the swamp, while open sand beaches with dunes are found along the northern edge covering 1,880 hectares.

17. Noteworthy flora:

This is an area of mangroves formed by *mangle rojo* (*Rhizophora mangle*); *mangle negro* (*Avicenia nitida*); *mangle de botoncillo* (*Conocarpus erectus*); and *mangle blanco* (*Laguncularia racemosa*).

18. Noteworthy fauna:

See appendices

19. Social and cultural values:

The municipality of Miranda, where this reserve is located, has several sites declared national historical sites. It is also here that are found the only beaches suitable for bathing which are a recreational resource. The inhabitants of this municipality have traditionally been fishermen.

20. Land tenure/ownership of:

Land tenure at the site is mixed, although the management of the area is in the hands of the government through the Ministry for the Environment and Renewable Natural Resources. Land tenure in the surrounding area is also mixed.

21. Current land use:

At the site: Small and large-scale extraction of salt; shrimp hatcheries; small-scale fishing.

In the surrounding area and basin: small and large-scale fishing; salt extraction; manufacturing industries; construction.

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

Potential disturbances are an increase in salt extraction and in the raising of shrimp. In the surrounding area, the use of water resources in the shrimp farms and the salt pans is a potential threat.

23. Conservation measures taken:

The Ciénaga de Los Olivitos, a proposed Ramsar site, has a protected status as a wildlife and fisheries reserve as established by a law of November 1986 and boundaries which were increased by a law of October 1991.

24. Conservation measures proposed but not yet implemented:

An operational management plan is being prepared to regulate use.

25. Current scientific research and facilities:

A survey of birdlife associated with the wetland:

- Numbers and species of birds
- Nesting
- A survey of the flamingo population
- Los Olivitos as a transit area for migrating beach birds

A survey of the animal populations:

- A survey of vertebrates (now in the final stages)
- A study of the benthic micro invertebrates and their relation to the abundance and distribution of flamingos
- Monitoring of sea turtles
- A fisheries survey
- A fisheries management plan

A management study of aquatic habitats:

- A study of the ecology and the seasonal dynamics of the benthic invertebrate fauna in the reserve
- Construction of an island for flamingos
- Monitoring of the activities of the shrimp and salt companies

26. Current conservation education:

The following programmes are being carried out: preparation of visiting paths and workshops and meetings with fishermen, local inhabitants and village populations

27. Current recreation and tourism:

An agreement is being negotiated to develop an ecological tourism management plan with the participation of the regional governments, the private sector, the Corporación de Turismo, the Universidad del Zulia, other partners and PROFAUNA.

28. Jurisdiction:

29. Management authority:

Ministerio del Ambiente y de los Recursos Naturales Renovables (MARNR)
Servicio Autónomo PROFAUNA
Dirección Regional del MARNR of the State of Zulia through the División
PROFAUNA
Jefatura del Refugio de Fauna Silvestre in Ancón de Iturre in the municipality of
Miranda

30. Bibliographical references: