

INFORMATION SHEET ON RAMSAR WETLANDS

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- 1. Date this sheet was completed/updated:** November 1997
- 2. Country:** Brazil
- 3. Name of wetland:** "Lagoa do Peixe" National Park
- 4. Geographical coordinates:** 31°14'S, 50°57'W
- 5. Altitude:** Plain with elevation varying between 0 and 15 meters, depending on the distance from the waterline.
- 6. Area:** Perimeter: 160 km; Total: 34,400 ha

7. Overview:

The "Lagoa do Peixe" National Park is located in the State of Rio Grande do Sul, on an extensive sandy plain, which results from the extensive and numerous sand banks that shut out the coastal lagoons.

- 8. Wetland type:** J H E A B F K

- 9. Ramsar Criteria:** 3a

- 10. Map of site included:** Yes (annex I)

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12. Justification of the criteria selected under point 9:

The National Park of Lagoa do Peixe is situated in the middle section of the Coastal Plains of Rio Grande do Sul and includes representative samples of the ecosystems of the Rio Grande do Sul coastal zone such as salt marsh, woods, grassy marshes, coastal dunes and lagoons, beach strips and marine area. These environments house characteristic endangered endemic species. 181 bird species have already been registered in the Park area, 35 of which are migratory. Furthermore, the influence of water masses of Brazilian and Malvina currents, as well as the water from Lagoa do Patos and Rio da Prata, provide the coastal zone of Rio Grande do Sul with an ecosystem rich in food for the different species of marine and coastal fauna.

13. General location:

State of Rio Grande do Sul - Mostardas, Tavares and Sao José do Norte municipalities.

14. Physical features:

14.1 Climate: Temperature - very humid with no dry season. Mean temperature 18° to 20° C, high temperature 38° to 40° C, low temperature -4° to 0° C.

14.2 Geology and morphology: The "Lagoa do Peixe" is part of the Sedimentary Deposits Morphostructural Domain, which contain Quaternary sediments of continental and marine origin. It is a

flat surface with elevations varying between 0 and 15 meters, depending on the distance from the waterline. The existence of dunes, which run parallel to the shoreline are a distinct feature. They are basically formed by wind-borne deposits of sandy quartzous material.

14.3 Soils: Marine quartzous sands. The Coastal Plain's region, where the "Lagoa do Peixe" National Park is located, is formed basically by new soils such as Planosols and Hydromorphic Alluvials, and even dunes, constantly renewed by alluvial and marine deposits, during the Quaternary.

15. Hydrological values:

15.1 Drainage and hydrography: The Lagoa do Peixe survives the freshwater of the large salty marshes of the south and north of the National Park, which will filter rainwater, during the flood months, usually in winter. The lagoon overflows with so much water and the salty marshes and lagoons cannot be distinguished. The field and the edges of the salt marsh woods are also flooded, as are the wet woods of the queenpalm and trumpet tree. In years of much rain, the Lagoa do Peixe empties into the sea, but nature does not open the bar canal any more, since it has been silted for a long time. In the coastline of Rio Grande do Sul, there is no moon tide, it is the wind that determines the life, drying and filling the lagoon. Cold winds from the south push the sea into the lagoon and the waters flow North. Dry winds in spring and summer, constant and strong from the Northeast, push the waters South. But the Lagoa do Peixe really lives from the sea, of the bar that mixes the salty waters and those of the marshes. Man also helps, he works all day with a machine to open a bar, "it's the strength of water", the contained rain waters empty; birds, fish, shrimp start to come to the lagoon, and another cycle of life starts, shore birds, plovers, snipes, terns and flamingoes. The salty marsh no longer has so much water and slowly releases the rainwater it stored. Birds, mammals, fishermen all want more water, more rain in spring and summer, more life, sea and salt marshes feeding the Lagoa do Peixe. It is a sad time with no rain, strong and dry winds bring sand into the lagoons, whose 30 km of shallow waters quickly evaporate. The lagoon is transformed into an immense sand field, covered with white from salt.

15.2 Water quality: No data available.

16. Ecological features:

The predominant vegetation in the Park is what is known as Aboriginal Formations, of marine influence.

17. Noteworthy flora:

The flora composition varies according to the different environments found. Along the beach, due to the influence of salinity, one finds species which have a preference for sandy soils and some species which grow in areas where there is plenty of salt, such as, for example, the espartina (*Spartina ciliata*), macela graúda (*Senecio-crassiflorus*), brejo-da-praia (*Irisine portulacoides*), grama-rasteira-da-praia (*Paspalum vaginatum*), among others.

Towards the inland, one finds mobile dunes, on which the fixation of plants becomes difficult. Therefore, vegetation is extremely scarce. One can find espartina, capim-das-dunas (*Panicum racemosum*), grama-branca (*Panicum raptans*), to name a few.

Next to the sides of the fixed and semi-mobile dunes and close to the humid spots, small and medium isolated clumps of trees and bushes are sheltered from the winds. They normally form lines which run parallel to the coastline. In these areas one finds the capororoca-vermelha (*Rapanea umbellata*), maria-mole (*Guapira opposita*), brugreiro (*Lithraea brasiliensis*), and embira (*Daphnopsis racemosa*).

On the grassy marshes, some fairly large, dispersed over the fields and by the shores of the lagoons, one finds juncos (sedges) (*Juncus* spp.), grama-branca (*Panicum reptans*), rainha-dos-lagos (*Pontederia lanceolata*), taboa (*Typha domingensis*), to name a few.

On the flat and dry areas, there is a thin grassy vegetation, composed of grass and sedges, such as capim-amoroso (*Cenchrus achinatus*), capim-membeca (*Andropogon leucostachyus*) and plumas-brancas-do-littoral (*Andropogon arenarius*).

Yearly expeditions are promoted by IBAMA/DIREC (Brazilian Institute for the Environment and Renewable Natural Resources/Ecosystem Administration Office) through the CEMAVE (Research Center for the Conservation of Wild Birds), and there is also supervision by the State superintendencies. Over 150 species of birds are listed for the region. Of the 26 species proceeding from the Northern Hemisphere, 16 spend the winter in this Park between September and April; not to mention 3 visiting species from the Southern Cone, which start arriving in February, and stay until September, fleeing the inclement weather of the South. Over 30% of the population of an extremely vulnerable species, the maçarico-de-bico-virado (*Limosa haemastica*), can still be found at the Lagoa do Peixe between October and April, having come from the Northern Hemisphere. Every year, attracted by the abundant food supply, they spend these months, resting, recovering the energy spent during migration, replacing their feathers and saving energy for their long journeys back home, in time for breeding.

The conservation of these important wildlife assets depends upon the preservation of their habitats which are critical for reproduction, which is put on hold during their yearly migration. It is the responsibility of all countries of the Americas. One individual's effort will be of no use if the critical locations where they stop over and feed on their migration routes are destroyed in the neighbouring countries.

The joint effort of the hemisphere as a whole, consolidated the inclusion of the "Lagoa do Peixe National Park" in the Hemispherical Network of Reserves for Limicolous Birds, in April of 1990, in the internationally important Reserve.

18. Noteworthy fauna:

Guarani Zoogeographical Province.

The Park's avifauna is composed of plenty of migrating species, such as the flamingo (*Phoenicopterus chilensis*), which starts arriving in the month of March, fleeing from the cold. They feed on molluscs and crustaceans.

The kelp gull (*Larus dominicanus*), feeds mainly on fish and so does the gaivota-maria-velha (*Larus maculipennis*).

The Lagoa do Peixe National Park has no infrastructure for accommodating or providing access to visitors.

The Lagoa do Peixe, with its unique environment, is one of the most spectacular sanctuaries of migratory birds in all of South America. It is located about 220 km Southeast of Porto Alegre and comprises the municipalities of Tavares and Mostardas, between the Atlantic Ocean and the "Lagoa dos Patos" (Duck's Lagoon). It is about 40 km long and 1.5 km wide and stretches out to Mostardas during the flooded season. The fact that it is not very deep, in addition to its connection with the sea, especially in winter, allows the development of a rich fauna of invertebrates which are abundant all year round, assuring its high primary productivity. Communities which are typical of saltwater and brackish areas can be found.

Among the most serious threats, one should mention shrimp (*Penaeus* sp.) and mullet (*Mugil* sp.) fishing during the spawning season, hunting, the drainage of water for growing rice, and real estate speculation in the beach area.

Since 1984, the Research Center for the Conservation of Wild Birds of the Brazilian Institute for the Environment and Renewable Resources' Ecosystem Department has been carrying out activities at the site. That year, it promoted a seminar on "maçaricos" and techniques for studying them, in association with the World Wildlife Fund, the Manomet Bird Observatory, the Vale do Rio dos Sinos University and Zoobotânica Foundation of the State of Rio Grande do Sul. Subsequent projects were carried out in 1985 and 1986 and included a course on banding, which provided training for new professionals. The results obtained revealed the importance of the "Lagoa do Peixe" for thousands of limicolous Nearctic migrating birds, such as the maçaricos (*Calidris canutus*), *Calidris fuscicollis*, *Calidris alba* and *Limosa haemastica*, and other species from the Southern Cone, such as the *Charadrius flaklandicus* and the *Zonibux modestus*. Besides, these results were an important input for the creation of the "Lagoa do Peixe" National Park, on 6 November 1986 (Law by Decree no. 93,546 - 11/06/86). It is, moreover, the only place in Brazil where one can watch flocks of flamingoes (*Phoenicopterus chilensis*) all year round. In the far North of the region, though it is mainly a refuge, one can find a

collection of thousands of waterfowl such as the Black-necked Swan (*Cygnus melancoryphus*), capororocas (*Coscoroba coscoroba*), and several wild ducks: *Dendrocygna viduata*, *Dendrocygna bicolor*, *Anas georgica*, *Anas flavirostris*, *Netta peposaca*, to name a few (Annex II).

19. Social and cultural values:

Social: open air recreation, sport fishing, tourism, education, scientific research, capture of water for rice farming, onion culture, extensive herd breeding, shrimp and mullet fishing (in the Lagoa do Peixe) and fishing with a “feiticeira” net in the sea.

Cultural: celebrations of black and Azorian origin: blessings, prayers, pledges, horse festivals, Christmas and saint’s days celebrations.

20. Land tenure and ownership:

(a) of the area: 10% belongs to IBAMA, the rest is either private property or Federal Community property.

(b) surrounding area: private property and Federal Government property.

21. Current land use:

(a) at the site: extensive herd breeding, rice and onion farming, shrimp and mullet fishing, in the lagoon, and net fishing in the sea, predatory fishing with trawl in the 3 nautical miles, hunting, tourism, bathing areas, pinus reforestation, cutting of native woods..

(b) in the surrounding area and/or basin: logging firms, extensive herd breeding, drainage of salty marshes for rice farming, onion monoculture, tourism, predatory fishing, hunting, illegal extraction of sand from dunes, reforestation of pinus and eucalyptus.

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

(a) at the site: the main work being planned for the Lagoa do Peixe National Park is the delimitation of its geographic limits, registration of the former properties and the effective dispossession (of the park 34,400 ha, only 1,100 ha are legally federal property - 3.1%).

(b) around the site: the main problem is the illegal installation of a watering place inside the area of the park.

23. Conservation measures taken:

The creation of the Lagoa do Peixe national Park - Federal Decree no. 93.546, November 06, 1986. inclusion of the “Lagoa do Peixe National Park” in the Hemispherical Network of Reserves for Limicolous Birds, in April of 1990, in the internationally important Reserve.

The Brazilian Institute of Environment and the Renewable Natural Resources is developing a management plan in cooperation with the Rio grande University Foundation, based on the scientific researches planned or being implemented.

24. Conservation measures proposed, but not yet implemented:

The Park has an Emergency Action Plan drafted in 1992. In 1991, studies have begun for the Management Plan, whose agreement was canceled in 1992. Since 1996, work on drafting the Management Plan has restarted.

25. Current scientific research and facilities:

Several scientific studies are being developed and implemented, especially:

- Study on the reproduction dynamics of the chelonians of the Lagoa dos Peixes National Park;
- Monitoring of the Waterfowl of the Lagoa dos Peixes National Park;
- Biology of *Crustacea decapoda* in the Lagoa dos Peixes National Park;
- Study on the ecology of otters;
- Characterisation of the Lagoa dos Peixes National Park - development of the “management plan” and registration of properties, with socio-economic data;

- Chemical characterisation of the Lagoa dos Peixes;
- Bio-physiographic classification of the neighbouring mangroves of the Lagoa dos Peixes National Park;
- Formulation of the Management Plan, Environmental Education Program, Archaeological Sites, Socio-economic Survey, Diagnostics and Ringing of Birds, Program for the Conservation and Management of the *Pinepedes* in the coastal zone of Rio Grande do Sul.

26. Current conservation education:

The Center of Environmental Education and Monitoring, a non-governmental organisation that works in the area, is implementing an "Environmental Education Project" since 1990, initially with a survey on the perception of local and surrounding population of the park. Based on data from this survey (interviews, informal conversations), efforts were made to enhance the aspects considered by the population to be positive (scenic beauty, peacefulness, abundance of natural resources) and highlight the issues that needed more information. The Environmental Education program was prepared together with the schools. Throughout six years, the following activities were carried out:

- talks for the community;
- guided visits to the park;
- itinerant photo exhibitions;
- debates with the community;
- production of publicity materials (folders, books, posters, videos);
- placing of signposts in the park;
- participation and promotion of popular events; and
- dissemination in the media (radio, newspapers, magazines, television).

27. Current recreation and tourism:

Current tourism is limited to weekends for recreational fishing or walks along the coastline. During the summer months there is an increase in the number of tourists. Around 2500 people a year come to the park, among tourists and vacationers. There is no infrastructure in the park for this activity. The Management Plan is detailing the places for public use.

28. Jurisdiction:

The area is part of the State of Rio Grande do Sul, with the jurisdiction of the Federal Government through IBAMA - the Brazilian Institute for the Environment and Renewable Natural Resources.

29. Management authority:

Brazilian Institute for the Environment and Renewable Natural Resources - IBAMA
 Lagoa do Peixes National Park
 Praça Luiz Martins, 30
 96.270-000 - Mostardas
 Rio Grande do Sul -RS
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30. Bibliographical references:

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WRI/FWS - Como planificar un Programa de Educación Ambiental Wood & Wood, Washington, USA. 1990.

Annexes.

Annex I - Map of site

Annex II - Avifauna survey - preliminary list of species