

## Information Sheet on Ramsar Wetlands

1. **Date this sheet was completed/updated:** 17 January 1997

2. **Country:** ARGENTINA

3. **Name of wetland:** Bahía Samborombón

4. **Geographical coordinates:**

35°27'S - 36°22'S  
56°45'W - 57°08'W

5. **Altitude:** an average of 4 metres above sea level

6. **Area:** 243,965 hectares (total)  
147,245 hectares (terrestrial)  
96,720 hectares (marine)

7. **Overview:**

This wetland covers approximately 180 kilometres of coastline. On land, its width varies from 2 kilometres at Punta Piedras to 23 kilometres at Canal 1. The site also includes a strip of shallow water up to 6 metres in depth. This area is in the southern portion of the *partido* de Magdalena; the eastern portion of the *partidos* of Castelli, Chascomús and Tordillo; the northern part of General Lavalle and the *municipio* of Urbano de la Costa. It is 10 kilometres northwest of the coastal town of San Clemente del Tuyú.

The reserve forms an extensive intertidal zone in the estuary of the River Plate. There are marshes (*bañados*), brackish swamps and crab flats (*shorre* and *slikke*). Vegetation is predominantly a herbaceous strata forming a mosaic of vegetative communities crisscrossed by meandering streams.

8. **Wetland type:**

A, F, G, J, K, M, N, Q, R, S, T, 9

9. **Ramsar criteria:**

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

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

Departamento Areas Protegidas y Difusión Conservacionista

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

13. **General location:**

This wetland is located in the province of Buenos Aires on the west bank of the estuary of the River Plate along the Bahía Samborombón between Punta Piedras, Punta Rasa and Cabo San Antonio. Its western and southern limits run along provincial highway number 11.

14. **Physical features:**

**Geology and geomorphology:** This area forms the eastern limit of the region called "the depressed Pampa", also known as the Salado depression. It covers an estimated 58,000 square kilometres in the east central part of the province of Buenos Aires. Use is determined by a series of geographical features. The following two distinct subareas are defined by their geology and geomorphology.

a) Coastal bands of *conchilla* of marine origin (River Plate), running predominantly north and south slightly concave towards Bahía Samborombón. It is hilly terrain raising 6 to 8 metres above sea level with depressions among the mounds. The *conchilla* is usually covered with recently formed sand or natural deposits of clay. The depth of sand cover varies, often reaching about 3.5 metres in depth. This area forms a narrow band between the Río Salado and Canal 15. Towards the south, especially around General Lavalle, there are ridges which are primarily sand deposits transported by the sea and distributed by the wind.

b) Recent coast forming the alluvial plain of the River Plate. This is the lowest part of the Salado depression (between sea level and 1 metre above sea level) rarely more than 2 metres in elevation. It is flat with almost no slope (0.005 per cent), formed by complex recent sediments of marine origin (Durquerquiano) and river deposits from the River Plate; Río Salado; Arroyo de Las Víboras; Canals 1, 2, 9, 15 and A; Ría de Ajó and the Río San Clemente.

The characteristic landforms are crab flats (either *schorre*: high crab beds or *slikke*: low crab beds), tidal channels, pre-coastal accumulations of mud (*wadden*), subcoastal pools and sand from *conchilla* ridges deposited on various types of clay.

**Water-table:** The water-table is almost at the surface, directly affected by oscillations in the water level of the estuary and subject to tides, flooding and storms. The tidal range is less than 2 metres (1.5 metres at Cabo San Antonio and 0.8 metres at the mouth of the Río Salado). The water-table is influenced by wind, especially wind from the southeast which can raise the water level by up to six times and flood a large part of the area. The tides bring in brackish water whose salinity increases from north to south-southeast moving toward the Atlantic Ocean. At the same time, the rivers, drainage canals and streams carry fresh water. All of this creates a complex hydrological system with a wide diversity of wetlands subject to surges of variable intensity according to the interaction of all these factors.

**Soils:** The predominant soils in the area are alluvial, sodium-saline, humic gley and semi-marsh (Cromudents and Haplaculos). Their textures are mud to clay on the surface and pure clay to clay in the lower horizons. They are poorly drained soils of slow permeability with a high level of salinity and alkalinity and are of almost no or little use for agriculture, ranching or forestry (soil use capacity VII ws and VIII ws, according to the Soil Conservation Service, 1961).

In the ridges of *conchilla* there are rendzina soils--typical rendols, well drained, permeable, with low levels of salinity and alkalinity and rich in calcium. In the southern part of the region, there is marine sand sedimentation.

**Climate:**

Climate: temperate and humid

Precipitation: 1000 mm/year

Temperature:

average annual: 15°C

average summer: 21°C

average winter: 9°C

maximum: 40°C

minimum: 4°C

Prevailing winds: from the east at 11 to 16 km/h

Relative cloudiness: 3.6 - 8 %

Thornthwaite climate classification: B1 - QUA, r, B'@, a" (humid to subhumid, little or no mesothermic moisture deficit, 46 per cent of thermic efficiency concentrated in summer)

**15. Hydrological values:**

**16. Ecological features:**

**17. Noteworthy flora:**

The predominant vegetation is herbaceous (except for the communities established on the ridges of *conchilla* and sand) with a wide range of associations.

The vegetative associations are:

a. wet grasslands (Cypero-Juncetum): This is a zonal community of low fields subject to flooding. Dominant species: *Carex bonariensis*, *Cyperus laetus*, *Cyperus reflexus*, *Gaudinia fragilis*, *Juncus bufonis*, *J. imbricatus*, *J. microcephalus*, *Panicum milioides*, *Paspalidium paludivagum*, *Paspalum vaginatum* and *Scirpus cernuus*. This area is unsuitable for agriculture, but widely used for ranching.

b. brackish grasslands (Distichletum): This is formed predominantly by *Distichlis spicata* and *Hordeum stenostachys*, with *Lepidium parodii*, *Paspalum vaginatum*, *Puccinellia glaucescens*, *Sida leprosa*, *Sisyrinchium platense*, *Spergularia villosa* and *Sporobolus poiretti*. This is a zonal soil community with salt residue usually found in poorly drained

lowlands, along lakes or near rivers and streams. This community has variations including frequent wide areas of *Salicornia virginica* in pure or mixed populations with *D. spicata*.

c. reeds (Juncetum): An azonal community formed by beds of *Juncus acutus* spread out in isolated clumps or in pure populations.

d. *espartillar* (Spartinetum): This community near Bahía Samborombón includes two variations each with a predominant species. In the floodable land at river mouths, canals and streams, the dominant species is *Spartina alterniflora*. In temporarily flooded land (crab flats), the predominant species is *Spartina densiflora* in pure or mixed associations covering large areas.

e. *duraznillar* (Solonetum): The predominant species is *Solanum malacoxilom* which alternates with *Alternanthera philoxeroides*, *Jussiaea repens*, *Mentha pulegium* and *Scirpus americanus*, among others. These are communities typical of poorly drained land and around lakes with reeds, cattails and bulrushes and along streams.

f. wet pastures with temporary or permanent ponds: These are formed by the development and alternation of three soil communities: reeds (Scirpetum), cattails (Typhetum) and bulrushes (Ziziniopsetum). The predominant species in each community is *Scirpus californicus*, *Typha latifolia* and *Zizaniopsis bonariensis* respectively. The reeds and the bulrushes develop in permanent lakes, small rivers, streams and along the bank of the River Plate. The cattails prefer lakes among ridges of *conchilla*. These communities cover large areas in this region.

g. *talar* (Celtetum): This is an azonal wooded community that grows on the ridges of *conchilla* or in loess of sand hills. *Celtis tala* is the predominant woody species along with *Jodina rhombifolia*, *Sambucus australis* and *Scutia buxifolia* with scrub areas of *Colletia spinosissima*. This community is grouped in small discontinuous thickets in well-drained and permeable soils. The thickets are used by cattle as a resting place and are cut for firewood.

The population of *tala* (*Celtis tala*), a native species of tree, is decreasing because of indiscriminate cutting for exploiting the soil and for its use as firewood. There is a reserve in the province of Buenos Aires for the protection of this and other characteristic species of the *talar* such as *Jodina rhombifolia*, *Sambucus australis* and *Scutia buxifolia* (Laguna Salada Grande botanic reserve in the partido of General Madariaga).

h. *cortaderal* (Cortaderetum): In the southern section between Canal 1 and Punta Rasa, there are associations on humid sand dunes in which the most conspicuous species are *Cortaderia selloana* and *Eryngium pandanifolium*. Quite frequently, these dunes are bordered by a reed, *Juncus acutus*.

#### 18. Noteworthy fauna:

See the attached list of species. [?]

#### 19. Social and cultural values:

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

The land in the Bahía Samborombón and Rincón de Ajó nature reserves is owned by the provincial government, and is administered by the provincial Ministry for Agrarian Affairs. The Campos del Tuyú private reserve belongs to the Fundación Vida Silvestre Argentina. The biology station at Punta Rasa is administered by the Navy and the Fundación Vida Silvestre Argentina. The San Antonio lighthouse belongs to the Navy. The rest of the site is private property. The coastal strip of shallow water is under the jurisdiction of the province.

**21. Current land use:**

There are no economic activities on the land in the reserve, because of its poor agricultural capacity and the area's classification as a nature reserve (Law 10.907).

On the private land, the main activity is cattle ranching. Other activities are fishing, hunting, the cutting of firewood, the growing of forage and the trapping of nutria (*Myocastor coypus*). Water for domestic use and for cattle is pumped from the ground using windmills situated on the *conchilla* ridges.

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

The main threats to the ecology of this region are illegal hunting and fishing. Another threat is the dredging of the canals leading to the coast in order to facilitate navigation, thus increasing the area's vulnerability.

**23. Conservation measures taken:**

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

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

Research is being carried out by universities, research organizations, governmental agencies (CIC, CONICET, ILPLA, INIDEP, LEAVES, MAA, UNLP, UNMDP) and NGOs (Wetlands International and the Fundación Vida Silvestre Argentina). The regulation and monitoring of the area is the responsibility of the Ministry for Agrarian Affairs.

**26. Current conservation education:**

The only educational centre open to the public and schoolchildren is the Estación Biológica de Punta Rasa. Steps are being taken to mark out the reserve.

**27. Current recreation and tourism:**

Provincial highway 11 provides access to several recreational sites in the reserve and is heavily travelled during the summer.

The following sites attract tourists:

- The mouth of the Río Salado picnic grounds and recreational area (sport fishing)

- The city of General Lavalle (Ría de Ajó) (sport fishing competitions, camping and hotels)
- The Campos del Tuyú private reserve (FVSA) (photographic safari and observation sites)
- The Mundo Marino aquarium, open the year round to the public
- The Punta Rasa biological research station (information centre and open-air recreation and camping)
- The port of San Clemente del Tuyú
- The ocean beach of the city of San Clemente del Tuyú
- The annual festival of the *corvina negra* (during the month of October)
- The port of General Lavalle (former historical port) (small-scale sport and commercial fishing activities, the unloading of *corvina*, *pescadilla* and other species)

**28. Jurisdiction:**

Departamento Areas Protegidas y Difusión Conservacionista  
 Dirección de Administración y Conservación de Recursos Naturales  
 Subsecretaría de Pesca y Recursos Naturales  
 Ministerio de Asuntos Agrarios de la Provincia de Buenos Aires

The municipalities of Castelli, Chascomús, General Lavalle, La Costa, Magdalena and Tordillo

**29. Management authority:**

Departamento Areas Protegidas y Difusión Conservacionista  
 Dirección de Administración y Conservación de Recursos Naturales  
 Subsecretaría de Pesca y Recursos Naturales  
 Ministerio de Asuntos Agrarios de la Provincia de Buenos Aires

**30. Bibliographical references:**