

Information Sheet on Ramsar Wetlands

Official translation by Charles Akin.

1. **Date this sheet was completed/updated:** 2 March 1998
2. **Country:** Ecuador
3. **Name of wetland:** Reserva Ecológica Manglares Churute
4. **Geographical coordinates:**

2 28' South latitude
79 42' West longitude

5. **Altitude:** 0-10 metres above sea level
6. **Area:** 35,042 hectares
7. **Overview:**

Most of this area is mangrove, with halophytic vegetation that grows in river estuaries. This reserve is subject to the influence of the tides.

8. **Wetland type:** I, J
9. **Ramsar criteria:** 1b, 1c, 2c
10. **Map of site included?** Please tick **yes** -or- **no**
11. **Name and address of the compiler of this form:**

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

The mangroves in this reserve are the southern-most vegetational formation of this type in the eastern Pacific. There are three structural categories in the forest: high mangrove, with trees taller than 15 metres and straight trunks; medium mangrove, with trees between 5 and 15 metres tall, homogeneous crowns and closed vegetation; and low mangrove with trees shorter than 5 metres and heterogeneous crowns. The life cycle of several species of molluscs, crabs, Cirripedia and fish take place in this ecosystem, and these animals are important links in the food chain in the mangrove.

13. **General location:**

This wetland is located in the province of Guayas, parish of Taura, near the city of Guayaquil on the Ecuadorian coast.

14. Physical features:

The subsoil of the nearby hills is formed by igneous and sedimentary rocks, partially broken down, surrounded by alluvial sediments. In addition, there are basaltic andesites, rocks subject to light metamorphosis, shales, quartzite and phillipitas. The reserve has three broad categories of landscape: hilly reliefs, current marine deposits and flat alluvial plains.

Total average annual precipitation is 850 mm with bimodal distribution, a rainy season between January and April, with March the rainiest month and then a dry period from May to December with little rainfall in August and September. Average annual temperature is 25.6 C, with only slight variation throughout the year. Relative humidity is an annual average of 80 per cent. Cloud cover is an annual average of six eighths.

15. Hydrological values:

The main source of water is the Taura River, which flows through the western part of the reserve. This river is the major source of fresh water for the mangrove ecosystem, preventing salinization of the system. The Churute swamp is the second most important source of water in the region. The reserve is characterized by an estuarine system in which salt water from the estuary of the Guayas River is mixed with the fresh water from the Cañar, Churute, Naranjal and Taura rivers. The importance of the mangroves in the reserve is evident in the capture of sediments and stabilization of the coast.

16. Ecological features:

The main life zones in this wetland are the mangrove with the three types of forest already mentioned and freshwater lakes and swamps.

17. Noteworthy flora:

The main species of flora are *Avicenia nitida*, *Conocarpus erectus* and *Rhizophora mangle*. There is a great variety of plant species, including several epiphytes such as orchids.

18. Noteworthy fauna:

The main species of fauna are oysters (*Cassostrea columbiensis*), the mussel (*Mytella guayanensis*) and red crab (*Ucides occidentalis*), as well as several species of fish. Important species of birds are *Ajaia ajaia*, *Aramus guarauna*, *Ardea cocoi*, *Egretta alba*, *Eudocimus albus*, *Florida caerulea*, *Gallinula chloropus*, *Nyctanassa violacea*, *Pandion haliaetus* and *Phalacrocorax olivaceus*. Among the reptiles, the most important species is *Crocodylus acutus*, and among the mammals the most important species is the *Procyon cancrivorus*.

19. Social and cultural values:

Of archaeological importance in the reserve are the *camellones*, *tolas* and *conchales*. The *camellones* are artificial accumulations of soil in the wetlands that are used for farming, without being subject to flooding. The *tolas* are artificial mounds of soil that were built for ceremonies, funeral mounds, living quarters or guard spaces. The best example of a complex of *tolas* is found along the road to the reserve at kilometre 21 of the Durán-Boliche highway where there are 64 *tolas*, the largest of which is 120 metres long and 12 metres high. The *conchales* are kitchen mittens of mollusc shells used in the diet of the former inhabitants. Within the reserve, there is a kitchen mitten in one of the walls of a shrimp pond. The oyster is the most frequently found mollusc.

The economic activities of the population within the reserve and in the surrounding area are ranching, forestry, small-scale fishing and shrimp aquaculture.

20. and 21. Land tenure/ownership and current land use:

In the reserve and the surrounding area, there are three distinct types of land tenure and land use.

In the El Canclón lagoon, there are 15 owners of which only one has lived for more than 15 years in the area. The other owners are recent settlers. Only one owner has title to his land, although it was obtained illegally. The economic activity of the settlers is very harmful for the environment, because they use free grazing, slash and burn and pesticides.

In the flat or transitional areas, there are farm lands that vary in size from 15 to 30 hectares, whose title was obtained legally in most cases.

In the mangrove ecosystem, there are two very distinct types of land tenure. On the one hand, there are small-scale fishermen and gatherers of crabs and shrimp larva. Then, there are the shrimp ranchers who have built large ponds for raising shrimp. The small farmers are not illegal and own private land. The shrimp ranchers have built their ponds on state land, without authorization for shrimp farming.

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

The ecological conditions in the Reserva Ecológica Manglares Churute are being modified by the use of pesticides in crops with short cycles and the presence of shrimp ponds. Pollution of water in the upper part of the rivers that flow through the reserve has led to a high mortality of fish and other aquatic organisms. Finally, overgrazing in areas near the El Canclón lagoon is leading to a decrease in water level.

23. Conservation measures taken:

The reserve has a management plan in force since January 1996.

24. Conservation measures proposed but not yet implemented:

25. Current scientific research and facilities:

In the reserve there is frequent fieldwork, primarily by students in biology from the Universidad Estatal de Guayaquil. Important research has been done on the natural history, reproduction and reintroduction of the *canclón* (*Anhima cornuta*). Another group of studies, supported by grants from "Wetlands for the future," has dealt with topics concerning aquatic birds, diversity and distribution of the plankton communities, population surveys and interaction of the red crab (*Ucides occidentalis*), as well as socio-economic aspects of its capture and monitoring of ecto and endoparasites in fish. The area has no specific infrastructure for research activities.

26. Current conservation education:

There are pamphlets and environmental interpretation trails.

27. Current recreation and tourism:

The precise number of visitors to the reserve is not known because no distinction has been made between visitors, fishermen and crabbers. The reserve has the following tourist attractions: mangroves, landscape, tropical forest, freshwater lakes, observation of monkeys, a high number and rare species of birds, waterfalls in the rainy season and rock formations. What makes the reserve of special interest is the combination of these attractions in a relatively small area. In addition, proximity to the city of Guayaquil increases its tourist potential.

28. Jurisdiction:

As was stated earlier, this wetland is located in the province of Guayas, parish of Taura, near the city of Guayaquil on the coast of Ecuador. It is administered by the Instituto Equatoriano Forestal y de Areas Naturales y Vida Silvestre (INEFRAN).

29. Management authority:

Jefe de la Reserva
Dirección Nacional de Areas Naturales y Vida Silvestre

30. Bibliographical references: