

INFORMATION SHEET FOR A NEW RAMSAR WETLAND IN THE PANTANAL

1. **DATE:** July 25, 2001, revised February 6th, 2003
2. **COUNTRY:** Brazil
3. **NAME OF WETLAND:** Reserva Particular do Patrimonio Natural SESC Pantanal
4. **GEOGRAPHICAL COORDINATES:** 16°28' and 16°50'South and 56°00'and 56°30'West.
5. **ELEVATION:** Very flat area. Elevation in the reserve varies from 101 to 117 meters above sea level.
6. **AREA:** 87,871.44 hectares. In process of federal recognition more 18,436.00 hectares. The process shall be finished by July 2003.
7. **OVERVIEW:** The reserve, established in 1998, is a significant sample of the large Pantanal wetland, located in its north-eastern portion, known as Poconé's Pantanal. It is a mix of permanent rivers, seasonal streams, permanent and seasonal floodplain freshwater lakes, shrub dominated wetlands and seasonally flooded forests. This area is an excellent ecological complement of the nearby Pantanal National Park, already included in the List.
8. **WETLAND TYPE:** P, N, O, W, Xf
9. **RAMSAR CRITERIA:** all of them (1 to 5, 7 and 8), apart from criteria 6, are fulfilled at least to some extent.
10. **MAP OF SITE INCLUDED:** A map of the reserve (1/100.000) is included.
11. **NAME AND ADDRESS OF COMPILER OF THIS FORM:** Leopoldo Brandão, Principal Advisor, Serviço Nacional do Comercio (SESC) Rua Voluntários da Pátria 169. 14^o andar. CEP:22270-000. Rio de Janeiro- Brasil
12. **JUSTIFICATION OF THE CRITERIA:**

Criterion # 1. The selected area represents, beyond doubts, a very representative sample of the Pantanal of Poconé, two of the 10 "Pantanal" that geographers and most ecologists recognize. It is also a good sample of the entire Pantanal's biodiversity and, more important, it complements the already existing RAMSAR site in the region (Pantanal National Park) located in the nearby Pantanal of Paraguay. The reserve contains at least 11 clearly different vegetal formations (described in point 15).

Criterion # 2. The reserve contains all known species that are considered endemic as well as all those that are known to be endangered or vulnerable in the Pantanal (see

points 17 and 18), including very significant numbers of some of these species such as the hyacinth macaw and the giant otter, the marsh deer, the giant anteater, the maned wolf among others.

Criterion # 3 Wildlife concentration in the Pantanal and in the reserve is the highest known in Latin America. The reserve, as explained above, contain most of the range of biological diversity (including habitat types) occurring in the Pantanal, especially if considered jointly with the Pantanal National Park. At least two species of annual fishes were registered in the SESC reserve (see point 18).

The Pantanal is not rich in endemisms. However, most species, even those common to other biomes, have developed special adaptations to the wetland.

Criterion # 4. The reserve provides essential ecological refuges that, in addition, are well protected, for critical moment of the life of several species of resident and migratory birds and fishes. It is especially key for species of fishes that occur in the Cuiabá and São Lourenço Rivers. Specific cases are indicated in point 18.

Criterion # 5. There is at least one species of bird with a populations that, at a moment during the year, exceed 20.000 individuals. This is the case of the cormoran *Phalacrocorax brasiliensis*, one of the nesting birds in the reserve. The reserve is also essential for large populations of migrants of the species *Rynchops niger*, *Phetusa simplex*, *Sterna superciliaris*, among other. The reserve contains one of the largest and healthiest nesting area of wood stork in the entire Pantanal. Over 400 nests were counted in 1999 and it is growing.

Criterion # 7. Within the reserve there are 5 annual fish species (*Neofundulus parvipinnis*, *Plesioblebias glaucopterus*, *Pterolebias longipinnis*, *Pterolebias phasianus* and *Trigonectes balzani*), plus a new species under evaluation to be described. Eleven cichlidae fishes are within the area, four of them with commercial catch for the pet market allowed by the Federal Government outside the reserve. The reserves may repopulate the neighborhood through surplus fishes hatched there, helping to keep this activity sustainable in a regional level. Among the characiformes fishes, 26 species are listed for the reserve wetlands, again with 8 with value for the pet market. Seven siluriformes fishes listed, one of commercial value for the pet market. Among the gymnotiformes fishes, 5 collected species (Costa and Vianna, 2002). This group is of particular importance for both commercial and sport fisheries, as some species are used as bait for the larger open water fishes of commercial and sport values, being sold and helping the local economy. However, it is the fish with the highest conservation value in the reserve among those consumed by humans. The piracema fishes, with its plateau headwaters breeding migration, need a nursery for the young in their first or second year. A study conducted in the creeks, major lakes, ponds and in the Cuiabá river has shown the reserve is the largest fish nursery for high prized species (Resende, 2002). They are both used for regional human feeding or by the sport/commercial fishermen from elsewhere. The reserve conservation role for fisheries is, beyond doubts, to support a significant proportion of the population of these species before they get larger size. As previously stated, the reserve provides abundant and safe habitats for critical moments of the life cycle of these species. Sport and commercial fisheries is prohibited inside the reserve.

Criterion # 8. Same answer as above.

13. **GENERAL LOCATION:** Municipality of Barão de Melgaço, Mato Grosso State, Central-West Region of Brazil, Federal Republic of Brazil. The nearest city is Poconé, with a small airport. The nearest large city is Cuiabá, the capital of Mato Grosso.

Access to the reserve is by paved road (100Km.) from Cuiabá to Poconé and by a good quality dirt road from Poconé to the reserve (46 Km.). The reserve is also accessible by boat from Cuiabá. An airport is being constructed by the SESC, near the hotel, in the locality of Porto Cercado, in front of the reserve, on the opposite side of the Cuiabá River.

14. **PHYSICAL FEATURES:** The Pantanal is an enormous (20 million hectares) floodplain that is fed by the Paraguay River and its tributaries. The term floodplain is misleading, as the Pantanal has a complicated topography. It consists of tens of large rivers and their deltas, thousands of lakes, ponds and salt pans, intersected by small hills and a few mountains and isolated rocky monadnocks. The reserve area is an extremely flat sedimentary area, located between two of the largest perennial rivers: Cuiabá River in the North and São Lourenço River in the South. Soils in the reserve are usually above 15% sand and less than 35% clay. The largest extent of the reserve is covered with eutrophic and dystrophic red-yellow podzols. Also present are alic and distrofic red-yellow latosols, reddish brunisols and humid eutrofic gleis. A few sparse gentle undulations, only a few meter high, usually above water highest level, are present in the area. During the flood season most of the area is inundated and the internal lakes and ponds grow much larger. The rainy season, from November to April, averages a precipitation of some 1500 mm per year, being January the month with the highest rainfall. N
The dry season goes from May to October being July the driest month. The yearly average temperature is of 25,7 °C, being October the hottest month (27,7 °C) and July the coldest (22,2 °C).
15. **HYDROLOGICAL VALUES:** The Pantanal is the key factor of water regulation of one of the largest watershed in the South American continent: the Paraguay watershed. This watershed is the main tributary of the La Plata basin, covering a large portion of Brazil, Paraguay, Bolivia, Argentina and Uruguay, where millions of people are living. The hydrological value of the SESC reserve is, of course, limited as a consequence of its relatively small size.
16. **ECOLOGICAL FEATURES:** The Pantanal has been recognized as an enormous ecotone located between the Amazon, the Cerrado, the Atlantic Forest and the Chaco biomes, with some influence from the Andes. The area of the reserve is dominated by the vegetal formations known as *Cerrado* (savannah) and *Cerradão* (dense wooded savannah), covering 45% of the area; *Matas* or forests (24%), *Campos* and *Capões* or prairies (10%), *Campo Sujo* and *Campo Úmido* or mixed prairies and wet prairies (6%) and, aquatic vegetation (4%). Another 10% of the area is considered degraded land, previously utilized as corral for cattle and horses, small scale agriculture or rancho location. The *Cerrado* formation dominates the center portion of the proposed area, as it does in the entire Pantanal. However, the area shows a variety of *Cerrado* forms, between the open *Cerrado* and the very dense *Cerradão*. The forests are of six types: the semideciduous seasonal forest and what is locally known as mixed *Cerrado* forest. These two types are mostly located bordering the Cuiabá River. The Mata Alta (High Forest) is located in the hills or *Cordilheiras*. The Alluvial Forest, Mixed Forest, the *Cambarazal* (almost pure stands of *Vochysia divergens*), and the are mostly located along the São Lourenço river and also bordering several smaller rivers, lakes and lagoons. The natural prairies of the area are also very diverse: the *Campos* include

several types of prairies in function of the dominating species, including the *Campo Sujo*, a form of prairie with intrusion of pioneer shrub and trees and the *Macegal* (dominated by *Mimosa pellita*, *Combretum lanceolatus* and *Ipomoea alba*). Of course aquatic vegetation, including floating vegetation is abundant everywhere water is permanent. While during the rain season most of the area is flooded, the dry season shows extensive sand beaches along rivers.

The previously described diversity of vegetal formations and transitions between them, provide a very large number of habitats for wildlife.

17. **NOTEWORTHY FLORA:** A very preliminary flora inventory of the reserve recognized 238 species of flowering plants. The most common trees species in the *Cerrado* are *Tabebuia stigonocarpa*, *Pouteria ramiflora*, *Tabebuia aurea* and *Curatella americana*. In the *Cerradão* the dominating tree species are *Tabebuia impetiginosa*, *Hymenaea courbaril* and *Hymenaea stigonocarpa*. In the *Cerrado* and the *Cerradão* the lower vegetation strata is mostly covered by a diversity of grasses, specially *Elionorus candidus*. The most frequent tree species in the forest along the Cuiabá River are *Sapium obovatum*, *Cassia grandis* and *Celtis pubescens*. The highest trees in this section may reach 20 meters or more. Along the smaller rivers, the most common tree species are *Mouriri guianensis*, *Vochysia divergens* and *Brosimum lactescens*. In other smaller streams the tree composition was dominated by *Spondias lutea*, *Albizia polycephala* and *Licania parvifolia*. In the São Lourenço River, the dominating tree species are *Inga uruguensis*, *Vochysia divergens* and *Scheelea phalerata*. Several palms occur in the reserve, among them *Scheelea phalerata* and *Bactris glaucescens*. Most of the tree species are important fruit producers for fishes and terrestrial fauna. Bromeliads and cactus are also found.

The *Campos* that remain flooded part of the year are often covered by a mix of species of *Pontederia*, *Andropogon*, *Mesosetum*, *Panicum*, *Scleria*, *Eleocharis*, *Oryza*, *Thalia*, *Axonopus*, *Nymphoides* and *Luziola*. Also common are the vegetation types known as *Macegal* (see above) and *Canjiqueiral* (mostly *Byrsonima orbignyana*). The portions that are permanently flooded are covered by species of *Echhornia*, *Nymphaea* and *Reussia*, among many more. No specific local studies were conducted on algae and groups of the aquatic vegetation.

Endemisms species of plants are probably to be found among algae and other group of inferior plants, but none has been registered until now. There are, among the species of plants registered in the reserve, a few that are considered nationally endangered. *Cerrado* and *Pantanal* biomes have 510 grass species endemic of these regions.

18. **NOTEWORTHY FAUNA:** The still partial inventory of the fauna in the reserve demonstrates that the area is a highly representative sample of the *Pantanal* diversity. Some 260 species of fishes are known from the *Pantanal*. Most of them are expected to be present in the waters of the reserve. Already registered in the area, among the better known fishes, are: several species of *Pimelodella*, *Salminus maxillosus*, *Sorubim lima*, *Paulicea luetkeni*, *Megalonema platanus*, *Pinirampus pinirampu*, *Pseudoplatystoma fasciatum*, *P. corruscans*, *Piaractus mesopotamicus*, several species of *Astyanax*, two species of *Serrasalmus*, *Raphiodon vulpinus*, several species

of *Leporinus*, *Prochilodus lineatus*, two species of *Metynnis* and *Myloplus levis*. In the Pantanal, the fish reproductive migration is a very noticeable phenomenon locally known as *piracema* and may take some species over hundreds and even more than a thousand kilometers.

Thirty species of amphibians were found in the reserve, being the species of the genus *Leptodactylus* and *Hyla* the most abundant. Fifty three species of reptiles were found in the reserve: 2 species of turtles, 18 sauria, 3 amphisbaenia, 32 snakes and 1 crocodylian. Among the lizards, the most conspicuous are *Ameiva ameiva*, *Tupinambis merianae*, *Cnemidophorus ocellifer* and *Dracaena paraguayensis*. Among snakes, the most common is the yellow anaconda (*Eunectes notaeus*) but the anaconda (*E. murinus*) is also found in the reserve. The most commonly found snakes in the reserve are *Hydrodynastes gigas*, *Eunectes notaeus*, *Liophis poecilogyrus*, *Thamnodynastes cf. strigilis* and *Helicops leopardinus*. Of course, the Pantanal cayman (*Cayman crocodylus yacare*) is, by large, the most common large animal seen in the Pantanal.

Birds are very conspicuous in the Pantanal, where as many as 665 species have already been registered. Of these, 264 species were recorded in the reserve but many more must be revealed by further research. Among the more conspicuous terrestrial birds are *Rhea americana* (greater rhea) and the red legged seriema (*Cariama cristata*). However, the birds associated to the wetland are dominants, specially the herons, storks, ibis and ducks. The most common heron species, in the reserve, are *Casmerodius albus*, *Ardea cocoi*, *Egretta thula*, *Tigrisoma lineatum*, *Bubulcus ibis* and *Butorides striatus*. Especially spectacular, in the reserve, is the presence of a rare nesting place of *Mycteria americana* as well as numerous *Jaburu mycteria*. *Ciconia maguari* was also found. The ibis are represented by 5 species: *Ajaia ajaia*, *Harpirion caerulescens*, *Theristicus caudatus*, *Mesembrinibis cayennensis* and *Phimosus infuscatus*. Four species of ducks were registered: *Dendrocygna viduata*, *D. autumnalis*, *Cairina moschata* and *Amazonetta brasiliensis*. Rails are quite common, as could be expected by the marshland domination. Common rails, with large populations in proper habitat, are *Aramides cajanea*, *Porphyryla martinica*, *Porphyryla flavirostris* and *Porzana albicollis*. Among the many *Falconiformes*, the presence of the king vulture (*Sarcoramphus papa*) is noticeable. Another well represented group is the *Psittaciformes*, with 15 species, including a relatively large number of hyacinth macaw (*Anodorhynchus hyacinthinus*).

Mammals in the Pantanal are represented by 123 species. Thirty eight of these species were viewed in the reserve. As everywhere in the *Cerrado* biome, bats are by far the most abundant order of mammals in the reserve. Opossum are also numerous (14 species), as well as armadillos with 8 species, including the giant armadillo (*Priodontes giganteus*). The reserve also contain the giant anteater (*Myrmecophaga tridactyla*), the southern tamandua (*Tamandua tetradactyla*); several species of monkeys, including a large population of black howler monkey (*Alouatta caraya*). Rodents are less abundant than in dryer portions of the *Cerrado* range, but the capivara (*Hydrochaeris hydrochaeris*) is very abundant everywhere. There are three species of agouti, as well as porcupines and one species of squirrel. The tapir (*Tapirus terrestris*) is also present, as well as the four species of deer (*Blastocerus dichotomus*, *Mazama americana*, *Mazama gouazubira* and *Ozotocerus bezoarticus*). Both peccary are present as well as a small feral population of wild boar. Predators are

well represented by the maned wolf (*Chrysocyon brachyurus*) and the bush dog (*Speothos venaticus*); several species of *Leopardus* and the puma (*Felis concolor*) and the jaguar (*Panthera onca*). This last animal does have a significant population in the reserve. Both Brazilian otters (*Pteronura brasiliensis* and *Lontra longicaudis*) are present, with an important population of the first species and, of course, *Nasua nasua* and *Procyon cancrivorus*.

Insects are abundant in the SESC reserve but less diversified than in other ecosystems. The Pantanal is known to have around 50% of the wild bee species known in Brazil. Lepidoptera are also well represented.

As it is well known, the Pantanal range is not rich in endemisms of vertebrates. The invertebrate fauna, specially the aquatic invertebrates, including zooplankton, molluscs and crustaceans are poorly known and, as already shown (i.e. the genus *Aquidauania*, Hydrobiidae), endemisms may be abundant. However, some species of vertebrates have a range limited to the region, such as the turtle *Acanthochelys macrocephala*, known only from the Pantanal and neighboring wetlands of Brazil, Bolivia and Paraguay. The yellow anaconda is also a species limited to the Paraguay and Paraná watersheds. Among birds, the only species that may be considered endemic is *Cercomacra melanaria*. Fishes present a special situation as *Plesiolebias glaucopterus*, *Pterolebias phasianus*, *Pterolebias longipinnis*, *Trigonectes balzanii* and *Neofundulus parvipinnis* were found in the reserve. They are annual fishes and endemic species.

The endangered or vulnerable bird species (based on IUCN lists) already found in the reserve is worth mentioning. The highly endangered Hyacinth Macaw *Anodorhynchus hyacinthinus* has a minimum population of 180 adults. Another very endangered species, endemic to Central Brazil, the Chestnut-bellied Guan *Penelope ochrogaster* has its largest remnant population within the reserve boundaries. Almost endemic to Central Brazil, with a small Bolivian population, the vulnerable Yellow-faced Amazon *Amazona xanthops* has a strong year round population in the reserve. At lower conservation risk, although dependent of protective measures, the largest Western Hemisphere bird, the Greater Rhea *Rhea americana*, finds its preferable habitats in the central portion of the SESC's reserve. Vulnerable within Brazil, the Lesser Seed-finch *Oryzoborus angolensis* has a healthy breeding population protected against illegal trappers. Recently listed as vulnerable in North American, the Arctic breeder and migrant Buff-breasted Sandpiper *Tryngites subruficollis* is a transient species in its migration southward.

Among the mammals, the Giant Otter *Pteronura brasiliensis*, the Giant Anteater *Myrmecophaga trydactyla*, the Marsh Deer *Blastocerus dichotomus* and the Bush Dog *Speothos venaticus* are listed as vulnerable in the IUCN red list. The same list put the Giant Armadillo *Priodontes giganteus* in the endangered category. The near-threatened mammals are the Tapir *Tapirus terrestris*, the Maned Wolf *Chrysocyon brachyurus* and the Jaguar *Panthera onca*.

19. SOCIAL AND CULTURAL VALUES:

The Pantanal is rich in traditions, some originated in the culture of the indigenous peoples that dominated the region up until a couple of centuries ago and others carried

in by the conquerors and settlers that introduced cattle and horses to the region. The reserve is located in an area that was probably part of the territory of the Bororó indigenous people and, certainly also had the influence of the Paiaguás and Guató. The fort of Poconé, located at 40 kilometers northeast from the border of the reserve, was founded in 1783, to repel indigenous peoples' incursions and to allow the penetration of gold diggers and settlers. Since the XIX century the area of the reserve became part of one large rural estate, a fazenda, that initially extensively raised a Spaniard race of cattle and, after the 1950s, moved to Nelore cattle. Horses, in the Pantanal, were also introduced by the Spaniards, long before the Portuguese conquest of the region. These horses have developed in a distinct race, very well adapted to the swamp. The region possesses its own cuisine, dancing, music and traditions, that make the *pantaneiros* a unique social group in Brazil. The field staff of the reserve is entirely integrated by original *pantaneiros* and local culture conservation is given incentives in every possible manner.

20. **LAND TENURE/OWNERSHIP OF:** The reserve is entirely a private estate, fully owned by the SESC. This estate was transformed by the SESC, part in July 1998 and part in November 9th 1998, in a RPPN or *reserva particular de patrimônio natural* (private natural heritage reserve or, simply, a private natural reserve or sanctuary), recognized by the Brazilian Institute for the Environment and the Natural Renewable Resources (IBAMA). Last year, the RPPNs were confirmed by the Federal Law N°9985/2000, Article 21°. The RPPNs are established in perpetuity and its objective of preserving nature can never be modified. The RPPNs are managed using a management plan and under supervision of the IBAMA. The only difference of an RPPN *vis a vis* a national park land is ownership, that is private. If the owner wishes to sell the area, this can be done only if the objective of nature protection is not changed. Of course, being the SESC a non-for profit entity, this reserve will never be sold. If some day the SESC becomes to be terminated, the area will become a state or federal protected area. SESC is a private organization created by law and funded through an annual contribution of private enterprisers. It has branches in every Brazilian state, congregated in a federation headquarters. It keeps local operations dealing with social, health, tourist and educational aspects of services enterprises employees. The hotel is outside of the reserve and is managed separately. The only allowed use for hotel guests is to use interpretative trails within the reserve, always in a trained guide company, for environmental education and ecotourism. The visitors' impact was fully addressed by the Management Plan and the ecological trails design and planning. The ground trails are available less than 5 months/year, as the Cuiabá river floods cover them. Trips in small boats covering the creeks near the Cuiabá river have become the major visitor's activity in the reserve. Plans for other visiting places will cover less than 3% of the whole reserve area, always with a minimum facilities approach.
21. **CURRENT LAND USE:** The reserve is currently entirely and exclusively dedicated to nature preservation. No economic activity based on direct exploitation of resources is carried out within its limits, not even sport fishery. On the basis of its management plan, only a very small portion of the reserve is open to visitors. All cattle have been eliminated from the reserve. Only the horses utilized by the rangers (and in the future by visitors) are being kept in enclosures near the posts.

22. **FACTORS (past, present or potential) ADVERSELY AFFECTING THE SITE'S:** The area has supported a large number of cattle during long time and a number of exotic grasses and plants were introduced over time. The management plan is considering options to control some of them. The elimination of the cattle is causing an accumulation of organic matter that is increasing the susceptibility of the area to natural and criminal fires. Fires will be a growing problem until a new equilibrium is reached. Several measures for fire control were adopted (fire control equipment, tower for fire detection, training, preventive education, etc.). The presence of wild boars and feral pigs may become a problem (disease dispersion and food competition). Another program is being initiated to control the population of these introduced species. Fishing inside the reserve and poaching is still possible but become rare due to the growingly efficient control by trained rangers.
23. **CONSERVATION MEASURES TAKEN:** Most of what is expected in a protected area. A preliminary inventory of flora and fauna and a management plan (1998), fencing, demarcation and signs, 7 post guards, 5 fire control towers, fire defense lines, fire equipment (including an aircraft, 6 boats, 6 all terrain vehicles, office), and 26 professional staff, 16 trained rangers and 1 pilot and workers. The hotel has 100 employees. For visitors, a 500 square meter model visitor center is being built, including living exhibits of ant, butterflies and termite nests, 19Km of interpretation trails are already in place, equipment (boats) are available for visitors. Additionally, the SESC administrate a first class lodge of 120 beds on the other side of the Cuiabá River, in front of the reserve. This facility, as the reserve, is oriented toward social eco-tourism.
24. **CONSERVATION MEASURES PROPOSED BUT NOT YET IMPLEMENTED:** The SESC is planning a review of the original management plan, on the basis of accumulated experience and results of new research works. New areas for educational interpretation are also being planned.
25. **CURRENT SCIENTIFIC RESEARCH AND FACILITIES:** A lab and collection conservation room is being constructed as part of the Visitor Center under construction. The SESC is currently financing an aggressive program of research, including: (1) small mammals inventory; (2) bird inventory and preparation of a field guide; (3) insect survey and collection; (4). biology and ecology of 5 species of large mammals using radio telemetry techniques; (5). fish inventory; and (6) biology and ecology of the three species of macaws, also using radio telemetry. Top Brazilian specialists are participating in these researches. In addition, a study on the environmental impact of the Manso hydro, located upstream in the Cuiabá River, has been finished. Also, a study for the establishment of a buffer zone for the reserve, along the road between Poconé and the reserve has been finished. A research on medicinal and aromatic plants is planned, as well as another on the ecology and biology of the giant otter. The fire control program is permanently actualized.
26. **CURRENT CONSERVATION EDUCATION:** The reserve is open for guided tours of students and any other group of local people. As a matter of facts, the SESC is often financing not only the tours in the reserve but also the costs of travel. All SESC hotel

guests are also visitors of the reserve. The rangers act as guides as well as do the professional staff of the reserve, in special occasions.

27. **CURRENT RECREATION AND TOURISM:** As mentioned above, tourism is actively promoted in the reserve. Around 10.000 visitors per year are visiting the reserve.
28. **JURISDICTION:** The SESC Pantanal reserve is entirely under jurisdiction of the SESC. The Pantanal Program is managed directly by the main office of SESC, located in Rio de Janeiro, in cooperation with the SESC office of Cuiabá.
29. **MANAGEMENT AUTHORITY:** In application of the Law 9985/2000, the reserve is managed by its owner, the SESC, through professional staff and in application of the approved management plan, under supervision of a broad Consultative Council (13 members, representing the local civil society, the scientific community, the Municipal, State and Federal governments). The IBAMA, as well as the State Secretariat for the Environment, have the necessary authority to supervise that the reserve is indeed well managed. All management decisions are coordinated through:
Leopoldo Brandão
Principal Advisor and President
Consultive Council of the RPPN SESC Pantanal
Serviço Nacional do Comercio (SESC)
Rua Voluntários da Pátria 169. 14º andar.
CEP:22270-000 Rio de Janeiro, Brasil.
Phone: +55 (61) 2536-8954.
E-mail: leopoldo@sesc.com.br

30. **BIBLIOGRAPHICAL REFERENCES:**

- Costa, W.J.E.M. and M.A.B.S. Vianna. 2002. Diversidade e distribuição de peixes de pequeno porte da RPPN SESC-Pantanal. In: 2º Encontro de Pesquisadores da RPPN do SESC-Pantanal. 56-59.
Cuiabá 99 p.
- FUNATURA/SESC 1998 Plano de Manejo Estância Ecológica SESC Pantanal
Brasília 166 p.
- Guedes, N. M. R. 1999 Projeto Arara Azul/UNIDERP na Reserva do SESC Pantanal
Instituto de Estudos de Gestão das Águas 2000 As implicações sócioambientais do APM Manso (Jorge Gomes deo Cravo Barros, Coordenador) Brasília, 149 p. + Anexos
- Resende, E.K. 2002. Avaliação da situação dos peixes de valor econômico para a pesca no rio Cuiabá, na área da RPPN SESC-Pantanal e possíveis ações futuras. In: 2º Encontro de Pesquisadores da RPPN do SESC-Pantanal. 19-38.
SESC 1999 SESC Pantanal Rio de Janeiro 60 p.

