

## INFORMATION SHEET ON RAMSAR WETLANDS

1. Country: Guatemala
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5. Name of wetland: Manchón-Guamuchal
6. Date of Ramsar designation: 25 April 1995
7. Geographical coordinates:
 

A. El Tular	14°30'05"N - 92°11'20"W
B. Los Cerritos	14°31'13"N - 92°10'05"W
C. Poza Honda	14°31'18"N - 92°06'57"W
D. Pamaxan	14°30'19"N - 92°05'35"W
E. El Chico	14°31'37"N - 92°03'54"W
F. Bifurcación Rio Ocosito	14°30'18"N - 92°02'05"W
G. Pampa del Diablo	14°27'13"N - 92°02'35"W
H. Manaquillales	14°26'52"N - 92°02'12"W
I. Hacienda la Dicha	14°23'46"N - 92°00'12"W
J. Cruce al Manchon	14°22'48"N - 92°01'27"W

(see also Figure 1)
8. General location:
 

The wetland is situated on the west coast of the Pacific, near the border between Guatemala and Mexico. The largest town in the area is Ocós, in the Departamento de San Marcos. Mention should also be made of Tilapa, which lies to the east of Ocós and which, although smaller than Ocós, is well known and visited at holiday times by Guatemalans from the region and the capital. The Manchón-Guamuchal area is 270 km from Guatemala City on Pacific highway CA-1.
9. Area: Approximately 13,500 ha

## 10. Wetland type:

Marine and coastal wetlands

5. Sand, shingle or pebble beaches; includes sand bars, spits and sandy islets.
6. Estuarine waters; permanent waters of estuaries and estuarine systems of deltas.
9. Intertidal forested wetlands; includes mangrove swamps, nipa swamps and tidal freshwater swamp forests.
10. Brackish to saline lagoons with at least one relatively narrow connection with the sea.
11. Freshwater lagoons and marshes in the coastal zone; includes delta lagoon and marsh systems.

Inland wetlands

8. Permanent freshwater ponds (8 ha), marshes and swamps on inorganic soils; with emergent vegetation waterlogged for at least most of the growing season.

Man-made wetlands

3. Aquaculture ponds; fish ponds, shrimp ponds.
4. Salt exploitation; salt pans, salines.

11. Altitude: minimum = sea-level; maximum = 20 masl

## 12. Overview:

The wetland is characterized by a combination of different plant communities which include, inter alia, coastal dune plants, dry forest, mangrove forest, palm forest and freshwater marsh plants. In spite of the wealth of its resources, the area is still relatively undisturbed. However, it is of prime importance that a start be made on establishing guidelines for managing and regulating the use of resources. The wetland is perhaps the only remaining site for migrating birds using the western corridor that begins in Canada and the United States.

## 13. Physical features:

Superficially, the wetland consists of alluvial materials which cover the older rock formations, so that the actual geology of the area is not known. The alluvial materials originated in the Pacific volcanic chain. The main rivers draining the area are the Ocós and the Naranjo. Both rivers are met by tributaries towards the end of their course, and these too irrigate the wetland. However, they do not form true estuarine deltas. In general, the soils are badly drained, sandy and heavy in texture. According to Thornthwaite, the climate of the area can be described as hot, without a well-defined cool season, and humid, with dry winters. According to the climatological map of the country, the average annual temperature is 25°C and the related humidity is 75%.

## 14. Ecological features (habitats and vegetation types):

Coastal dune plants, mezquite and dry forest: This community is situated on a narrow, sandy coastal strip, which is isolated by two sandbars and the estuarine system. Typical dune species include graminaceae (*Uniola pittieri*, *Jouvea pilosa*) and creeping plants (*Pectis multiflosculosa*, *Ipomoea pes-caprae*, *Canavalia maritima*, *Cassia diphylla*). The spiky scrubland has bushy plants such as mezquite (*Prosopis juliflora*) and a species of cactus (*Acanthocereus pentagonus*). The arboreal vegetation includes *Bursera simarouba* and *Acacia sp.*

Mangrove forest: Four species of mangrove are to be found in the area. In order of abundance, these are red mangrove (*Rhizophora mangle*), white mangrove (*Laguncularia racemosa*), black mangrove (*Avicennia germinans*) and buttonwood (*Conocarpus erecta*). Although the white and the black are less abundant than the red mangrove, there are large areas of forest in which one or other of these species flourishes alone. Buttonwood is the least common species and occurs in small pure clusters, usually in firm soil and far from the ocean.

Emergent vegetation: In the north of the wetland, there is a vast expanse of freshwater marshes and pastureland whose vegetation consists mainly of graminaceae and various species of shrubs.

Riparian forest: *Pachira aquatica* and *Salix chilensis* are the principal species.

Palm forest: Although a thorough survey of this forest type has yet to be carried out, *Sabal mexicana* has been found to be the dominant species. This is much used as a roofing material, so that in some places the palm forest is managed on a commercial basis.

## 15. Land ownership:

More than 95% of the land designated a Ramsar wetland, including a large part of the coastal strip, is privately owned. The populated areas of La Garita and Tilapa are owned by the State.

## 16. Conservation measures taken:

Legal status: Pursuant to Article 90 of the Law on Protected Areas (Decree 4/89), Manchón-Guamuchal enjoys special protection status. However, it has still to be legally designated a protected area. At present, a technical study on the wetland, which is a prerequisite for such a designation, is being carried out by the Fundación Interamericana de Investigación (FIIT). This study will propose a management category and a management plan for the area.

Management category: This has still to be decided.

Management practices: In 1984, the Dirección General de Bosques (DIGEBOS) and a Guatemalan NGO, the Asociación Amigos del Bosque, initiated a mangrove reforestation scheme in the area and established a turtle refuge. In 1988, in cooperation with Cuerpo de Paz, they arranged for breeding enclosures to be erected for the green iguana, the freshwater turtle and the American crocodile. A plan for a close fishing season has also been introduced in the Tilapa district. At the end of 1994, FIIT has started up a communal programme for growing bivalves and a forest nursery for dry forest species.

17. Conservation measures proposed:

The technical study, that is actually being revised in part by the Secretaría Ejecutiva del Consejo Nacional de Areas Protegidas (CONAP), contains specific proposals for management of the mangrove resources and for the fishing resources at the wetland.

18. Land use:

The most densely populated towns in the wetland are La Garita, La Barrita and Tilapa. The principal economic activity in the region is fishing. Various fish species are taken, together with shellfish of the genera *Callinectes* and *Anadara*. Livestock farming is practised in the pampas by a few landowners. Sesame, watermelon and maize are grown on a strip of land parallel to the coast on which there was once dry forest.

19. Changes in land use and development projects:

Some watercourses in the wetland have been diverted as a result of the creation of shrimp ponds and channels to irrigate and drain them. Shrimp-farming is currently expanding in various parts of the wetland. In addition, cattle-grazing has been introduced in some parts of the marshland. At the northern edge of the wetland, cotton is grown. It is planned to redesign the port of Champerico, which lies to the east of the wetland, with a view to building a large and modern port facility.

20. Disturbances and threats:

The uncontrolled removal of various plant and animal species is perhaps the main threat to the wetland at present. Amongst the most exploited species are mangrove (for building projects outside the wetland area), shrimps (larvae taken to stock farms in the region), and marine and freshwater turtles and crocodiles (specimens and their eggs taken for food/skins). The growing of cotton is currently a threat to the system because of the agro-chemicals that are usually used for this.

## 21. Hydrological and biophysical values:

Hydrological values in the wetland have still to be assessed. However, it can be confidently stated that it provides a site for the reproduction and growth of marine species of invertebrates and fish, many of which are of commercial value.

## 22. Social and cultural values:

There is a shrimp farm (Pamaxán) in the wetland which is currently expanding. There are also a number of salt pans.

## 23. Noteworthy fauna:

The birdlife of the site is particularly interesting. Of the total number of resident and migratory species that could theoretically be present at one and the same time (427), 147 (35%) have been precisely identified by FIIT. Of these, 14 species of ducks have been seen in relatively large numbers, including 12 that are migratory. A total of 20 species of herons and wading birds were sighted between June 1992 and May 1993.

## 24. Noteworthy flora:

As stated in point 14, Manchón-Guamuchal has various interesting plant communities. Particular importance attaches to what remains of the dry forest and mezquite. It is still possible to find species of *Pitecellobium dulce*, *Enterolobium cyclocarpum* and *Prosopis juliflora*.

## 25. Scientific research:

FIIT has a small field station in Tilapa. This is used as a centre for scientific research and for the training of biologists attending specialized workshops. In addition to the monitoring activities pursued by FIIT in the area (phenology of the different plant communities, fluctuations in water levels at particular points, water analyses, depletion and regeneration of the mangrove forest), general inventories of the flora and fauna are being compiled. A study has just been finished on the association between the populations of wading birds and different vegetation types in the wetland.

## 26. Conservation education:

The Asociación Amigos del Bosque has been organizing educational activities in the area since 1984. These have focused on the problems of mangrove reforestation and the incubation and release of marine turtles. Cuerpo de Paz has recently been in Tilapa to set up a visitors' centre, and a local group of nature guides has been established and trained. FIIT is organizing specialized workshops targeted primarily at final-year biology students from the Universities of San Carlos and Del Valle. At the end of 1994, the Fundación has started a training programme for environmental work. Twenty-six people (11 women) of the villages of Tilapa and Almendrales have participated.

## 27. Recreation and tourism:

Because of its scenic beauty, its large, clean beaches and the abundance of its observable wildlife, Manchón-Guamuchal has considerable potential as an area of low-impact tourism. At present, it is mainly visited by people living in the south-west region of the country. In Tilapa, there are a number of weekend chalets, owned by local inhabitants. This is an advantage, as it is necessary to evaluate the general impact of tourism and propose guidelines for its development before promoting particular tourist activities on any particular scale.

## 28. Management authority:

As it is not a protected area, the wetland is still without an official management body. However, DIGEBOS is responsible for regulating and managing mangrove forests throughout the country. In pursuance of the Law on Protected Areas, the Consejo Nacional de Areas Protegidas (CONAP) is responsible for monitoring the Republic's flora and fauna resources. Once Manchón-Guamuchal is established as a protected area, it will be necessary to set up a board of administration on which all the institutions currently involved in the wetland are represented. That will make for better management of the site and its resources. It is important to remember that about 95% of the land is privately owned.

## 29. Jurisdiction: territorial -- Manchón-Guamuchal comes within the purview of the municipal authorities of Ocos, Depto. de San Marcos, and Retalhuleu, Depto. de Retalhuleu.

: functional -- DIGEBOS manages the mangrove forests and CONAP monitors the removal and conservation of flora and fauna.

## 30. Bibliographical references:

Most of the information given in this report was gathered directly by the FIIT research team. However, the following is thought to be useful reference material:

- Gall, F. 1978. Diccionario geográfico de Guatemala (= Geographical dictionary of Guatemala), Vols. I and II. Ed. Tip. Nac. Guatemala, Guatemala. 1916 pp.
- Borhegyi, S.F. 1965. Archaeological Synthesis of the Guatemala Highlands. Handbook of Middle American Indians. Univ. Texas Press, Austin, TX. Vol. 2, Part 1:3-58.
- Instituto Nacional de Sismología, Vulcanología, Meteorología e Hidrología. 1970-1980. Records of the weather stations of Caballo Blanco and Champerico-FEGUA. Guatemala, Ministerio de Comunicaciones, Transporte y Obras Públicas. 4 pp.
1988. Atlas climatológico de la República de Guatemala (= Climatological Atlas of the Republic of Guatemala). Guatemala, Ministerio de Comunicaciones, Transporte y Obras Públicas. 20 pp.

31. Reasons for inclusion:

The Manchón-Guamuchal wetland meets the following criteria for inclusion in the list: 1, 2a, 2c, 3b.

32. Map of site (attached)